As filed with the Securities and Exchange Commission on July 19, 2021.

Registration No. 333-257483

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

Amendment No 1.
to

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Duolingo, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**7372**	**45-3055872**
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

5900 Penn Avenue
Pittsburgh, Pennsylvania 15206
(412) 567-6602
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Luis von Ahn
Chief Executive Officer
Duolingo, Inc.
5900 Penn Avenue
Pittsburgh, Pennsylvania 15206
(412) 567-6602
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Tad J. Freese **Benjamin A. Potter** **Alison A. Haggerty** **Latham & Watkins LLP** **140 Scott Drive** **Menlo Park, California 94025** **(650) 328-4600**	**Stephen Chen** **General Counsel** **Duolingo, Inc.** **5900 Penn Avenue** **Pittsburgh, Pennsylvania 15206** **(412) 567-6602**	**Ryan J. Dzierniejko** **Michelle Gasaway** **Skadden, Arps, Slate, Meagher & Flom LLP** **One Manhattan West,** **New York, NY 10001** **(212) 735-3000**

Approximate date of commencement of proposed sale to the public:
As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, check the following box: ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☐
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	**Amount to be Registered(1)**	**Proposed Maximum Offering Price Per Share(2)**	**Proposed Maximum Aggregate Offering Price(2)**	**Amount of Registration Fee(3)**
Class A common stock, $0.0001 par value per share	5,872,029	$95.00	$557,842,755	$60,861

(1) Includes 765,916 additional shares that the underwriters have the option to purchase.
(2) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(a) under the Securities Act of 1933, as amended.
(3) The registrant previously paid $10,910 in connection with the previous filing of the registration statement.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

Table of Contents

Subject to Completion, dated July 19, 2021

Duolingo, Inc.

5,106,113 Shares of Class A Common Stock

This is an initial public offering of shares of Class A common stock of Duolingo, Inc. We are offering 3,700,000 shares of our Class A common stock, and the selling stockholders identified in this prospectus are offering 1,406,113 shares of Class A common stock. We will not receive any proceeds from the sale of shares of Class A common stock by the selling stockholders.

Prior to this offering, there has been no public market for our Class A common stock. It is currently estimated that the initial public offering price will be between $85.00 and $95.00 per share. We have applied to list our Class A common stock on the Nasdaq Global Select Market under the symbol “DUOL.”

We are an “emerging growth company” as defined under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements for this prospectus and may elect to do so in future filings.

We have two classes of common stock, Class A and Class B common stock (collectively, our common stock). The rights of holders of Class A and Class B common stock are identical, except voting and conversion rights. Each share of Class A common stock is entitled to one vote. Each share of Class B common stock is entitled to 20 votes and is convertible at any time into one share of Class A common stock. Outstanding shares of Class B common stock will represent approximately 97.8% of the voting power of our outstanding capital stock immediately following this offering, with our directors, executive officers, and 5% stockholders and their respective affiliates representing approximately 91.5% of the voting power.

Investing in our Class A common stock involves a high degree of risk. See the section titled “Risk Factors” beginning on page 21 to read about factors you should consider before buying shares of our Class A common stock.

	Per Share	Total
Initial public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds, before expenses, to us	$	$
Proceeds, before expenses, to the selling stockholders	$	$

(1) See the section titled “Underwriting” for a description of the compensation payable to the underwriters.

To the extent that the underwriters sell more than 5,106,113 shares of Class A common stock, the underwriters have the option to purchase up to an additional 765,916 shares from us at the initial public offering price less the underwriting discount.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of Class A common stock to purchasers on , 2021.

Goldman Sachs & Co. LLC **Allen & Company LLC**

BofA Securities **Barclays** **Evercore ISI** **William Blair**

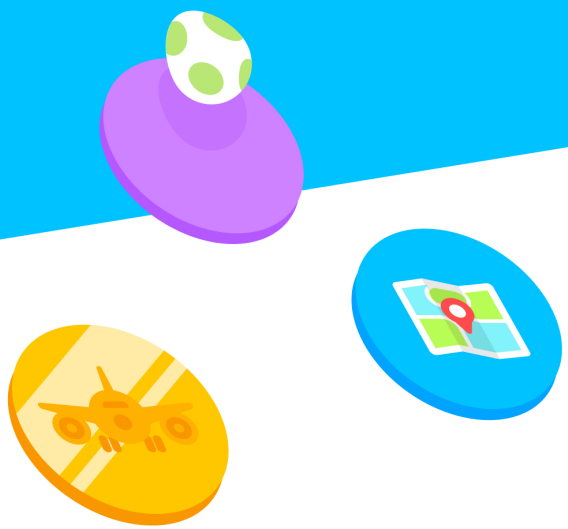
KeyBanc Capital Markets **JMP Securities, LLC** **Piper Sandler** **Raymond James**

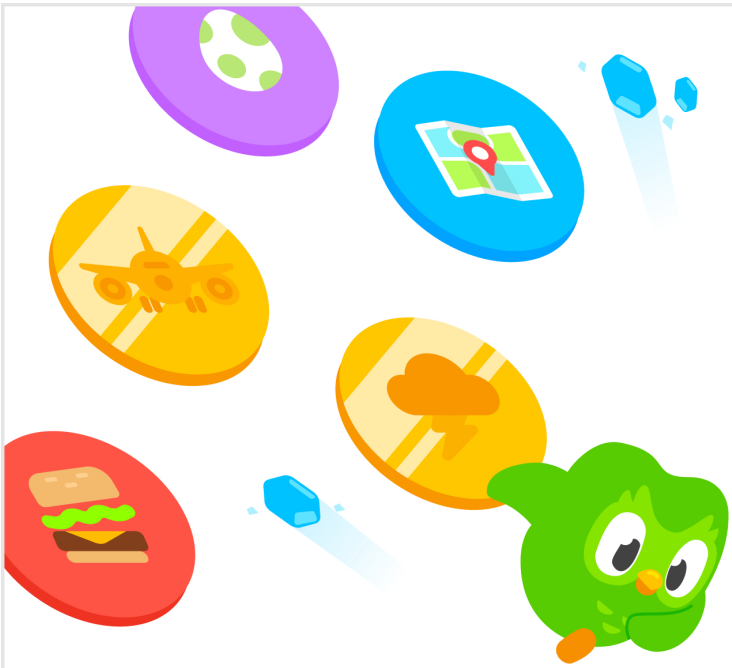
Prospectus dated , 2021

Education creates possibilities.

Duolingo was founded to help build a future where high-quality education is available to everyone, no matter where they live or how much money they have.

And for the first time in history, this is possible — we can reach billions of people on their smartphones, with an app that's free and fun to use.





Driven by our mission and propelled by technology, we're sharing the power of learning with the world.

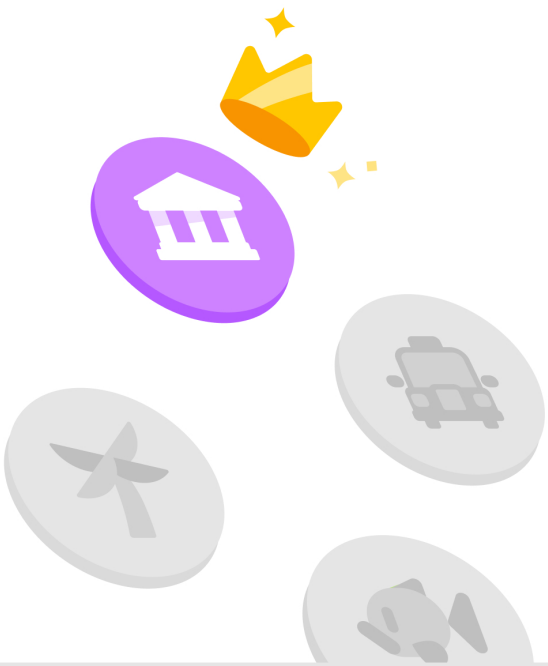


Table of Contents

You should rely only on the information contained in this prospectus or contained in any free writing prospectus filed with the Securities and Exchange Commission (the SEC). Neither we, the selling stockholders, nor any of the underwriters have authorized anyone to provide any information or make any representations other than those contained in this prospectus or in any free writing prospectus we have prepared. Neither we, the selling stockholders, nor the underwriters take responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares of Class A common stock offered by this prospectus, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the Class A common stock. Our business, results of operations, financial condition, and prospects may have changed since such date.

For investors outside of the United States: Neither we, the selling stockholders, nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus or any free writing prospectus we may provide to you in connection with this offering in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside of the United States who come into possession of this prospectus and any free writing prospectus must inform themselves about and observe any restrictions relating to this offering and the distribution of this prospectus outside of the United States.

prospectus summary

Prospectus Summary

This summary highlights selected information that is presented in greater detail elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our Class A common stock. You should read this entire prospectus carefully, including the sections titled "Risk Factors," "Special Note Regarding Forward-Looking Statements," and "Management's Discussion and Analysis of Financial Condition and Results of Operations," and our consolidated financial statements and related notes included elsewhere in this prospectus, before making an investment decision. Unless the context otherwise requires, the terms "Duolingo," the "company," "we," "us," and "our" in this prospectus refer to Duolingo, Inc. and its consolidated subsidiaries, and the phrase "our learners" refers to the users of our language learning app.

Our Mission

Our Mission is to develop the best education in the world and make it universally available.

Although education can open the door to economic opportunity, it is also among the principal sources of inequality: the privileged can get the best education in the world, while those with fewer resources, especially in developing countries, may not be able to get even basic schooling. That is why we started Duolingo. We believe that everyone, regardless of how wealthy they are, should have access to high quality education. And for the first time in history, the technology necessary to enable this is in the hands of billions of people, in the form of a smartphone. At Duolingo, we build products native to the smartphone—bite-sized, on-demand and engaging—to make learning accessible and effective, opening doors for everyone alike.

Who We Are

Duolingo is a technology company founded by two engineers, Luis von Ahn and Severin Hacker. Luis and Severin met at Carnegie Mellon University, where Luis was a professor in the Computer Science Department and Severin was his Ph.D. student. Luis, a MacArthur Fellow, grew up in Guatemala and witnessed firsthand the tremendous impact that access to high quality education can have on people's lives. Luis and Severin bonded over the dream of building an intelligent learning system informed by massive amounts of user engagement data that could deliver superior learning outcomes.

Our team of over 400 passionate employees, including more than 170 engineers, aims to build the most sophisticated education platform in the world. We believe that by using modern technology, the very best engineering talent, and a mission-driven approach, we can create better learning experiences and meaningful improvements in efficacy. Our products are powered by sophisticated data analytics and artificial intelligence that make it easier for learners to stay motivated, master new material, and achieve their learning goals.

Our Business

Duolingo is the leading mobile learning platform globally. With over 500 million downloads, our flagship app has organically become the world's most popular way to learn languages and the top-grossing app in the Education category on both Google Play and the Apple App Store. For many, Duolingo has become synonymous with language learning: for example, on Google, people search the term "Duolingo" nine times more often than "learn Spanish." We are particularly proud that our learners come from the entire socioeconomic spectrum, ranging from billionaires and celebrities to recently resettled refugees, a rare instance in which more money does not imply better access to a high quality educational platform.

We started with a focus on teaching languages because of the profound impact learning a new language can have on people's lives, as well as the large market opportunity. According to HolonIQ, 1.8 billion

people across the world are learning a new language, and in 2019, consumer spend on both online and offline language learning represented a $61 billion market. Driving much of the demand for language learning is the reality that English can unlock tremendous economic opportunity. And the power of language learning is not limited to economic advancement. Learning another language can unlock new experiences and deep human connections, ranging from navigating a first trip to another country, to communicating with family members of an older generation.

Duolingo offers courses in 40 languages to approximately 40 million monthly active users. To put our scale in context, there are more people in the United States learning languages on Duolingo than there are foreign language learners in all US high schools combined, and there are more people learning certain languages on Duolingo, like Irish and Hawaiian, than there are native speakers of those languages worldwide.

Duolingo is the learning product built for the mobile generation: bite-sized, on-demand and fun. We believe that the hardest part of learning something new is staying motivated, so we build gamification features into our platform to motivate our learners, and we run thousands of A/B tests to optimize each feature for maximum engagement. Our obsession with user experience has yielded affinity and loyalty in our learners, which in turn has helped us cultivate millions of brand advocates who tell their friends and families about our products. Indeed, our brand has become part of pop culture, appearing in internet memes and sketches on late night comedy shows. All of this has allowed us to grow our business organically, primarily relying on word-of-mouth virality rather than paid user acquisition.

Our millions of learners complete over 500 million exercises every day, creating what we believe to be the world's largest learning dataset. This data powers the high volume A/B testing and novel artificial intelligence (AI) that we use to continually improve how well we teach. According to an internal study, people who complete five “Units” of Duolingo, or roughly half of one of our courses, learn as much as students taking four university semesters of language education—and they do so in half the time.

We intentionally do not put our learning content behind a paywall. Anyone can download the Duolingo app, use it for as long as they like, and complete as many of our courses as they choose, all without paying anything. Learners who use Duolingo for free see an ad at the end of each lesson, whereas learners who purchase Duolingo Plus, our premium subscription, enjoy an ad-free experience and access to additional features. As of March 31, 2021, approximately 5% of our monthly active users were paid subscribers of Duolingo Plus. Our paid subscriber penetration has increased steadily since we launched Duolingo Plus in 2017 and, combined with our user growth, has led to our revenue more than doubling every year since. We have a strong future roadmap of feature improvements and optimizations, and believe we are in the early stages of increasing our paid subscriber penetration.

Our freemium business model is core to our success because it enables significant user scale. Our growth and competitive differentiation have been driven by two mutually-reinforcing flywheels: our learning flywheel and our investment flywheel.

- **Learning flywheel:** The greater the scale of our learner base, the more we can use insights from data analytics to improve both engagement and efficacy. The more engaging our products are, and the more effectively we teach, the more our learners tell their friends about Duolingo, and the more we continue to grow our learner base.
- **Investment flywheel:** Our learner scale and word-of-mouth growth allow us to focus our capital investments on product innovation and data analytics, as opposed to brand or performance marketing. The more learners use Duolingo and convert into paid subscribers, the more we are able to invest in creating an even more delightful, engaging and effective learning experience. In

turn, this increases our popularity and user scale, as well as the effectiveness of our data analytics, further widening our competitive moat.

Our second product, the Duolingo English Test, is an online, on-demand assessment of English proficiency. Every year, millions of people around the world seek to demonstrate English proficiency for a variety of reasons, including university admissions, work visas, and job applications. We developed the Duolingo English Test because language assessment has lacked innovation, with the most popular English proficiency tests still administered in physical testing centers and usually costing hundreds of dollars per test. By offering a more accessible, online option that is both rigorous and accurate, we provide greater opportunities for aspiring students and professionals dependent on successful completion of these high stakes assessments. As of June 2021, over 3,000 higher education programs around the world accept Duolingo English Test results as proof of English proficiency for international student admissions. These include 17 of the top 20 undergraduate programs in the United States according to US News and World Report—for example, Yale, Stanford, MIT, Duke and Columbia. In 2020, roughly 344,000 individual Duolingo English Tests were purchased, mostly by prospective international students.

We believe we are just getting started. As the language learning market continues to shift online and digital subscriptions become increasingly prevalent in both mature and emerging markets, we expect to grow our number of monthly active users, as well as the portion of users who pay for a subscription. We also have a significant opportunity to impact more learners around the world by extending our platform to teach subjects beyond language, such as literacy and math. In 2020, for example, we launched Duolingo ABC, an app designed to teach early literacy skills to children ages three to six.

Our business has experienced rapid growth since our founding in 2011. For the years ended December 31, 2019 and 2020, we had 27 million and 37 million monthly active users, respectively, representing year-over-year growth of 34%, and we grew our paying subscribers from 0.9 million as of December 31, 2019 to 1.6 million as of December 31, 2020, or 84% year over year. For the quarter ended March 31, 2021, we had 40 million monthly active users, and as of March 31, 2021, we had 1.8 million paying subscribers. Our revenue was $70.8 million in 2019 and $161.7 million in 2020, representing 129% year-over-year growth. Our revenue was $28.1 million in the three months ended March 31, 2020 and $55.4 million in the three months ended March 31, 2021, representing 97% period-over-period growth. In 2020 and the three months ended March 31, 2021, approximately 73% and 72%, respectively, of our revenue came from subscriptions to Duolingo Plus, approximately 17% came from advertising in both periods, and approximately 10% and 11%, respectively, came from the Duolingo English Test and other revenue. Given the momentum in our business and the size of our market opportunity, we continue to invest in product innovation and data analytics. In 2019 and 2020, we had net losses of $13.6 million and $15.8 million, respectively. In the three months ended March 31, 2020 and 2021, we had net losses of $2.2 million and $13.5 million, respectively. Our Adjusted EBITDA improved from $(8.0) million in 2019 to $3.6 million in 2020, and was $(0.9) million and $0.9 million in the three months ended March 31, 2020 and 2021, respectively. Our total bookings were $88.0 million in 2019 compared to $190.2 million in 2020, representing 116% year-over-year growth, and $36.9 million in the three months ended March 31, 2020 compared to $65.8 million in the three months ended March 31, 2021, representing 78% period-over-period growth.

Industry Trends

We believe the following market trends will contribute to the continued success of our platform:

Mobile-first behaviors are reshaping industries. In categories ranging from retail to music to dating, consumers are increasingly gravitating to mobile, app-based experiences. We believe that consumer behavior will continue to be shaped by a preference for the convenient, on-demand nature of mobile experiences.

The shift towards online learning is accelerating. Historically, education has lagged behind other industries in the shift from offline to online. According to GSV Ventures, the 2019 digital learning market represented $160 billion in spend—already a sizable number, but still only 2.3% of total global education expenditures. However, the COVID-19 pandemic sparked a radical shift towards online learning, and its effects are likely to be enduring. GSV Ventures now predicts that digital learning will reach 11% of education market expenditures by 2026, representing approximately $1 trillion in spend and a 26% compound annual growth rate (CAGR) from 2019 to 2026.

Online learners seek engaging, mobile-first experiences. Consumers are increasingly accustomed to the highly engaging design of social media apps and mobile games. We believe that consumers turning to online learning will not only prefer the convenience and control that mobile apps provide, but also expect experiences to be highly engaging.

Adoption of subscription models is growing globally. Rising adoption of subscription models across the globe is further enabling the shift towards mobile experiences. We believe that as subscriptions increase in popularity across categories, consumers will also gravitate towards subscription models in online learning.

Market Opportunity

The global market for direct-to-consumer language learning is large, growing, and shifting online. According to HolonIQ, total consumer spend on both online and offline language learning represented a $61 billion market in 2019, and will grow to $115 billion in 2025, implying a CAGR of 11% over this period. Online language learning is the fastest-growing market segment, projected to grow from $12 billion in 2019 to $47 billion in 2025, representing a CAGR of approximately 26% over this period, and to comprise 41% of total consumer spend on language learning in 2025. We believe that growth in digital spend will be driven in part by a shift away from offline offerings, as consumers seek more affordable, convenient, and higher quality online solutions.

We also believe that growth in online language learning spend will be driven by consumers who would not have paid for offline offerings, but now choose to purchase online products. For example, according to a survey we conducted in 2021, almost 80% of Duolingo users in the US were not already learning a language when they began using Duolingo. Globally, GSMA reports that the number of mobile internet users is projected to grow from 3.8 billion at the end of 2019 to 5.0 billion by 2025. Growth in smartphone adoption can open up new access to the convenience and affordability of mobile-first learning to hundreds of millions of people.

We also have a significant opportunity to impact more learners around the world by extending our platform beyond language learning. According to HolonIQ, approximately $6 trillion was spent on education globally in 2019. And GSV Ventures reports that $160 billion was spent on digital learning, with digital spend expected to grow at a 26% CAGR from 2019 to 2026. We believe we can expand our addressable market by extending our scalable platform to other segments of learning such as literacy and math.

The Duolingo Learning Experience

The Duolingo learning experience sits at the rare intersection of fun and self-improvement. Learners love Duolingo because:

- **It's fun.** Duolingo feels more like a mobile game than an education product. Our bite-sized lessons and gamification features motivate learners to come back each day to continue learning.
- **It's effective.** Learners stick with Duolingo at first because it’s fun, and then over time also because they find that it works. Our expert-designed courses help learners build robust speaking,

reading, listening, and writing skills, and our data analytics power personalization and superior learning outcomes.

- **It's free.** Every language course on Duolingo is free to access. Learners can spend as much time learning as they want and complete any and every course without paying. This lowers barriers to start learning and to keep learning.

In a world where people are increasingly engaged in immersive, bite-sized, mobile-first experiences, we provide such an experience that also results in learning valuable skills. Indeed, many of our learners prefer to spend time on Duolingo rather than on social media or mobile games because they can learn while still feeling entertained.

Our Product Philosophy

Each of our learning and gamification features is carefully crafted to contribute to a learner experience that is defined by several key principles:

Low friction. Beginning the learning journey on Duolingo is easy. We ensure that our onboarding journey is as intuitive as possible by continually reviewing the actions of new learners as they navigate our app for the first time. Duolingo is recognized as a gold standard for user experience design, with our onboarding flows used as examples of industry best practices.

Motivating game mechanics. Because we believe that staying motivated is the hardest part of learning something new, we focus relentlessly on keeping learners engaged. Ultimately, the high engagement driven by gamification leads to consistent learning and demonstrable efficacy.

Beautiful design and engaging storytelling. From the precise shape and color of each button, to the mood of the celebratory animations that congratulate learners upon finishing each lesson, our app is calibrated to maximize learners' delight. Over the years, our owl mascot, Duo, has become a popular brand icon and a marketing asset for our company.

Diverse learning experiences informed by robust pedagogy. Our learning experiences are designed by an in-house team of experts in learning science and second language acquisition. Content in our largest courses is aligned to the Common European Framework of Reference (CEFR), an international standard for language proficiency, and the pedagogical structure of each course is unique.

Application of data analytics and artificial intelligence to optimize learning. We use data from over half a billion exercises completed daily to train sophisticated machine learning algorithms that we deploy to improve learning efficacy.

Measurable learning outcomes. In 2020, we conducted a formal study to evaluate Duolingo's effectiveness versus traditional university language courses. We found that Duolingo learners earned proficiency scores comparable to those of US university students at the end of their fourth semester of French or Spanish. Moreover, the Duolingo learners were able to attain this level of proficiency in about half the time as the university students.

Our Technology Platform

Technology is at the core of everything we do. We utilize the latest in machine learning and data analytics, along with a relentless focus on A/B testing, to fuel our differentiated learning experience.

Highlights of our technology platform include:

Large data moat. With over half a billion exercises completed every day on our platform, we believe we have built the world's largest collection of language-learning data. We leverage this data by developing novel AI models at the intersection of machine learning, natural language processing, and cognitive

science, which enable personalized instruction and power new product features that drive both engagement and efficacy.

Robust testing framework. The foundation of our product strategy is our relentless focus on improving learner engagement through A/B testing, and we run hundreds of A/B tests on new product features each quarter. These A/B tests also provide us with the data to make decisions that positively impact paid subscriber conversion.

Advanced data analytics and machine learning capabilities. Our machine learning capabilities allow us to leverage our data to optimize the learning experience. One example of this is our "student model," called BirdBrain, which evaluates every learner's answer to every exercise every day and learns to predict the probability that any learner will answer any given exercise correctly. We use BirdBrain predictions to adaptively construct lessons where each exercise is "just right" in terms of difficulty for each learner.

Shared infrastructure. Products across our platform, like our flagship Duolingo language learning app, Duolingo ABC, and the Duolingo English Test, share a singular technology infrastructure, which allows us to leverage operational efficiencies in implementing new features for each. With our shared infrastructure, we are able to innovate at a higher velocity.

Strict data protection and privacy standards. We are committed to abiding by the strictest privacy standards and do not sell personal data to outside parties.

Our Strengths

We believe the following strengths will drive our continued success in the global language learning market and beyond:

Product-obsessed culture focused on creating a fun, engaging experience. We use sophisticated gamification and beautiful design to make our products fun and engaging, inspiring learners to come back day after day to learn on our platform.

Leading consumer brand. Our free, fun, and effective learning experience has made us a category-leading brand in consumer education, which in turn drives organic traffic to our platform and minimizes our reliance on paid marketing.

Deep data analytics capabilities. Data from over 2.3 billion tracking events generated every day by our learners informs the more than 500 A/B tests we run per quarter. These A/B tests enable us to rapidly launch product optimizations and new features that materially improve engagement, learning outcomes, and paid subscriber conversion.

Superior learning outcomes through personalized learning. We also leverage our massive collection of language-learning data to develop novel artificial intelligence models at the intersection of machine learning, natural language processing, and cognitive science.

Powerful flywheel effects powered by a strong business model. Our mutually reinforcing Learning and Investment flywheels drive efficient growth on our platform while widening our competitive moat.

Highly scalable platform. We are a technology-driven company and have invested deeply in developing our scalable, mobile-first platform.

Strong profitability and cash flow dynamics drive long-term value. Our business model, which is focused on organic growth and "free to paid" conversion, results in efficient and relatively low marketing expenses. We expect this efficiency, combined with our high gross margins and technology infrastructure, to provide significant operating leverage over the long term, resulting in margin expansion, while allowing us to continue to invest in our brand, product innovation, and technology platform.

Mission-driven, founder-led management team. Duolingo is led by passionate co-founders and a leadership team of seasoned executives with a proven track record of scaling consumer technology businesses.

Our Growth Opportunities

We believe that we have a significant opportunity before us, both to further our mission and to strengthen our business and grow our revenue. Our growth opportunities include not only expanding our scale within the language learning market, but also leveraging the core competencies of our platform and brand to expand into new markets. We are focused on the following to drive our growth:

Continue expansion of learners on our platform. As a category leader in digital language learning, we believe we are well positioned to continue to grow the number of learners who use our platform. Our audience is globally distributed, and we are in the early stages of penetrating key international markets, including Europe, Asia, and Latin America.

Drive higher conversion to paid subscriptions. We believe our ongoing investment in product improvements, as well as rollout of new premium features, will continue to increase the conversion of free users to paying subscribers. In addition, continued optimizations of purchase flows, subscription packaging, and pricing will reduce the friction to subscribe. We believe we have the opportunity to increase monetization in markets across the globe, both in affluent English-speaking markets such as the United States and United Kingdom, and also among English learners worldwide.

Increase the lifetime value of our subscribers. As we continue to expand Duolingo's subscriber base, we are also focused on subscriber stickiness, which drives the lifetime value of our subscribers. The primary way we improve subscriber stickiness is through product improvements that increase engagement, like Leaderboards and Streaks.

Expand adoption of the Duolingo English Test. We believe there is a significant opportunity to continue expanding adoption of the Duolingo English Test via three primary avenues: (1) continuing to expand acceptance by higher education programs for international student admissions; (2) accessing immigration and workforce markets in countries that require English proficiency assessment as a part of the visa approval or job recruiting and promotion processes; and (3) integrating with the Duolingo language learning app to provide our English learners with a more seamless experience between learning and assessment.

Extend our platform and brand beyond language learning. We believe that there is an opportunity to diversify the scope of our platform beyond language learning to a variety of subjects, using the same product-focused, mobile-first, gamified approach to education. For example, in 2020 we launched Duolingo ABC, an app for young children that teaches early literacy skills. We believe that expanding the scope of our platform to additional learning subjects will further expand our addressable market.

Recent Developments

Estimated Selected Preliminary Results for the Three Months Ended June 30, 2021 (unaudited)

Set forth below are certain estimated preliminary unaudited financial results and other data for the three months ended June 30, 2021 and the corresponding period of the prior fiscal year. Our unaudited interim consolidated financial statements for the three months ended June 30, 2021 are not yet available. These ranges are based on the information available to us as of the date of this prospectus. These are forward-looking statements and may differ from actual results. We have provided ranges, rather than specific amounts, because these results are preliminary and subject to change. Our actual results may vary from the estimated preliminary results presented below due to the completion of our financial closing and other operational procedures, final adjustments, and other developments that may arise between now and the time the financial results for the three months ended June 30, 2021 are finalized.

These estimates should not be viewed as a substitute for our full interim or annual financial statements prepared in accordance with US generally accepted accounting principles (GAAP). Accordingly, you should not place undue reliance on this preliminary data. See the sections titled “Risk Factors,” “Special Note Regarding Forward-Looking Statements,” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” for additional information regarding factors that could result in differences between the preliminary estimated ranges of our financial and other data presented below and the actual financial and other data we will report for the three months ended June 30, 2021, and see the section titled “—Summary Consolidated Financial and Other Data—Key Operating Metrics and Non-GAAP Financial Measures” for additional information on the operating metrics and non-GAAP financial measures set forth below.

The estimated preliminary financial results for the three months ended June 30, 2021 have been prepared by, and are the responsibility of, management. Our independent registered public accounting firm, Deloitte & Touche LLP, has not audited, reviewed, compiled or performed any procedures with respect to the estimated preliminary financial results. Accordingly, Deloitte & Touche LLP does not express an opinion or any other form of assurance with respect thereto.

	Three Months Ended June 30,		
		2021 Estimated	
(In thousands)	2020 Actual	Low	High
GAAP Financial Measures			
Revenues	$ 40,011	$ 57,300	$ 58,500
Gross profit	$ 28,202	$ 41,200	$ 42,400
Net income (loss)	$ 40	$ (3,000)	$ (500)
Operating Metrics			
Subscription bookings(1)	$ 36,581	$ 48,000	$ 49,000
Total bookings(2)	$ 49,569	$ 63,300	$ 64,500
Non-GAAP Financial Measure			
Adjusted EBITDA(3)	$ 2,331	$ 1,000	$ 3,500

(1) Subscription bookings represent the amounts we receive from a purchase of a subscription to Duolingo Plus.

(2) Total bookings represent the amounts we receive from a purchase of a subscription to Duolingo Plus, a registration for a Duolingo English Test, an in-app purchase for a virtual good and from advertising networks for advertisements served to our users.

(3) Adjusted EBITDA is defined as net loss excluding interest (income) expense, net, income tax provision, depreciation and amortization, IPO and public company readiness costs, stock-based compensation expense, tender offer-related costs, other expenses, and the impairment of capitalized software.

- For the three months ended June 30, 2021 we expect revenue to be between $57.3 million and $58.5 million, as compared to revenue of $40.0 million for the three months ended June 30, 2020, an increase of 45% at the midpoint. The expected increase is due to the increase in total bookings, which was driven by a higher number of average subscribers. In addition, advertising revenue increased due to an increase in daily active users and average revenue per user.

- For the three months ended June 30, 2021 we expect gross profit to be between $41.2 million and $42.4 million, as compared to gross profit of $28.2 million for the three months ended June 30, 2020, an increase of 48% at the midpoint. The expected increase is driven by the higher revenue as described above, and the mix shift towards higher percentages of subscribers on the annual plan. Further, advertising revenue per user was higher year over year.

- For the three months ended June 30, 2021 we expect net loss to be between $(3.0) million and $(0.5) million, as compared to net income of $40.4 thousand for the three months ended June 30, 2020. The expected decrease is due to operating expenses, particularly research and development expenses, increasing faster than gross profit.
- For the three months ended June 30, 2021 we expect subscription bookings to be between $48.0 million and $49.0 million, as compared to subscription bookings of $36.6 million for the three months ended June 30, 2020, an increase of 33% at the midpoint. The expected increase is due to an increase in the number of subscribers from the prior year.
- For the three months ended June 30, 2021 we expect total bookings to be between $63.3 million and $64.5 million, as compared to total bookings of $49.6 million for the three months ended June 30, 2020, an increase of 29% at the midpoint. The expected increase is due to the increase in subscription bookings noted above, in addition to the increase in advertising revenue due to an increase in daily active users and average revenue per user.
- For the three months ended June 30, 2021 we expect Adjusted EBITDA to be between $1.0 million and $3.5 million, as compared to Adjusted EBITDA of $2.3 million for the three months ended June 30, 2020, a decrease of (3)% at the midpoint. Adjusted EBITDA will change based upon the changes noted in net income (loss) above.

The following table presents a reconciliation of Adjusted EBITDA for the periods presented above to net income (loss), the most directly comparable financial measure presented in accordance with GAAP:

	Three Months Ended June 30,		
		2021 Estimated	
(In thousands)	**2020 Actual**	**Low**	**High**
Net income (loss)	$ 40	$ (3,000)	$ (500)
Interest (income) expense, net	(25)	(2)	(2)
Income tax provision	11	2	2
Depreciation and amortization	623	650	650
IPO and public company readiness costs(1)	—	1,200	1,200
Stock-based compensation expense	1,682	3,000	3,000
Other expenses(2)	—	(850)	(850)
Adjusted EBITDA	$ 2,331	$ 1,000	$ 3,500

(1) IPO and public company readiness costs include costs associated with IPO readiness and establishment of our public company structure and processes, including consultant costs. These costs are included within General and administrative expenses within our Consolidated Statement of Operations.

(2) Represents one-time cash awards to Duolingo contributors under our non-employee volunteer program included within Sales and marketing expenses within our Consolidated Statement of Operations. See Note 14 to our audited consolidated financial statements and Note 2 to our unaudited interim consolidated financial statements included elsewhere in this prospectus.

Risk Factors Summary

Our business is subject to a number of risks and uncertainties of which you should be aware before making a decision to invest in our Class A common stock. These risks are more fully described in the section titled “Risk Factors” immediately following this prospectus summary. These risks include, among others, the following:

- If we fail to keep existing users or add new users, or if our users decrease their level of engagement with our products or do not convert to paying users, our revenue, financial results and business may be significantly harmed.

- The online language learning industry is highly competitive, with low switching costs and a consistent stream of new products and entrants and innovation by our competitors may disrupt our business.
- Changes to our existing brand and products, or the introduction of a new brand or products, could fail to attract or keep users or generate revenue and profits.
- Our costs are continuing to grow, and some of our investments have the effect of reducing our operating margin and profitability. If our investments are not successful, our business and financial performance could be harmed.
- Our quarterly operating results and other operating metrics may fluctuate from quarter to quarter, which makes these metrics difficult to predict.
- Our user metrics and other estimates are subject to inherent challenges in measurement, and real or perceived inaccuracies in those metrics may negatively affect our reputation and our business.
- We rely on third-party platforms such as the Apple App Store and the Google Play Store to distribute our products and collect revenue. If we are unable to maintain a good relationship with such platform providers, if their terms and conditions or pricing changed to our detriment, if we violate, or if a platform provider believes that we have violated, the terms and conditions of its platform, or if any of these platforms loses market share or falls out of favor or is unavailable for a prolonged period of time, our business will suffer.
- We rely on third-party hosting and cloud computing providers, like Amazon Web Services (AWS) and Google Cloud, to operate certain aspects of our business. A significant portion of our product traffic is hosted by a limited number of vendors, and any failure, disruption or significant interruption in our network or hosting and cloud services could adversely impact our operations and harm our business.
- Our business is subject to complex and evolving US and international laws and regulations. Many of these laws and regulations are subject to change and uncertain interpretation, and could result in claims, changes to our business practices, monetary penalties, increased cost of operations, or declines in user growth or engagement, or otherwise harm our business.
- Our success depends, in part, on our ability to access, collect, and use personal data about our users and payers, and to comply with applicable data privacy laws.
- The varying and rapidly-evolving regulatory framework on privacy and data protection across jurisdictions could result in claims, changes to our business practices, monetary penalties, increased cost of operations, or declines in user growth or engagement, or otherwise harm our business.
- From time to time, we may be party to intellectual property-related litigation and proceedings that are expensive and time consuming to defend, and, if resolved adversely, could materially adversely impact our business, financial condition and results of operations.
- We may fail to adequately obtain, protect and maintain our intellectual property rights or prevent third parties from making unauthorized use of such rights.
- We have identified a material weakness in our internal control over financial reporting. If we experience material weaknesses in the future or otherwise fail to implement and maintain an effective system of internal controls in the future, we may not be able to accurately report our financial condition or results of operations which may adversely affect investor confidence in us and, as a result, the value of our common stock.

- The dual class structure of our common stock has the effect of concentrating voting control with those stockholders who held our capital stock prior to the listing of our Class A common stock on the Nasdaq Global Select Market, including our directors, executive officers, and 5% stockholders and their respective affiliates, who held in the aggregate 91.5% of the voting power of our capital stock as of March 31, 2021. This ownership will limit or preclude your ability to influence corporate matters, including the election of directors, amendments of our organizational documents, and any merger, consolidation, sale of all or substantially all of our assets, or other major corporate transaction requiring stockholder approval.

Corporate Information

We were incorporated in August 2011 as a Delaware corporation. Our principal executive offices are located at 5900 Penn Avenue, Pittsburgh, Pennsylvania 15206, and our telephone number is (412) 567-6602. Our website address is www.duolingo.com. Information contained on, or that can be accessed through, our website does not constitute part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only. Investors should not rely on any such information in deciding whether to purchase our Class A common stock.

The Duolingo word mark, “Duolingo,” and our other registered or common law trademarks, service marks or tradenames appearing in this prospectus are the property of Duolingo, Inc. Solely for convenience, our trademarks, tradenames, and service marks referred to in this prospectus appear without the ®, TM, and SM symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights to these trademarks, tradenames, and service marks. This prospectus contains additional trademarks, tradenames, and service marks of other companies that are the property of their respective owners.

Implications of Being An Emerging Growth Company

We are an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012 (the JOBS Act). We will remain an emerging growth company until the earliest of (1) the last day of the fiscal year following the fifth anniversary of the consummation of this offering, (2) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (3) the last day of the fiscal year in which we are deemed to be a “large accelerated filer” as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended (the Exchange Act), which would occur if the market value of our common stock held by non-affiliates exceeded $700.0 million as of the last business day of the second fiscal quarter of such year or (4) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period. An emerging growth company may take advantage of specified reduced reporting requirements and is relieved of certain other significant requirements that are otherwise generally applicable to public companies. As an emerging growth company:

- We will present in this prospectus only two years of audited financial statements, plus unaudited condensed financial statements for any interim period, and related management’s discussion and analysis of financial condition and results of operations;
- We will avail ourselves of the exemption from the requirement to obtain an attestation and report from our auditors on the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002;
- We will provide less extensive disclosure about our executive compensation arrangements; and
- We will not require stockholder non-binding advisory votes on executive compensation or golden parachute arrangements.

Under the JOBS Act, emerging growth companies also can delay adopting new or revised accounting standards until such time as those standards would otherwise apply to private companies. While we have not historically delayed the adoption of new or revised accounting standards until such time as those standards would apply to private companies, we have elected to take advantage of this extended transition period and, as a result, our operating results and financial statements in the future may not be comparable to the operating results and financial statements of companies who have adopted the new or revised accounting standards.

The Offering

Class A common stock offered by us	3,700,000 shares
Class A common stock offered by the selling stockholders	1,406,113 shares
Option to purchase additional shares of Class A common stock offered by us	765,916 shares. The underwriters can exercise this option at any time within 30 days from the date of this prospectus.
Class A common stock to be outstanding after this offering	11,293,655 shares (or 12,059,571 shares if the underwriters exercise their option to purchase additional shares of Class A common stock in full).
Class B common stock to be outstanding after this offering	24,598,497 shares
Total Class A and Class B common stock to be outstanding after this offering	35,892,152 shares (or 36,658,068 shares if the underwriters exercise their option to purchase additional shares of Class A common stock in full).
Voting rights	We have two classes of common stock, Class A and Class B common stock. The rights of holders of Class A and Class B common stock are identical, except voting and conversion rights. Each share of Class A common stock is entitled to one vote. Each share of Class B common stock is entitled to 20 votes and is convertible at any time into one share of Class A common stock. The holders of our outstanding Class B common stock will hold 97.8% of the voting power of our outstanding capital stock following this offering, with our directors, executive officers, and 5% stockholders and their respective affiliates holding approximately 91.5% of the voting power. These holders will have the ability to control the outcome of matters submitted to our stockholders for approval, including the election of our directors and the approval of any change of control transaction. See the section titled “Description of Capital Stock” for additional information.
Use of proceeds	We estimate that that we will receive net proceeds from this offering of approximately $309.3 million (or $374.2 million if the underwriters exercise their option to purchase additional shares of Class A common stock in full), based upon an assumed initial public offering price of $90.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We will not receive any proceeds from the sale of shares of Class A common stock offered by the selling stockholders.

	The principal purposes of this offering are to increase our capitalization and financial flexibility and to create a public market for our Class A common stock. We currently intend to use the net proceeds from this offering for general corporate purposes, including working capital, operating expenses, and capital expenditures. We will have broad discretion in the way that we use the net proceeds of this offering. See the section titled “Use of Proceeds” for additional information.
Risk factors	See the section titled “Risk Factors” and the other information included in this prospectus for a discussion of factors you should carefully consider before deciding to invest in shares of our Class A common stock.
Proposed Nasdaq Global Select Market symbol	“DUOL”

The number of shares of our common stock to be outstanding after this offering is based on 6,187,542 shares of Class A common stock and 26,004,610 shares of Class B common stock outstanding as of March 31, 2021 (after giving effect to the Transactions (as defined below)), and excludes:

- 6,736,002 shares of our Class A common stock issuable upon the exercise of options to purchase shares of our Class A common stock that were outstanding as of March 31, 2021, with a weighted-average exercise price of $9.64 per share, pursuant to our 2011 Equity Incentive Plan, as amended (2011 Plan);
- 1,034,500 shares of our Class B common stock issuable upon the exercise of options to purchase shares of our Class B common stock that were outstanding as of March 31, 2021, with a weighted-average exercise price of $20.17 per share, pursuant to our 2011 Plan;
- 41,917 shares of our Class A common stock issuable upon the vesting and settlement of restricted stock units (RSUs) outstanding as of March 31, 2021, pursuant to our 2011 Plan, including 1,743 RSUs for which the service-based condition had been satisfied as of March 31, 2021 and the performance-based condition is expected to be satisfied in connection with this offering;
- 71,700 shares of our Class A common stock issuable upon the exercise of options to purchase shares of our Class A common stock that were granted after March 31, 2021, with an exercise price of $52.80 per share, pursuant to our 2011 Plan;
- 552,788 shares of our Class A common stock issuable upon the vesting and settlement of RSUs that were granted after March 31, 2021, pursuant to our 2011 Plan;
- 1,800,000 shares of our Class B common stock issuable upon the vesting and settlement of performance-based RSUs that were granted to Luis von Ahn and Severin Hacker (our Founders) after March 31, 2021, pursuant to our 2011 Plan, as more fully described in the section titled “Executive Compensation—Narrative to Summary Compensation Table—Fiscal 2021 Equity-Based Compensation;”
- 7,832,000 shares of our Class A common stock reserved for future issuance under our 2021 Incentive Award Plan (2021 Plan), which will become effective on the date immediately prior to the date our registration statement of which this prospectus forms a part becomes effective (and which excludes any potential annual evergreen increases pursuant to the 2021 Plan); and
- 1,119,000 shares of our Class A common stock reserved for future issuance under our Employee Stock Purchase Plan (ESPP), which will become effective on the date immediately prior to the

date our registration statement of which this prospectus forms a part becomes effective (and which excludes any potential annual evergreen increases pursuant to the ESPP).

Our 2021 Plan and ESPP each provide for annual automatic increases in the number of shares reserved thereunder, and our 2021 Plan also provides for increases to the number of shares of Class A common stock that may be granted thereunder based on shares underlying any awards under our 2011 Plan that expire, are forfeited or are otherwise terminated, as more fully described in the section titled "Executive Compensation—Equity Compensation Plans—2021 Incentive Award Plan."

Except as otherwise indicated, all information in this prospectus assumes or gives effect to:

- the filing and effectiveness of our amended and restated certificate of incorporation in Delaware and the effectiveness of our amended and restated bylaws, each of which will occur immediately prior to the completion of this offering;
- the reclassification of all outstanding shares of our common stock as of March 31, 2021 into an equal number of shares of our Class A common stock and the subsequent exchange of all shares of Class A common stock held by our Founders into an aggregate of 6,930,334 shares of Class B common stock pursuant to the terms of an exchange agreement entered into with us, each of which will occur prior to completion of this offering (collectively, the Common Stock Reclassification and Exchange);
- the conversion of all outstanding shares of our convertible preferred stock as of March 31, 2021 into an aggregate of 19,074,276 shares of our Class B common stock, the conversion of which will occur immediately prior to the completion of this offering (the Preferred Stock Conversion);
- the reclassification of all shares of common stock underlying outstanding equity awards under our 2011 Plan (other than those held by our Founders) into shares of Class A common stock pursuant to an amendment to the 2011 Plan and the amendment of the terms of all outstanding stock options to purchase shares of common stock and RSUs under our 2011 Plan held by our Founders to provide that such awards are exercisable for or settle into shares of Class B common stock, which will occur immediately prior to the completion of this offering;
- no exercise of the outstanding options or settlement of outstanding RSUs except as described above; and
- no exercise by the underwriters of their option to purchase up to 765,916 additional shares of our Class A common stock.

Unless otherwise specified or context otherwise requires, we refer to the Common Stock Reclassification and Exchange and the Preferred Stock Conversion, collectively as the "Transactions." See the section titled "Description of Capital Stock" for additional information regarding the Transactions.

Summary Consolidated Financial and Other Data

The following tables summarize our consolidated financial and other data. The summary consolidated statements of operations data for the years ended December 31, 2019 and 2020 have been derived from our audited consolidated financial statements included elsewhere in this prospectus. We derived our summary consolidated statements of operations data for the three months ended March 31, 2020 and 2021 and the summary consolidated balance sheet data as of March 31, 2021 from our unaudited interim consolidated financial statements included elsewhere in this prospectus. In our opinion, the unaudited interim consolidated financial statements have been prepared on a basis consistent with our audited consolidated financial statements and contain all adjustments, consisting only of normal and recurring adjustments, necessary for a fair presentation of such interim financial statements. Our historical results are not necessarily indicative of results to be expected in the future and our interim results are not necessarily indicative of the results that may be expected for the full fiscal year or any other future period. You should read the following summary consolidated financial and other data in conjunction with the section titled “Management's Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes included elsewhere in this prospectus. The summary consolidated financial and other data in this section are not intended to replace, and are qualified in their entirety by, our consolidated financial statements and related notes.

Consolidated Statements of Operations Data:

(In thousands, except per share data)	Year Ended December 31, 2019	Year Ended December 31, 2020	Three Months Ended March 31, 2020	Three Months Ended March 31, 2021
Revenues	$ 70,760	$ 161,696	$ 28,112	$ 55,360
Cost of revenues(1)(2)	20,737	45,987	8,214	15,019
Gross profit	50,023	115,709	19,898	40,341
Operating expenses:				
Research and development(1)	31,560	53,024	9,576	22,529
Sales and marketing(1)(2)	14,989	34,983	5,511	19,773
General and administrative(1)	16,371	43,713	7,266	11,453
Impairment of capitalized software	1,228	—	—	—
Total operating expenses	64,148	131,720	22,353	53,755
Loss from operations	(14,125)	(16,011)	(2,455)	(13,414)
Other income, net	571	303	233	(41)
Loss before provision for income taxes	(13,554)	$ (15,708)	$ (2,222)	$ (13,455)
Provision for income taxes	—	68	11	17
Net loss	$ (13,554)	$ (15,776)	$ (2,233)	$ (13,472)
Basic and diluted net loss per share(3)	$ (1.10)	$ (1.24)	$ (0.18)	$ (1.04)
Weighted-average shares used in computing net loss per share attributable to common stockholders, basic and diluted (3)	12,373	12,735	12,403	12,916
Pro forma net loss per share attributable to common stockholders—basic and diluted (unaudited)(4)		$ (0.68)		$ (0.60)
Weighted-average shares used in computing pro forma net loss per share attributable to common stockholders—basic and diluted (unaudited)(4)		31,809		31,992

(1) Includes stock-based compensation expenses as follows:

(In thousands)	Year Ended December 31, 2019	Year Ended December 31, 2020	Three Months Ended March 31, 2020	Three Months Ended March 31, 2021
Cost of revenues	$ 6	$ 6	$ 1	$ 2
Research and development	1,552	2,773	447	1,111
Sales and marketing	341	348	73	68
General and administrative	1,826	13,904	633	1,370
Total	$ 3,725	$ 17,031	$ 1,154	$ 2,551

During the year ended December 31, 2020, we recorded compensation costs of $10.2 million related to a secondary transaction where certain employees sold shares of stock to an outside investor at a price above fair market value of the stock.

(2) Includes amortization of capitalized software as follows:

(In thousands)	Year Ended December 31, 2019	Year Ended December 31, 2020	Three Months Ended March 31, 2020	Three Months Ended March 31, 2021
Cost of revenues(a)	$ 103	$ 86	$ 26	$ —
Sales and marketing(a)	621	546	33	148
Total	$ 724	$ 632	$ 59	$ 148

(a) Amortization of capitalized software is recorded to cost of revenue and selling and marketing for revenue and non-revenue generating capitalized software, respectively.

(3) See Note 13 to our audited consolidated financial statements and Note 12 to our unaudited interim condensed consolidated financial statements included elsewhere in this prospectus for an explanation of the method used to calculate our basic and diluted net loss per share attributable to common stockholders.

(4) We have presented the unaudited pro forma basic and diluted net loss per share which has been computed to give effect to the conversion of our stock-based awards and convertible preferred stock into common stock (using the if-converted method) as though the conversion had occurred as of the beginning of the period. The unaudited pro forma net loss per share does not include shares being offered in this offering.

The following table sets forth the computation of our unaudited pro forma basic and diluted net loss per share:

(In thousands, except per share data)	Year Ended December 31, 2020	Three Months Ended March 31, 2021
Numerator:		
Net loss	$ (15,736)	(13,472)
Pro forma adjustment for RSU compensation expense(a)	(107)	(224)
Pro forma adjustment for executive stock option compensation expense(b)	(5,724)	(5,649)
Pro forma net loss	(21,607)	(19,345)
Denominator:		
Weighted-average shares used in computing net loss per share attributable to common stockholders, basic and diluted	12,735	12,916
Pro forma adjustment to reflect assumed vesting and settlement of RSUs(c)	—	2
Pro forma adjustment to reflect assumed conversion of convertible preferred stock	19,074	19,074
Weighted-average shares used in computing pro forma net loss per share, basic and diluted	31,809	31,992
Pro forma net loss per share, basic and diluted	$ (0.68)	(0.60)

(a) Reflects stock-based compensation expenses related to RSUs subject to both a service-based vesting condition and a performance-based vesting condition, where the performance-based vesting condition will be satisfied in connection with this offering. There was $1.2 million and $1.4 million of unrecognized expense as of December 31, 2020 and March 31, 2021 remaining after the pro forma RSU compensation expense.

(b) Reflects compensation expense for stock options granted to our executive officers whereby the vesting accelerates in connection with this offering. There was $2.9 million and $2.5 million of unrecognized expense remaining as of December 31, 2020 and March 31, 2021, respectively, after giving effect to the pro forma stock-based compensation expense.

(c) Reflects RSUs that have vested as of December 31, 2020 and March 31, 2021 for which the service-based vesting condition had been satisfied as of December 31, 2020 and March 31, 2021, respectively, and for which the performance-based vesting condition will be satisfied in connection with this offering.

Consolidated Balance Sheet Data:

	As of March 31, 2021		
(In thousands)	Actual	Pro Forma(1)	Pro Forma As Adjusted(2)(3)
Cash and cash equivalents	$ 117,459	$ 117,459	$ 426,764
Working capital	74,916	74,916	384,221
Total assets	176,874	176,874	486,179
Total deferred revenues	65,262	65,262	65,262
Total stockholders' (deficit) equity	$ (97,785)	$ 84,826	$ 394,131

(1) The pro forma balance sheet data reflects (a) the Transactions as if such Transactions had occurred on March 31, 2021, and (b) the filing and effectiveness of our amended and restated certificate of incorporation, which will occur immediately prior to the completion of this offering.

(2) The pro forma as adjusted consolidated balance sheet data reflects (a) the pro forma adjustments set forth in footnote (1) above and (b) our sale and issuance of 3,700,000 shares of our Class A common stock in this offering at an assumed initial public offering price per share of $90.00, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

(3) Each $1.00 increase or decrease in the assumed initial public offering price per share of $90.00, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the amount of our pro forma as adjusted

cash and cash equivalents, working capital, total assets and total stockholders' (deficit) equity by approximately $3.5 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each 1.0 million share increase or decrease in the number of shares offered by us in this offering would increase or decrease the amount of our pro forma as adjusted cash and cash equivalents, working capital, total assets and total stockholders' (deficit) equity by approximately $84.7 million, assuming that the initial public offering price per share remains at $90.00, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

Key Operating Metrics and Non-GAAP Financial Measures

We regularly review a number of key operating metrics and non-GAAP financial measures to evaluate our business, measure our performance, identify trends, prepare financial projections and make business decisions. The measures set forth below should be considered in addition to, not as a substitute for or in isolation from, our financial results prepared in accordance with GAAP. With respect to MAUs and DAUs, along with paid subscribers, these operating metrics help inform management about the underlying growth in users of our platform, and are a measure of our monetization efforts with respect to Duolingo Plus. Other companies, including companies in our industry, may calculate these measures differently or not at all, which reduces their usefulness as comparative measures. See "Selected Consolidated Financial and Other Data —Key Operating Metrics and Non-GAAP Financial Measures" for additional information on the operating metrics and non-GAAP financial measures set forth below, including a reconciliation of the non-GAAP financial measures, Adjusted EBITDA and free cash flow, to the most directly comparable financial measure calculated in accordance with GAAP.

	Year Ended December 31,		Three Months Ended March 31,	
(In millions, except dollar amounts in thousands)	**2019**	**2020**	**2020**	**2021**
Operating Metrics				
Monthly active users (MAUs)(1)	27.3	36.7	33.5	39.9
Daily active users (DAUs)(2)	5.2	8.2	6.8	9.5
Paid subscribers(3)	0.9	1.6	1.1	1.8
Subscription bookings(4)	$ 72,115	$ 144,379	$ 30,737	$ 50,466
Total bookings(5)	$ 88,033	$ 190,181	$ 36,880	$ 65,830
Non-GAAP Financial Measures				
Net loss (GAAP)	$ (13,554)	$ (15,776)	$ (2,233)	$ (13,472)
Adjusted EBITDA(6)	$ (7,969)	$ 3,630	$ (867)	$ 871
Net cash provided by operating activities (GAAP)	$ 2,152	$ 17,708	$ 4,719	$ 5,123
Free cash flow(7)	$ (3,094)	$ 13,976	$ 2,996	$ 3,825

(1) MAUs are defined as unique Duolingo users who engage with our mobile language learning application or the language learning section of our website each month. MAUs are reported for a measurement period by taking the average of each calendar month in that measurement period. MAUs are a measure of the size of our global active user community on Duolingo.

(2) DAUs are defined as unique Duolingo users who engage with our mobile language learning application or the language learning section of our website each calendar day. DAUs are reported for a measurement period by taking the average of the DAUs for each day in that measurement period. DAUs are a measure of the consistent engagement of our global user community on Duolingo.

(3) Paid subscribers are defined as users who pay for access to Duolingo Plus and had an active subscription as of the end of the measurement period. Each unique user account is treated as a single paid subscriber regardless of whether such user purchases multiple subscriptions, and the count of paid subscribers does not include users who are currently on a free trial.

(4) Subscription bookings represent the amounts we receive from a purchase of a subscription to Duolingo Plus.

(5) Total bookings represent the amounts we receive from a purchase of a subscription to Duolingo Plus, a registration for a Duolingo English Test, an in-app purchase for a virtual good and from advertising networks for advertisements served to our users.

(6) Adjusted EBITDA is defined as net loss excluding interest (income) expense, net, income tax provision, depreciation and amortization, IPO and public company readiness costs, stock-based compensation expense, tender offer-related costs, other expenses, and the impairment of capitalized software.

(7) Free cash flow is defined as net cash provided by operating activities, reduced by capital expenditures and capitalized software development costs, and increased by IPO and public company readiness costs.

risk factors

Risk Factors

Investing in our Class A common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this prospectus, before making a decision to invest in our Class A common stock. If any of the risks actually occur, our business, results of operations, financial condition and prospects could be harmed. In that event, the trading price of our Class A common stock could decline, and you could lose part or all of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations.

Risks Related to Our Business and Industry

If we fail to keep existing users or add new users, or if our users decrease their level of engagement with our products or do not convert to paying users, our revenue, financial results and business may be significantly harmed.

The size of our user base and our users' level of engagement and paid conversion are critical to our success. Our financial performance has been and will continue to be significantly determined by our success in adding, keeping and engaging users of our products and converting them into paying subscribers. We expect that the size of our user base will fluctuate or decline in one or more markets from time to time. If people do not perceive our products to be useful, effective, reliable, and/or trustworthy, we may not be able to attract or keep users or otherwise maintain or increase the frequency and duration of their engagement or the percentage of users that are converted into paying subscribers. There is no guarantee that we will not experience an erosion of our user base or engagement levels. User engagement can be difficult to measure, particularly as we introduce new and different products and services. Any number of factors can negatively affect user stickiness, growth, engagement and conversion, including if:

- users increasingly engage with other competitive products or services instead of our own;
- user behavior on any of our products changes, including decreases in the frequency and duration of use of our products and services;
- users feel that their experience is diminished as a result of the decisions we make with respect to the frequency, prominence, format, size and quality of ads that we display;
- users become concerned about our user data practices or other matters related to privacy and the sharing of user data;
- users lose confidence in our ability to teach language or other subjects or have concerns related to security or other factors;
- users are no longer willing to pay for subscriptions or in-app purchases;
- users have difficulty installing, updating or otherwise accessing our products on mobile devices as a result of actions by us or third parties that we rely on to distribute our products and deliver our services;
- we fail to introduce new features, products or services that users find engaging or if we introduce new products or services, or make changes to existing products and services, that are not favorably received;
- initiatives designed to attract and keep users and increase engagement are unsuccessful or discontinued, whether as a result of actions by us, third parties or otherwise;

- there is a decrease in user stickiness as a result of users no longer being interested in pursuing online language learning or reaching a point where they feel our product cannot advance their language ability;
- third-party initiatives that may enable greater use of our products, including low-cost or discounted data plans, are discontinued;
- we adopt terms, policies or procedures related to areas such as user data or advertising that are perceived negatively by our users or the general public;
- we fail to combat inappropriate or abusive activity on our platform;
- we fail to provide adequate customer service to users, marketers or other partners;
- we fail to protect our brand image or reputation;
- we, our partners or companies in our industry are the subject of adverse media reports or other negative publicity, including as a result of our or their user data practices;
- technical or other problems prevent us from delivering our products in a rapid and reliable manner or otherwise affect the user experience, such as unplanned site outages due to our failure or the failure of third-party systems we rely on, security breaches, distributed denial-of-service attacks or failure to prevent or limit spam or similar content;
- there is decreased engagement with our products as a result of internet shutdowns or other actions by governments that affect the accessibility of our products in any of our markets;
- there is decreased engagement with our products, or failure to accept our terms of service, as part of changes that we have implemented, or may implement, in the future in connection with regulations, regulatory actions or otherwise;
- there is decreased engagement with our products as a result of changes in prevailing social, cultural or political preferences in the markets where we operate; or
- there are changes mandated by legislation, regulatory authorities or litigation that adversely affect our products or users.

From time to time, certain of these factors have negatively affected user stickiness, growth and engagement to varying degrees. If we are unable to maintain or increase our user base and user engagement, our revenue and financial results may be materially adversely affected. In addition, we may not experience rapid user growth or engagement in countries that have high mobile device penetration, but due to the lack of sufficient cellular based data networks, consumers rely heavily on Wi-Fi and may not access our products regularly throughout the day. Any decrease in user stickiness, growth or engagement could render our products less attractive to users, which is likely to have a material and adverse impact on our revenue, business, financial condition and results of operations. If our user growth rate slows or declines, we will become increasingly dependent on our ability to maintain or increase levels of user engagement and monetization in order to drive revenue growth.

The online language learning industry is highly competitive, with low switching costs and a consistent stream of new products and entrants, and innovation by our competitors may disrupt our business.

The online language learning industry is highly competitive, with a consistent stream of new products and entrants. As a result, new products, entrants and business models are likely to continue to emerge, both in the United States and abroad. It is possible that a new product could gain rapid scale at the expense of existing brands through harnessing a new technology, or a new or existing distribution channel, creating a

new or different approach to connecting people or some other means. We compete for learners' time, attention, and share of wallet not only with other online and app-based language learning platforms, but also with offline forms of language learning. Because of the extensibility of the Duolingo platform beyond language learning, we also compete with language learning assessment providers and literacy platforms.

Many of the current and potential competitors, both domestically and internationally, have substantially greater financial, technical, sales, marketing and other resources than we do, as well as in some cases, lower costs. Some competitors offer more differentiated products (for example, online learning as well as physical classrooms and textbooks) that may allow them to more flexibly meet changing customer preferences. Some of our competitors may enjoy better competitive positions in certain geographical regions, user demographics or other key areas that we currently serve or may serve in the future, or in their ability to teach certain languages or to teach speakers of certain languages other languages. These advantages could enable these competitors to offer products that are more appealing to users and potential users than our products, to respond more quickly and/or cost-effectively than us to new or changing opportunities, new or emerging technologies or changes in customer requirements and preferences, or to offer lower prices than ours or to offer free language-learning products or services.

There are a number of free online language-learning opportunities to learn grammar, pronunciation, vocabulary (including specialties in areas such as medicine and business), reading and conversation by means of podcasts and mobile applications, audio courses and lessons, videos, games, stories, news, digital textbooks, and through other means, which compete with our products. We estimate that there are thousands of free mobile applications for language learning; free products are provided in at least 50 languages by private companies, universities and government agencies. Low barriers to entry allow start-up companies with lower costs and less pressure for profitability to compete with us. Competitors that are focused more on user acquisition rather than profitability may be able to offer products at significantly lower prices or for free. As free online translation services improve and become more widely available and used, people may generally become less interested in language learning. If we cannot successfully attract users of these free products and convert a sufficient portion of these free users into paying users, our business could be adversely affected. If free products become more engaging and competitive or gain widespread acceptance by the public, demand for our products could decline or we may have to lower our prices, which could adversely impact our revenue and other results.

Potential competitors also include larger companies that could devote greater resources to the promotion or marketing of their products and services, take advantage of acquisition or other opportunities more readily or develop and expand their products and services more quickly than we do. For example, in 2020, Apple released “Translate," an iOS translation app developed by Apple for iOS devices, to translate text sentences or speech between several languages. Potential competitors also include established social media companies that may develop products, features, or services that may compete with ours or operators of mobile operating systems and app stores. These social media and mobile platform competitors could use strong or dominant positions in one or more markets, and ready access to existing large pools of potential users and personal information regarding those users, to gain competitive advantages over us. These may include offering different product features, services or pricing models that users may prefer, which may enable them to acquire and engage users at the expense of our user growth or engagement.

If we are not able to compete effectively against our current or future competitors and products or services that may emerge, the size and level of engagement of our user base may decrease, which could materially adversely affect our business, financial condition and results of operations.

Changes to our existing brand and products, or the introduction of a new brand or products, could fail to attract or keep users or generate revenue and profits.

Our ability to keep, increase, and engage our user base and to increase our revenue depends heavily on our ability to continue to evolve our existing brand and products and to create successful new brands and products. We may introduce significant changes to our existing brand and products, or acquire or introduce new and unproven brands, products and product extensions, including using technologies with which we have little or no prior development or operating experience. In addition, we often introduce a new product and delay its monetization until the product is more mature and the user base is better established. We have also invested, and expect to continue to invest, significant resources in growing our products to support increasing usage as well as new lines of business, new products, new product extensions and other initiatives to generate revenue. For example, in 2020, we launched our Duolingo ABC app, which has not yet generated any revenue for us. There is no guarantee that investing in new lines of business, new products, new product extensions and other initiatives will succeed. If our new or enhanced brands, products or product extensions fail to engage users, we may fail to attract or keep users or to generate sufficient revenue, operating margin, or other value to justify our investments, and our business may be materially adversely affected.

We have a limited operating history and, as a result, our past results may not be indicative of future operating performance.

We have a limited operating history, which makes it difficult to forecast our future results. You should not rely on our past quarterly operating results as indicators of future performance. You should take into account and evaluate our prospects in light of the risks and uncertainties frequently encountered by companies in rapidly-evolving markets like ours.

We have had operating losses each year since our inception and we may not achieve or maintain profitability in the future.

We have incurred operating losses each year since our inception and we may not achieve or maintain profitability in the future. Although our revenue has increased each quarter since the first quarter of 2018, there can be no assurances that it will continue to do so. Our operating expenses may continue to increase in the future as we increase our sales and marketing efforts and continue to invest in the development of products and services. These efforts may be costlier than we expect and we cannot guarantee that we will be able to increase our revenue to offset our operating expenses. Our revenue growth may slow or our revenue may decline for a number of other possible reasons, including reduced demand for our products or services, increased competition, a decrease in the growth or reduction in size of our overall market, or if we fail for any reason to capitalize on our growth opportunities. If we do not achieve or maintain profitability in the future, it could materially adversely affect our business, financial condition and results of operations.

We have grown rapidly in recent years and have limited operating experience at our current scale of operations. If we are unable to manage our growth effectively, our brand, company culture and financial performance may suffer.

We have experienced rapid growth and demand for our services since inception. We have expanded our operations rapidly and have limited operating experience at our current size. As we have grown, we have increased our employee headcount and we expect headcount growth to continue for the foreseeable future. From December 31, 2018 to May 31, 2021, our headcount grew from approximately 140 employees to over 400 employees. Further, as we grow, our business becomes increasingly complex. To effectively manage and capitalize on our growth, we must continue to expand our sales and marketing, focus on innovative product and content development, upgrade our management information systems

and other processes, and obtain more space for our expanding staff. Our continued growth could strain our existing resources, and we could experience ongoing operating difficulties in managing our business across numerous jurisdictions, including difficulties in hiring, training, and managing a diffuse and growing employee base. Failure to scale and preserve our company culture with growth could harm our future success, including our ability to retain and recruit personnel and to effectively focus on and pursue our corporate objectives. If our management team does not effectively scale with our growth, we may experience erosion to our brand, the quality of our products and services may suffer, and our company culture may be harmed. Moreover, we have been, and may in the future be, subject to legacy claims or liabilities arising from our systems and controls, content or workforce in earlier periods of our rapid development.

Because we have a limited history operating our business at its current scale, it is difficult to evaluate our current business and future prospects, including our ability to plan for and model future growth. Our limited operating experience at this scale, combined with the rapidly-evolving nature of the market in which we operate, substantial uncertainty concerning how these markets may develop, and other economic factors beyond our control, reduces our ability to accurately forecast quarterly or annual revenue. Failure to manage our future growth effectively could have a material adverse effect on our business, financial condition, and operating results.

Our costs are continuing to grow, and some of our investments have the effect of reducing our operating margin and profitability. If our investments are not successful, our business and financial performance could be harmed.

Historically, our costs have increased each year since 2011 and we anticipate that our expenses will continue to increase in the future as we broaden our user base, develop and implement new products, market new and existing products and promote our brands, continue to expand our technical infrastructure, and continue to hire additional employees and contractors to support our expanding operations, including our efforts to focus on privacy, safety, and security. In addition, from time to time we may be subject to settlements, judgments, fines, or other monetary penalties in connection with legal and regulatory developments that may be material to our business. We may also invest in new platforms and technologies. Some of these investments may generate only limited revenue and reduce our operating margin and profitability. If these efforts are not successful, our ability to grow revenue will be harmed, which could materially adversely affect our business and financial performance.

Our quarterly operating results and other operating metrics may fluctuate from quarter to quarter, which makes these metrics difficult to predict.

Our quarterly operating results and other operating metrics have fluctuated in the past and may continue to fluctuate from quarter to quarter, which makes them difficult to predict. Our financial condition and operating results in any given quarter can be influenced by numerous factors, many of which we are unable to predict or are outside of our control, including, for example:

- the timing, size and effectiveness of our marketing efforts;
- the timing and success of new product, service and feature introductions by us or our competitors or any other change in the competitive landscape of our market;
- fluctuations in the rate at which we attract new users, the level of engagement of such users and the propensity of such users to subscribe to our brands or to purchase à la carte features;
- successful expansion into international markets;
- errors in our forecasting of the demand for our products and services, which could lead to lower revenue or increased costs, or both;

- increases in sales and marketing, product development or other operating expenses that we may incur to grow and expand our operations and to remain competitive;
- the diversification and growth of our revenue sources;
- our ability to maintain gross margins and operating margins;
- fluctuations in currency exchange rates and changes in the proportion of our expenses denominated in foreign currencies;
- changes in our effective tax rate;
- changes in accounting standards, policies, guidance, interpretations, or principles;
- our development and improvement of the quality of the Duolingo language app and Duolingo English Test, other Duolingo experiences, including, enhancing existing and creating new products, services, technology and features;
- the continued development and upgrading of our technology platform;
- system failures or breaches of security or privacy;
- our ability to obtain, maintain, protect and enforce intellectual property rights and successfully defend against claims of infringement, misappropriation or other violations of third-party intellectual property;
- adverse litigation judgments, settlements, or other litigation-related costs;
- changes in the legislative or regulatory environment, including with respect to privacy, intellectual property, consumer product safety, and advertising, or enforcement by government regulators, including fines, orders, or consent decrees; and
- changes in business or macroeconomic conditions, including the impact of the current COVID-19 outbreak, lower consumer confidence in our business or in the online learning industry generally, recessionary conditions, increased unemployment rates, stagnant or declining wages, political unrest, armed conflicts, or natural disasters.

Any one of the factors above or the cumulative effect of some of the factors above may result in significant fluctuations in our results of operations.

The variability and unpredictability of our quarterly operating results or other operating metrics could result in our failure to meet our expectations or those of analysts that cover us or investors with respect to revenue or other operating results for a particular period. If we fail to meet or exceed such expectations, the market price of our Class A common stock could fall substantially, and we could face costly lawsuits, including securities class action suits.

Our user metrics and other estimates are subject to inherent challenges in measurement, and real or perceived inaccuracies in those metrics may negatively affect our reputation and our business.

We track certain key operational metrics and non-GAAP financial measures, including MAUs, DAUs, paid subscribers, subscription bookings, total bookings, Adjusted EBITDA and free cash flow, to evaluate growth trends, measure our performance, and make strategic decisions. Our user metrics are calculated using internal company data gathered on an analytics platform that we developed and operate, have not been validated by an independent third party and may differ from estimates or similar metrics published by third parties due to differences in sources, methodologies, or the assumptions on which we rely. Our user metrics are also affected by technology on certain mobile devices that automatically runs in the background of our application when another phone function is used, and this activity can cause our

system to miscount the user metrics associated with such an account. We continually seek to improve the accuracy of and our ability to track such data, but given the complexity of the systems involved and the rapidly changing nature of mobile devices and systems, we expect to continue to encounter challenges, particularly if we continue to expand in parts of the world where mobile data systems and connections are less stable. In addition, we may improve or change our methodologies for tracking these metrics over time, which could result in unexpected changes to our metrics, including the metrics we publicly disclose. As a result, while any future periods may benefit from such improvement or change, prior periods may not be as accurate or comparable, or we may need to adjust such prior periods. The methodologies used to measure these metrics require significant judgment and are also susceptible to algorithm or other technical errors. In addition, our methodologies for tracking these metrics may change over time, which could result in unexpected changes to our metrics, including the metrics we publicly disclose. If the internal systems and tools we use to track these metrics undercount or overcount performance or contain algorithmic or other technical errors, the data we report may not be accurate. While these numbers are based on what we believe to be reasonable estimates of our metrics for the applicable period of measurement, there are inherent challenges in measuring how our products are used across large populations globally.

Errors or inaccuracies in our metrics or data could also result in incorrect business decisions and inefficiencies. For instance, if a significant understatement or overstatement of active users were to occur, we may expend resources to implement unnecessary business measures or fail to take required actions to attract a sufficient number of users to satisfy our growth strategies. We continually seek to address technical issues in our ability to record such data and improve our accuracy, but given the complexity of the systems involved and the rapidly changing nature of mobile devices and systems, we expect these issues to continue, particularly if we continue to expand in parts of the world where mobile data systems and connections are less stable. If our operational metrics are not accurate representations of our business, or if investors do not perceive these metrics to be accurate, or if we discover material inaccuracies with respect to these figures, our reputation may be significantly harmed, our stock price could decline, we may be subject to stockholder litigation, and our business, results of operations, and financial condition could be materially adversely affected.

We rely on third-party platforms such as the Apple App Store and the Google Play Store to distribute our products and collect revenue. If we are unable to maintain a good relationship with such platform providers, if their terms and conditions or pricing changes to our detriment, if we violate, or if a platform provider believes that we have violated, the terms and conditions of its platform, or if any of these platforms loses market share or falls out of favor or is unavailable for a prolonged period of time, our business will suffer.

Our products depend on mobile app stores and other third parties such as data center service providers, as well as third party payment aggregators, computer systems, internet transit providers and other communications systems and service providers. Our mobile applications are almost exclusively accessed through and depend on the Apple App Store and the Google Play Store. While our mobile applications are generally free to download from these stores, we offer our users the opportunity to purchase subscriptions and certain à la carte features through these applications. We determine the prices at which these subscriptions and features are sold. Purchases of these subscriptions and features via our mobile applications are mainly processed through the in-app payment systems provided by Apple and Google. We pay Apple and Google, as applicable, a meaningful share (generally 30%) of the revenue we receive from transactions processed through in-app payment systems. In 2020, we derived 51% of our revenue and 53% of our total bookings from the Apple App Store, and 19% of our revenue and 20% of our total bookings from the Google Play Store. The timing of their payments also may change, which may negatively impact our cash receipts and working capital. While we do not anticipate any interruption in

their distribution platforms or ability to accept customer payments, any such disruptions, even temporary, may have material impacts on our business and operations.

We are subject to the standard policies and terms of service of third-party platforms, which govern the promotion, distribution, content and operation generally of apps on the platform. Each platform provider has broad discretion to make changes to its operating systems or payment services or change the manner in which their mobile operating systems function and to change and interpret its terms of service and other policies with respect to us and other developers, and those changes may be unfavorable to us. For example, such changes could limit, eliminate or otherwise interfere with our products, our ability to distribute our applications through their stores, our ability to update our applications, including to make bug fixes or other feature updates or upgrades, the features we provide, the manner in which we market our in-app products, our ability to access native functionality or other aspects of mobile devices, and our ability to access information about our users that they collect. In addition, our distribution agreements with Apple and Google are generally terminable by Apple or Google without cause with 30 days prior written notice (to the extent allowed by applicable local law). Apple and Google may also terminate our agreements with them immediately (unless a longer period is required by applicable law) under certain circumstances, including upon our uncured breach of such agreements. To the extent Apple, Google or other third party platform providers on which we rely make such changes or terminate our agreements with them, our business, financial condition and results of operations could be materially adversely affected.

A platform provider may also change its fee structure, add fees associated with access to and use of its platform, alter how we are able to advertise on the platform, change how the personal information of its users is made available to application developers on the platform, limit the use of personal information for advertising purposes, or restrict how users can share information with their friends on the platform or across platforms. For example, in December 2017, Apple revised its App Store Guidelines to require the disclosure of the odds of receiving certain types of virtual items from “loot boxes” (or similar mechanisms that offer a paid license to randomized virtual items) before customers purchase a license for the virtual items, and in May 2019 Google revised its Play Store policies to require similar disclosures. As another example, in 2020 Apple announced that a version update of iOS 14 will require its users, on an app-by-app basis, to explicitly opt-in to the use of identifier-for-advertising, a device identifier assigned by Apple to each of its devices and used by advertisers to attribute app installs to advertising campaigns, target users through user acquisition, and deliver targeted ads. Based on statements from Apple, we anticipate these changes will take effect in 2021. We are continuing to evaluate how these rules or announced changes may affect our business, operations and financial results.

If we violate, or a platform provider believes we have violated, its terms of service (or if there is any change or deterioration in our relationship with these platform providers), that platform provider could limit or discontinue our access to the platform. A platform provider could also limit or discontinue our access to the platform if it establishes more favorable relationships with one or more of our competitors or it determines that we are a competitor. Any limit or discontinuation of our access to any platform could significantly reduce our ability to distribute our products to users, decrease the size of the user base we could convert into paying users, or decrease the revenues we derive from paying users or advertisers, each of which would materially and adversely affect our business, financial condition and results of operations.

We also rely on the continued popularity, customer adoption, and functionality of third-party platforms. In the past, some of these platform providers have been unavailable for short periods of time or experienced issues with their in-app purchasing functionality. If either of these events recurs on a prolonged, or even short-term, basis or other similar issues arise that impact users’ ability to access our app or access social features, our business, financial condition, results of operations or reputation may be harmed.

We rely on third-party hosting and cloud computing providers, like Amazon Web Services (AWS) and Google Cloud, to operate certain aspects of our business. A significant portion of our product traffic is hosted by a limited number of vendors, and any failure, disruption or significant interruption in our network or hosting and cloud services could adversely impact our operations and harm our business.

Our technology infrastructure is critical to the performance of our products and to user satisfaction, as well as our corporate functions. Our products and company systems run on a complex distributed system, or what is commonly known as cloud computing. We own, operate and maintain elements of this system, but significant elements of this system are operated by third-parties that we do not control and which would require significant time and expense to replace. We expect this dependence on third-parties to continue. We have suffered interruptions in service in the past, including when releasing new software versions or bug fixes, and if any such interruption were significant and/or prolonged it could adversely affect our business, financial condition, results of operations or reputation.

In particular, a significant portion, if not almost all, of our product traffic, data storage, data processing and other computing services and systems is hosted by AWS and Google Cloud. AWS and Google Cloud provide us with computing and storage capacity pursuant to an agreement that continues until terminated by either party. The agreements require AWS and Google Cloud to provide us their standard computing and storage capacity and related support in exchange for timely payment by us. We have experienced, and may in the future experience, disruptions, outages and other performance problems due to a variety of factors, including infrastructure changes, human or software errors and capacity constraints. If a particular application is unavailable when users attempt to access it or navigation through a product is slower than they expect, users may stop using the application and may be less likely to return to the application as often, if at all.

Any failure, disruption or interference with our use of hosted cloud computing services and systems provided by third-parties, like AWS or Google Cloud, could adversely impact our business, financial condition or results of operations. In addition, since many of the technical specialists responsible for managing disruptions to our technology infrastructure are working from home in accordance with shelter-in-place orders issued due to the COVID-19 pandemic, the time required to remedy any interruption may increase. To the extent we do not effectively respond to any such interruptions, upgrade our systems as needed and continually develop our technology and network architecture to accommodate traffic, our business, financial condition or results of operations could be adversely affected. Furthermore, our disaster recovery systems and those of third-parties with which we do business may not function as intended or may fail to adequately protect our critical business information in the event of a significant business interruption, which may cause interruption in service of our products, security breaches or the loss of data or functionality, leading to a negative effect on our business, financial condition or results of operations.

In addition, we depend on the ability of our users to access the internet. Currently, this access is provided by companies that have significant market power in the broadband and internet access marketplace, including incumbent telephone companies, cable companies, mobile communications companies, government-owned service providers, device manufacturers and operating system providers, any of whom could take actions that degrade, disrupt or increase the cost of user access to our products or services, which would, in turn, negatively impact our business. The adoption or repeal of any laws or regulations that adversely affect the growth, popularity or use of the internet, including laws or practices limiting internet neutrality, could decrease the demand for, or the usage of, our products and services, increase our cost of doing business and adversely affect our results of operations.

We derive a portion of our revenues from advertisements. If we are unable to continue to compete for these advertisements, or if any events occur that negatively impact our relationships with advertising networks, our advertising revenues and operating results would be negatively impacted.

We generate advertising revenue from the sale of display and video advertising delivered through advertising impressions. In 2020, approximately 17% of our total revenues were derived from advertising. We generally enter into arrangements with the major programmatic advertising networks to monetize our advertising inventory. We need to maintain good relationships with these advertising networks to provide us with a sufficient inventory of advertisements. Online advertising, including through mobile applications, is an intensely competitive industry. Many large companies, such as Amazon, Facebook and Google, invest significantly in data analytics to make their websites and platforms more attractive to advertisers. Our advertising revenue is primarily a function of the number and hours of engagement of our free users and our ability to provide innovative advertising products that are relevant to our users and enhance returns for our advertising partners. If our relationship with any advertising partners terminates for any reason, or if the commercial terms of our relationships are changed or do not continue to be renewed on favorable terms, we would need to qualify new advertising partners, which could negatively impact our revenues, at least in the short term.

In addition, internet-connected devices and operating systems controlled by third parties increasingly contain features that allow device users to disable functionality that allows for the delivery of advertising on their devices or reduce the ability to provide personalized or targeted advertising, which results in less valuable ads. Device and browser manufacturers may include or expand these features as part of their standard device specifications. For example, when Apple announced that UDID, a standard device identifier used in some applications, was being superseded and would no longer be supported, application developers were required to update their apps to utilize alternative device identifiers such as universally unique identifier, or, more recently, identifier-for-advertising, which simplifies the process for Apple users to opt out of behavioral targeting. As of April 2021, Apple has deployed further changes, requiring its users with a version of iOS 14 (and presumably future iOS versions) to opt into the use of identifier-for-advertising on a per app basis. Furthermore, laws and regulations may also make it more difficult to deliver personalized or targeted advertising or impose requirements that result in more users making elections to block our ability to deliver targeted ads. If users do not elect to participate in functionality that supports the delivery of targeted advertising on their devices, our ability to deliver effective advertising campaigns could suffer, which could cause our business, financial condition, or results of operations to suffer. The impact of these operating systems changes or potential future regulation on targeted advertising is highly uncertain.

If we are not able to maintain the value and reputation of our brand, our ability to expand our base of users may be impaired, and our business and financial results may be harmed.

We believe that our brand has significantly contributed to our word of mouth virality, which has in turn contributed to the success of our business. We also believe that maintaining, protecting and enhancing our brand is critical to expanding our base of users and, if we fail to do so, our business, financial condition and results of operations could be materially adversely affected. We believe that the importance of brand recognition will continue to increase, given the growing number of language learning applications, or “apps,” and the low barriers to entry for companies offering language learning products and services. Many of our new users are referred by existing users. Maintaining our brand will depend largely on our ability to continue to provide useful, reliable, trustworthy and innovative products, which we may not do successfully.

Further, we may experience media, legislative, or regulatory scrutiny of our actions or decisions regarding user privacy, encryption, content, contributors, advertising and other issues, which may materially

adversely affect our reputation and brand. In addition, we may fail to respond expeditiously or appropriately to objectionable content within our app or practices by users, or to otherwise address user concerns, which could erode confidence in our brand. Maintaining and enhancing our brand will require us to make substantial investments and these investments may not be successful.

Our growth and profitability rely, in part, on our ability to attract and keep users through cost-effective marketing efforts, including through our social media presence and use of social media influencers. Any failure in these efforts could materially adversely affect our business, financial condition and results of operations.

We have increased our marketing expenditures over time in order to attract and keep users and sustain our growth. For the years ended December 31, 2019 and 2020, our sales and marketing expenses were $15.0 million and $35.0 million, respectively. For the three months ended March 31, 2020 and 2021, our sales and marketing expenses were $5.5 million and $19.8 million, respectively. Evolving consumer behavior can affect the availability of profitable marketing opportunities. For example, as consumers communicate less via email and more via text messaging, messaging apps and other virtual means, the reach of email campaigns designed to attract new and repeat users (and keep current users) for our products is adversely impacted. To continue to reach potential users and grow our businesses, we must identify and devote our overall marketing expenditures to newer advertising channels, such as mobile and online video platforms as well as targeted campaigns in which we communicate directly with potential, former and current users via new virtual means. Generally, the opportunities in and sophistication of newer advertising channels are relatively undeveloped and unproven, and there can be no assurance that we will be able to continue to appropriately manage and fine-tune our marketing efforts in response to these and other trends in the advertising industry. Any failure to do so could materially adversely affect our business, financial condition and results of operations.

We are subject to certain risks as a mission-based company.

We believe that a critical contributor to our success has been our commitment to make free language learning available worldwide in an effort to help people throughout the world improve their economic outcomes. The mission of Duolingo is a significant part of our business strategy and who we are as a company. We believe that Duolingo users value our commitment to our mission. However, because we hold ourselves to such high standards, and because we believe our users have come to have high expectations of us, we may be more severely affected by negative reports or publicity if we fail, or are perceived to have failed, to live up to Duolingo's mission. For example, maintaining a free version of the app that is both effective and enjoyable is central to Duolingo's mission. As a result, our brand and reputation may be negatively affected by actions we take that are viewed as contrary to that mission, such as features that are only available to Plus subscribers or changes to the free offering that are viewed as undermining how fun or effective the free offering is. In these or other circumstances, the damage to our reputation may be greater than to other companies that do not share similar values with us, and it may take us longer to recover from such an incident and gain back the trust of our users.

We may make decisions regarding our business and products in accordance with Duolingo's mission and values that may reduce our short- or medium-term operating results if we believe those decisions are consistent with the mission and will improve the aggregate user experience. Although we expect that our commitment to Duolingo's mission will, accordingly, improve our financial performance over the long term, these decisions may not be consistent with the expectations of investors and any longer-term benefits may not materialize within the time frame we expect or at all, which could harm our business, revenue and financial results.

Unfavorable media coverage could materially adversely affect our business, brand image or reputation.

Unfavorable publicity or media reports regarding us, our privacy practices, data security compromises or breaches, product changes, product or service quality or features, litigation or regulatory activity or regarding the actions of our partners, our users, our employees or other companies in our industry, could materially adversely affect our brand image or reputation, regardless of the veracity of such publicity or media reports. If we fail to protect our brand image or reputation, we may experience material adverse effects to the size, demographics, engagement, and loyalty of our user base, resulting in decreased revenue, fewer app installs (or increased app uninstalls), or slower user growth rates. Damage to our brand or reputation could also adversely affect educational institutions' willingness to accept the Duolingo English Test, which in turn could slow the growth of, or reduce, our revenue from the Duolingo English Test. In addition, if securities analysts or investors perceive any media coverage of us to be negative, the price of our Class A common stock may be materially adversely affected. Any of the foregoing could materially adversely affect our business, financial condition and results of operations.

Our future success depends on the continuing efforts of our key employees and our ability to attract and retain highly skilled personnel and senior management.

We currently depend on the continued services and performance of our key personnel, including Luis von Ahn and Severin Hacker. If one or more of our executive officers or key employees were unable or unwilling to continue their employment with us, we might not be able to replace them easily, in a timely manner, or at all. The risk that competitors or other companies may poach our talent increases as we continue to build our brands and become more well-known. Our key personnel have been, and may continue to be, subject to poaching efforts by our competitors and other internet and high-growth companies, including well-capitalized players in the social media and consumer internet space. The loss of key personnel, including members of management as well as key engineering, product development, design and marketing personnel, could disrupt our operations and have a material adverse effect on our business. The success of our brand also depends on the commitment of our key personnel to our mission. To the extent that any of our key personnel act in a way that does not align with our mission, our reputation could be materially adversely affected. See "—Our employees could engage in misconduct that materially adversely affects us."

Our future success will depend upon our continued ability to identify, hire, develop, motivate, and retain highly skilled individuals across the globe, with the continued contributions of our senior management being especially critical to our success. Competition for well-qualified, highly skilled employees in our industry is intense and our continued ability to compete effectively depends, in part, upon our ability to attract and retain new employees. While we have established programs to attract new employees and provide incentives to retain existing employees, particularly our senior management, we cannot guarantee that we will be able to attract new employees or retain the services of our senior management or any other key employees in the future. Additionally, we believe that our culture and core values have been, and will continue to be, a key contributor to our success and our ability to foster the innovation, creativity and teamwork we believe we need to support our operations. If we fail to effectively manage our hiring needs and successfully integrate our new hires, or if we fail to effectively manage remote work arrangements resulting from the COVID-19 pandemic, our efficiency and ability to meet our forecasts and our ability to maintain our culture, employee morale, productivity and retention could suffer, and our business, financial condition and results of operations could be materially adversely affected.

Finally, effective succession planning is also important to our future success. If we fail to ensure the effective transfer of senior management knowledge and smooth transitions involving senior management across our various businesses, our ability to execute short and long term strategic, financial and operating

goals, as well as our business, financial condition, and results of operations generally, could be materially adversely affected.

Our employees, consultants and third party providers could engage in misconduct that materially adversely affects us.

Our employees, consultants and third party providers could engage in misconduct that materially and adversely affects us. Misconduct by these parties could include intentional failures to comply with the applicable laws and regulations in the United States and abroad, report financial information or data accurately or disclose unauthorized activities to us. These laws and regulations may restrict or prohibit a wide range of pricing, discounting and other business arrangements. Such misconduct could result in legal or regulatory sanctions and cause serious harm to our reputation. It is not always possible to identify and deter misconduct by these parties, and any other precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses, or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could result in the imposition of significant civil, criminal and administrative penalties, which could have a significant impact on our business. Whether or not we are successful in defending against such actions or investigations, if any of our employees, consultants or third party providers were to engage in or be accused of misconduct, we could be exposed to legal liability, incur substantial costs, our business and reputation could be materially adversely affected, and we could fail to retain key employees. See "—Unfavorable media coverage could seriously harm our business, brand image or reputation."

If the acceptance by educational organizations of technology-based education does not continue to grow, or if technology-based education is discouraged by educational organizations, it could have a material adverse effect on our business.

Our success depends in part upon the continued adoption by educational organizations, such as schools, of technology-based education initiatives, including online learning. Some educators utilize our language learning application or Duolingo for Schools, our free web-based tool for teachers, as part of their curriculums or as a supplement to their curriculums. Based on a 2020 survey, we believe that almost 40% of foreign language teachers in US K-12 schools use Duolingo in their classrooms in some form. However, some academics and educators oppose online education in principle and have expressed concerns regarding the perceived loss of control over the education process that could result from offering or utilizing courses online. If the acceptance of technology-based education does not continue to grow, or if schools and other educational organizations do not continue to utilize our language learning application in the classroom or do not promote the utilization of our language learning application outside of the classroom, our ability to continue to grow our language learning application could be impaired.

If the recognition by schools and other educational organizations of the value of technology-based assessment does not continue to grow, or if schools and other organizations reduce their reliance on assessment in general, our ability to generate revenue from our assessment, including our Duolingo English Test, could be impaired.

The success of the Duolingo English Test depends in part upon the continued recognition and acceptance by schools and other educational organizations of technology-based assessment and upon the continued utilization of assessment in general. As a result of the COVID-19 pandemic, in 2020, a number of universities waived standardized test requirements for admissions requirements and some universities plan to phase out requirements for standardized testing altogether. In addition, some have questioned the validity of language assessments taken online. If schools and other educational organizations reduce their reliance, or altogether cease to use standardized testing as part of admissions processes or otherwise, or

reduce or eliminate reliance on standardized testing, it would have a material adverse effect on our Duolingo English Test business, which could adversely affect our revenues and results of operations.

We operate in various international markets, including certain markets in which we have limited experience. As a result, we face additional risks in connection with certain of our international operations.

Both our language learning application and the Duolingo English Test are available all over the world. Operating internationally, particularly in countries in which we have limited experience, exposes us to a number of additional risks, including:

- operational and compliance challenges caused by distance, language and cultural differences;
- the cost and resources required to localize our platform and services, which often requires the translation of our platform into foreign languages and adaptation for local practices and regulatory requirements;
- difficulties in staffing and managing international operations;
- differing levels of social and technological acceptance of our products or lack of acceptance of them generally;
- foreign currency fluctuations, and in particular, decreases in the value of foreign currencies relative to the US dollar;
- restrictions on the transfer of funds among countries and back to the United States, as well as costs associated with repatriating funds to the United States;
- differing and potentially adverse tax laws, including resulting from the complexities of foreign corporate income tax systems, value added tax (VAT) regimes, tax withholding rules, and other indirect taxes, tax collection or remittance obligations, and restrictions on the repatriation of earnings;
- multiple, conflicting and changing laws, rules and regulations, and difficulties understanding and ensuring compliance with those laws, rules and regulations by both our employees and our users, over whom we exert no control;
- compliance challenges due to different laws and regulatory environments, particularly in the case of privacy, data security, and content, which are complex, sometimes inconsistent, and subject to unexpected changes;
- competitive environments that favor local businesses;
- reduced or varied protection for our intellectual property rights in some countries;
- low usage and/or penetration of internet-connected consumer electronic devices;
- political tension or social unrest and economic instability, particularly in countries in which we operate;
- trade sanctions, political unrest, terrorism, war, health and safety epidemics (such as the COVID-19 pandemic) or the threat of any of these events; and
- breaches or violation of any anti-corruption laws, rules or regulations applicable to our business, including but not limited to the Foreign Corrupt Practices Act of 1977, as amended.

Moreover, geopolitical tensions or regulatory uncertainty in countries in which we operate, such as China, may prevent us from operating in certain countries or increase our costs of operating in those countries.

Additionally, if enforcement authorities demand access to our user data or require that we obtain hard to obtain local licenses, our failure to comply with those demands or obtain those licenses could lead to our inability to operate in such countries or other punitive acts.

In addition to the factors listed above, we have invested to expand our operations in China, which is an intensely competitive market, both on the consumer side and from a talent perspective. We expect to continue to incur significant expenses to operate our business in China, and we may not achieve profitability in that market. As we expand our operations in China, the above factors, sentiment of the workforce in China, and China's policy towards foreign direct investment may particularly impact our operations in China. Further, as we expand our operations in China, we expect to continue to make modifications to the way our website, mobile apps, offerings, and features function in China as compared to other countries. In addition, we need to ensure that our business practices in China are compliant with local laws and regulations, which may be interpreted and enforced in ways that are different from our interpretation, and/or create obligations on us that are costly to meet or conflict with laws in other jurisdictions. Our office of approximately 17 employees in Beijing makes it easier for the Chinese authorities to bring enforcement actions against us.

The occurrence or impact of any or all of the events described above could materially adversely affect our international operations, which could in turn materially adversely affect our business, financial condition and results of operations.

Our business and results of operations may be materially adversely affected by the recent COVID-19 pandemic or other similar outbreaks.

Our business could be materially adversely affected by the outbreak of a widespread health epidemic or pandemic, including the COVID-19 pandemic. The COVID-19 pandemic has reached across the globe, resulting in the implementation of significant governmental measures, including lockdowns, closures, quarantines, and travel bans intended to control the spread of the virus. While some of these measures have been relaxed over the past few months in certain parts of the world, ongoing social distancing measures, and future prevention and mitigation measures, as well as the potential for some of these measures to be reinstituted in the event of repeat waves of the virus, are likely to have an adverse impact on global economic conditions and consumer confidence and spending, and could materially adversely affect demand, or users' ability to pay, for our products and services.

A public health epidemic or pandemic, including COVID-19, poses the risk that Duolingo or its employees, contractors, vendors, and other business partners may be prevented or impaired from conducting ordinary course business activities for an indefinite period of time, including due to shutdowns necessitated for the health and well-being of our employees, the employees of business partners, or shutdowns that may be requested or mandated by governmental authorities. In addition, in response to the COVID-19 outbreak, we have taken several precautions that may adversely impact employee productivity, such as requiring employees to work remotely, imposing travel restrictions, and temporarily closing office locations.

A widespread epidemic, pandemic or other health crisis could also cause significant volatility in global markets. The COVID-19 outbreak has caused disruption in financial markets, which if it continues or intensifies, could reduce our ability to access capital and thereby negatively impact our liquidity.

We intend to continue to execute on our strategic plans and operational initiatives during the COVID-19 outbreak; however, the aforementioned uncertainties may result in delays or modifications to these plans and initiatives. Part of our growth strategy includes increasing the number of international users and expanding into additional geographies. The timing and success of our international expansion may be negatively impacted by COVID-19, which could impede our anticipated growth.

The ultimate extent of the impact of any epidemic, pandemic, or other health crisis on our business will depend on multiple factors that are highly uncertain and cannot be predicted, including its severity, location and duration, and actions taken to contain or prevent further its spread. Additionally, the COVID-19 outbreak could increase the magnitude of many of the other risks described in this prospectus, and may have other material adverse effects on our operations that we are not currently able to predict. If our business and the markets in which we operate experience a prolonged occurrence of adverse public health conditions, such as COVID-19, it could materially adversely affect our business, financial condition, and results of operations.

An economic downturn or economic uncertainty may adversely affect consumer discretionary spending and demand for our products and services.

Our products and services may be considered discretionary items for consumers. Factors affecting the level of consumer spending for such discretionary items include general economic conditions, and other factors, such as consumer confidence in future economic conditions, fears of recession, the availability and cost of consumer credit, levels of unemployment, and tax rates. In recent years, the United States and other significant economic markets have experienced cyclical downturns and worldwide economic conditions remain uncertain. As global economic conditions continue to be volatile or economic uncertainty remains, including due to the COVID-19 outbreak, trends in consumer discretionary spending also remain unpredictable and subject to reductions. To date, our business has operated almost exclusively in a relatively strong economic environment and, therefore, we cannot be sure the extent to which we may be affected by recessionary conditions. Unfavorable economic conditions may lead consumers to delay or reduce purchases of our products and consumer demand for our products may not grow as we expect. Our sensitivity to economic cycles and any related fluctuation in consumer demand for our products and services could materially adversely affect our business, financial condition, and results of operations. In addition, political instability or adverse political developments, could harm our business, financial condition and results of operations.

Security breaches of our networks, systems or applications, improper unauthorized access to or disclosure of our proprietary data or user-related data, including personal data, other hacking and phishing attacks on our systems or service, or other cyber incidents could disrupt our services or compromise sensitive information related to our business and/or personal data processed by us or on our behalf and expose us to liability, which could harm our reputation and materially adversely affect our business.

Our products and services and the operation of our business involve the collection, storage, processing, and transmission of data, including personal data. The information systems that store and process such data are susceptible to increasing threats of continually evolving cybersecurity risks. In particular, our industry is prone to cyber-attacks by third parties seeking unauthorized access to confidential or sensitive data, including user personal data, or to disrupt our ability to provide services. We face an ever-increasing number of threats to our information systems from a broad range of threat actors, including foreign governments, criminals, competitors, computer hackers, cyber terrorists and politically motivated groups or individuals, and we have previously experienced various attempts to access our information systems. These threats include physical or electronic break-ins, security breaches from inadvertent or intentional actions by our employees, contractors, consultants, and/or other third parties with otherwise legitimate access to our systems, website or facilities, or from cyber-attacks by malicious third parties which could breach our data security and disrupt our systems. The motivations of such actors may vary, but breaches that compromise our information technology systems or the personal data processed on such systems can cause interruptions, delays or operational malfunctions, which in turn could have a material adverse effect on our business, results of operations, financial condition and prospects.

In addition, the risks related to a security breach or disruption, including through ransomware, a distributed denial-of-service (DDoS) attack, computer malware, viruses, social engineering (predominantly spear phishing attacks), and general hacking, have become more prevalent in our industry and have generally increased as the number, intensity, and sophistication of attempted attacks and intrusions from around the world have increased.

Such security breaches or disruptions have occurred on our systems in the past and will occur on our systems in the future. We also regularly encounter attempts to create false or undesirable user accounts and ads or take other actions on our platform for objectionable ends. As a result of our prominence, the size of our user base, the volume of personal data on our systems, and the evolving nature of our products and services (including our efforts involving new and emerging technologies), we may be a particularly attractive target for such attacks, including from highly sophisticated, state-sponsored, or otherwise well-funded criminal actors.

Our efforts to address undesirable activity on our platform also increase the risk of retaliatory attacks. Such breaches and attacks on us or our third-party service providers may cause interruptions to the services we provide, degrade the user experience, cause users or marketers to lose confidence and trust in our products and decrease the use of our products or stop using our products in their entirety, impair our internal systems, or result in financial harm to us. Any failure to prevent or mitigate security breaches and unauthorized access to or disclosure of our data or user data, including personal information, content, or payment information from users, or information from marketers, could result in the loss, modification, disclosure, destruction, or other misuse of such data, which could subject us to legal liability and penalties, harm our business and reputation and diminish our competitive position. We may incur significant costs in protecting against or remediating such incidents and as cybersecurity incidents continue to evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any information security vulnerabilities. Our efforts to protect our confidential and sensitive data, the data of our users or other personal information we receive, and to prevent or disable undesirable activities on our platform, may also be unsuccessful due to software bugs or other technical malfunctions; employee, contractor, or vendor error or malfeasance, including defects or vulnerabilities in our service providers' information technology systems or offerings; government surveillance; breaches of physical security of our facilities or technical infrastructure; or other threats that may surface or evolve.

In addition, third parties may attempt to fraudulently induce employees or users to disclose information in order to gain access to our data or our users' data. Cyber-attacks continue to evolve in sophistication and volume, and may be difficult to detect for long periods of time. Although we have developed systems and processes that are designed to protect our data and user data, to prevent data loss, to disable undesirable accounts and activities on our platform, and to prevent or detect security breaches, we cannot assure you that such measures will be successful, that we will be able to anticipate or detect all cyber-attacks or other breaches, that we will be able to react to cyber-attacks or other breaches in a timely manner, or that our remediation efforts will be successful. We may incur significant costs in connection with such remediation efforts, including the costs of notifying applicable regulators and affected users, or offering credit monitoring services. We may also incur significant legal and financial exposure, including legal claims, higher transaction fees and regulatory fines and penalties as a result of any compromise or breach of our systems or data security, or the systems and data security of our third party providers. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

In addition, some of our partners may receive or store information provided by us or by our users through mobile or web applications integrated with our applications and we use third-party service providers to store, transmit and otherwise process certain confidential, sensitive or personal information on our behalf.

If these third parties fail to adopt or adhere to adequate data security practices, or in the event of a breach of their networks, our data or our users' data may be improperly accessed, used, or disclosed, which could subject us to legal liability. We cannot control such third parties and cannot guarantee that a security breach will not occur on their systems. Although we may have contractual protections with our third-party service providers, contractors and consultants, any actual or perceived security breach could harm our reputation and brand, expose us to potential liability or require us to expend significant resources on data security and in responding to any such actual or perceived breach. Any contractual protections we may have from our third-party service providers, contractors or consultants may not be sufficient to adequately protect us from any such liabilities and losses, and we may be unable to enforce any such contractual protections.

While our insurance policies include liability coverage for certain of these matters, subject to retention amounts that could be substantial, if we experience a significant security incident, we could be subject to liability or other damages that exceed our insurance coverage and we cannot be certain that such insurance policies will continue to be available to us on economically reasonable terms, or at all, or that any insurer will not deny coverage as to any future claim. The successful assertion of one or more large claims against us that exceed available insurance coverage, or the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, could have a material adverse effect on our results of operations, financial condition and cash flows.

If the security of personal and confidential or sensitive user information that we maintain and store is breached, or otherwise accessed by unauthorized persons, it may be costly to remediate such breach, subject us to regulatory investigations or private party lawsuits, and our reputation could be harmed.

We receive, process, store, and transmit personal user and other confidential or sensitive information, including credit card information and personal information of our employees and users. In some cases, we engage third-party service providers to process or store this information. We continuously develop and maintain systems to protect the security, integrity and confidentiality of this information, but we have experienced past incidents (which to our knowledge were immaterial) and cannot guarantee that inadvertent or unauthorized use or disclosure of such information will not occur in the future or that third parties will not gain unauthorized access to such information despite our efforts. When such incidents occur, we may not be able to remedy them, we may be required by law to notify regulators and individuals whose personal information was used or disclosed without authorization, we may be subject to claims against us, including government enforcement actions or investigations, fines and litigation, and we may have to expend significant capital and other resources to mitigate the impact of such events, including developing and implementing protections to prevent future events of this nature from occurring. When breaches of our or our third-party service providers' and partners' information technology systems occur or unauthorized access to any of the confidential, sensitive or other personal information we collect or process occurs, the perception of the effectiveness of our security measures, the security measures of our partners and our reputation may be harmed, we may lose current and potential users and the recognition of our various brands and such brands' competitive positions may be diminished, any or all of which might materially adversely affect our business, financial condition and results of operations. See "—The varying and rapidly-evolving regulatory framework on privacy and data protection across jurisdictions could result in claims, changes to our business practices, monetary penalties, increased cost of operations, or declines in user growth or engagement, or otherwise harm our business."

We are subject to a number of risks related to credit card payments, including data security breaches and fraud that we or third parties experience or additional regulation, any of which could materially adversely affect our business, financial condition and results of operations.

In addition to purchases through the Apple App Store and the Google Play Store, we accept payment from our users through credit card transactions, certain online payment service providers, and mobile payment platforms. The ability to access credit card information on a real-time basis without having to proactively reach out to the consumer each time we process an auto-renewal payment or a payment for the purchase of a premium feature on any of our products is critical to our success and a seamless experience for our users.

When we or a third party experiences a data security breach involving credit card information, affected cardholders will often cancel their credit cards. In the case of a breach experienced by a third party, the more sizable the third party's customer base and the greater the number of credit card accounts impacted, the more likely it is that our users would be impacted by such a breach. To the extent our users are ever affected by such a breach experienced by us or a third party, affected users would need to be contacted to obtain new credit card information and process any pending transactions. It is likely that we would not be able to reach all affected users, and even if we could, some users' new credit card information may not be obtained and some pending transactions may not be processed, which could materially adversely affect our business, financial condition and results of operations.

We work with our payment service providers to utilize tokenization tools to replace sensitive cardholder information with a stand-in token to help secure individual cardholder bank account details in credit card transactions and to reduce the number of systems that have access to our customers' credit card information. While these tokenization tools can help limit the data security risks associated with credit card transactions, it does not eliminate those risks altogether.

Even if our users are not directly impacted by a given data security breach, they may lose confidence in the ability of service providers to protect their personal information generally, which could cause them to stop using their credit cards online and choose alternative payment methods that are not as convenient for us or restrict our ability to process payments without significant cost or user effort.

Additionally, if we fail to adequately prevent fraudulent credit card transactions, we may face litigation, fines, governmental enforcement action, civil liability, diminished public perception of our security measures, significantly higher credit card-related costs and substantial remediation costs, or refusal by credit card processors to continue to process payments on our behalf, any of which could materially adversely affect our business, financial condition and results of operations.

Finally, the passage or adoption of any legislation or regulation affecting the ability of service providers to periodically charge consumers for, among other things, recurring subscription payments may materially adversely affect our business, financial condition and results of operations. For example, under the Payment Services Regulation 2017, banks and other payment services providers are expected to develop and implement by September 14, 2021 strong customer authentication to check that the person requesting access to an account or trying to make a payment is permitted to do so. This could materially adversely affect our payment authorization rate and user journey. Legislation or regulation regarding the foregoing, or changes to existing legislation or regulation governing subscription payments, are being considered in many states in the US. While we monitor and attempt to comply with these legal developments, we have been in the past, and may be in the future, subject to claims under such legislation or regulation.

Our success depends, in part, on the integrity of our information technology systems and infrastructures and on our ability to enhance, expand and adapt these systems and infrastructures in a timely and cost-effective manner.

In order for us to succeed, our information technology systems and infrastructures must perform well on a consistent basis. Our products and systems rely on software and hardware that are highly technical and complex, and depend on the ability of such software and hardware to store, retrieve, process and manage immense amounts of data. We have in the past experienced, and we may from time to time in the future experience, system interruptions that make some or all of our systems or data temporarily unavailable and prevent our products from functioning properly for our users; any such interruption could arise for any number of reasons, including software bugs and human errors. Further, our systems and infrastructures are vulnerable to damage from fire, power loss, hardware and operating software errors, cyber-attacks, technical limitations, telecommunications failures, acts of God and similar events. While we have backup systems in place for certain aspects of our operations, not all of our systems and infrastructures are fully redundant. We do not have a formal disaster recovery plan, and system backups do not account for all possible eventualities and our property and business interruption insurance coverage may not be adequate to compensate us fully for any losses that we may suffer. Any interruptions or outages, regardless of the cause, could negatively impact our users' experiences with our products, tarnish our brands' reputations and decrease demand for our products, any or all of which could materially adversely affect our business, financial condition and results of operations. Moreover, even if detected, the resolution of such interruptions may take a long time, during which customers may not be able to access, or may have limited access to, the service. See "—Security breaches, improper access to or disclosure of our data or user data, other hacking and phishing attacks on our systems, or other cyber incidents could compromise sensitive information related to our business and/or personal data processed by us or on our behalf and expose us to liability, which could harm our reputation and materially adversely affect our business."

We also continually work to expand and enhance the efficiency and scalability of our technology and network systems to improve the experience of our users, accommodate substantial increases in the volume of traffic to our various products, ensure acceptable load times for our products and keep up with changes in technology and user preferences. Any failure to do so in a timely and cost-effective manner could materially adversely affect our users' experience with our various products and thereby negatively impact the demand for our products, and could increase our costs, either of which could materially adversely affect our business, financial condition and results of operations.

We may experience operational and financial risks in connection with acquisitions.

We may seek potential acquisition candidates to add complementary companies, products or technologies. The identification of suitable acquisition candidates can be difficult, time-consuming and costly, and we may not be able to successfully complete identified acquisitions. We may experience operational and financial risks in connection with historical and future acquisitions if we are unable to:

- properly value prospective acquisitions, especially those with limited operating histories;
- accurately review acquisition candidates' business practices against applicable laws and regulations and, where applicable, implement proper remediation controls, procedures, and policies;
- successfully integrate the operations, as well as the accounting, financial controls, management information, technology, human resources and other administrative systems, of acquired businesses with our existing operations and systems;

- overcome cultural challenges associated with integrating employees from the acquired company into our organization;
- successfully identify and realize potential synergies among acquired and existing businesses;
- fully identify potential risks and liabilities associated with acquired businesses, including intellectual property infringement claims, violations of laws, commercial disputes, tax liabilities, litigation or other claims in connection with the acquired company, including claims from terminated employees, former stockholders or other third parties, and other known and unknown liabilities;
- retain or hire senior management and other key personnel at acquired businesses; and
- successfully manage acquisition-related strain on our management, operations and financial resources and those of the various brands in our portfolio

Furthermore, we may not be successful in addressing other challenges encountered in connection with our acquisitions. The anticipated benefits of one or more of our acquisitions may not be realized or the value of goodwill and other intangible assets acquired could be impacted by one or more continuing unfavorable events or trends, which could result in significant impairment charges. The occurrence of any of these events could have a material adverse effect on our business, financial condition and results of operations.

Additionally, the integration of acquisitions requires significant time and resources, and we may not manage these processes successfully. Our ability to successfully integrate complex acquisitions is unproven, particularly with respect to companies that have significant operations or that develop products with which we do not have prior experience. We may make substantial investments of resources to support our acquisitions, which would result in significant ongoing operating expenses and may divert resources and management attention from other areas of our business. We cannot assure you that these investments will be successful. If we fail to successfully integrate the companies we acquire, we may not realize the benefits expected from the transactions and our business may be harmed.

Foreign currency exchange rate fluctuations could adversely affect our results of operations.

Our functional currency is the US dollar, our operating expenses are denominated in the currencies of the countries in which our operations are located, which are primarily in the United States and China. Our consolidated results of operations and cash flows are, therefore, subject to fluctuations due to changes in foreign currency exchange rates and may be adversely affected in the future due to changes in foreign exchange rates. In addition, certain of our payment providers translate our payments from local currency into USD at time of settlement, which means that during periods of a strengthening US dollar, our international receipts could be reduced. In addition, as foreign currency exchange rates fluctuate, the translation of our international receipts into US dollars affects the period-over-period comparability of our operating results and can result in foreign currency exchange gains and losses. We have not entered into any hedging arrangements with respect to foreign currency risk or other derivative financial instruments, although we may choose to do so in the future. The use of such hedging activities may not offset any or more than a portion of the adverse financial effects of unfavorable movements in foreign exchange rates and may introduce additional risks if we are unable to structure effective hedges with such instruments.

The estimates of market opportunity and forecasts of market growth included in this prospectus may prove to be inaccurate, and even if the market in which we compete achieves the forecasted growth, our business could fail to grow at similar rates, if at all.

Market opportunity estimates and expectations about market growth included in this prospectus are subject to significant uncertainty and are based on assumptions and estimates that may not prove to be

accurate. Even if the markets in which we compete meet the size estimates and growth expectations included in this prospectus, our business could fail to grow for a variety of reasons, which could adversely affect our results of operations.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our operating results could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

The preparation of financial statements in conformity with generally accepted accounting principles in the United States requires us to make estimates and assumptions that affect the reported amount of assets and liabilities and the disclosure of contingent liabilities as of the date of the financial statements and the reported amount of revenues and expenses during the reporting period. We base estimates and assumptions on historical experience and on various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. We may make estimates regarding activities for which the accounting treatment is still uncertain. Actual results could differ from those estimates. If our assumptions change or if actual circumstances differ from our assumptions, our operating results may be adversely affected and could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

Risks Related to Legal and Regulatory Compliance

Our business is subject to complex and evolving US and international laws and regulations. Many of these laws and regulations are subject to change and uncertain interpretation, and could result in claims, changes to our business practices, monetary penalties, increased cost of operations, or declines in user growth or engagement, or otherwise harm our business.

We are subject to a variety of laws and regulations in the United States and abroad that involve matters that are important to or may otherwise impact our business, including, among others, broadband internet access, online commerce, advertising, user privacy, data protection, intermediary liability, protection of minors, consumer protection, accessibility, immigration and university admissions, taxation and securities law compliance. The introduction of new products, expansion of our activities in certain jurisdictions, or other actions that we may take may subject us to additional laws, regulations or other government scrutiny. In addition, foreign laws and regulations can impose different obligations or be more restrictive than those in the United States.

These US federal, state, and municipal and foreign laws and regulations, which in some cases can be enforced by private parties in addition to government entities, are constantly evolving and can be subject to significant change.

In addition, the introduction of new brands and products, or changes to our existing brand and products, may result in new or enhanced governmental or regulatory scrutiny. As a result, the application, interpretation, and enforcement of these laws and regulations are often uncertain, particularly in the new and rapidly-evolving industry in which we operate, and may be interpreted and applied inconsistently from state to state and country to country and inconsistently with our current policies and practices. These laws and regulations, as well as any associated inquiries or investigations or any other government actions, may be costly to comply with and may delay or impede the development of new products, require that we change or cease certain business practices, result in negative publicity, increase our operating costs, require significant management time and attention, and subject us to remedies that may harm our business, including fines, demands or orders that require us to modify or cease existing business

practices. For example, a variety of laws and regulations govern the ability of users to cancel subscriptions and auto-payment renewals. We have in the past and may in the future be subject to claims under such laws and regulations that could materially adversely affect our business.

The promulgation of new laws or regulations, or the new interpretation of existing laws and regulations, in each case, that restrict or otherwise unfavorably impact our business, or our ability to provide or the manner in which we provide our services, could require us to change certain aspects of our business and operations to ensure compliance, which could decrease demand for services, reduce revenues, increase costs and subject us to additional liabilities.

The adoption of any laws or regulations that adversely affect the popularity or growth in use of the internet or our services, including laws or regulations that undermine open and neutrally administered internet access, could decrease user demand for our service offerings and increase our cost of doing business, any of which could have a material adverse effect on our business, financial condition and results of operations.

We may be exposed to liabilities under the US Foreign Corrupt Practices Act and other US and foreign anti-corruption anti-money laundering, export control, sanctions and other trade laws and regulations, and any determination that we violated these laws could have a material adverse effect on our business.

We are subject to rules and regulations of the United States and abroad relating to export controls and economic sanctions, including, but not limited to, trade sanctions administered by the Office of Foreign Assets Control within the US Department of the Treasury, as well as the Export Administration Regulations administered by the Department of Commerce. These regulations limit our ability to market, sell, distribute or otherwise transfer our products or technology to prohibited countries or persons.

Further, we have historically provided services to users in Iran, Cuba and Syria, countries that are presently the subject of comprehensive sanctions by the US government (Sanctioned Countries). We believe our provision of such services is either in compliance with generally available exemptions from sanctions laws or otherwise in compliance with applicable law, and have implemented various control mechanisms designed to prevent unauthorized dealings with Sanctioned Countries.

While we have taken steps to comply with these rules and regulations, a determination that we have failed to comply, whether knowingly or inadvertently, may result in substantial penalties, including fines, enforcement actions, civil and/or criminal sanctions, the disgorgement of profits, and may materially adversely affect our business, results of operations and financial condition.

Our success depends, in part, on our ability to access, collect, and use personal data about our users and payers, and to comply with applicable data privacy laws.

Increased regulation of data utilization practices, including self-regulation, new laws, or findings or guidance under existing laws that limit our ability to collect, disclose, process, transfer, retain and use information and other data, could have a material adverse effect on our business. In addition, if we were to disclose information and other data about our users in a manner that was objectionable to them, our business reputation could be materially adversely affected, and we could face potential legal claims that could impact our operating results. Internationally, we may become subject to additional and/or more stringent legal obligations concerning our treatment of customer and other personal information, such as laws regarding data localization and/or restrictions on data export. For example, in July 2020 the Court of Justice of the European Union (CJEU) invalidated the EU-US Privacy Shield Framework (Privacy Shield) under which personal data could be transferred from the European Economic Area (EEA) and the United Kingdom to entities in the United States who had self-certified under the Privacy Shield scheme. This has led to uncertainty about the adequate transfer mechanisms for other personal data transfers from the EEA

and the United Kingdom to the United States or interruption of such transfers. In the event that any court of law orders the suspension of personal data transfers to or from a particular jurisdiction this could give rise to operational interruption in the performance of services for customers, greater costs to implement alternative data transfer mechanisms that are still permitted, regulatory liabilities or reputational harm. Failure to comply with evolving privacy laws could subject us to liability and expose us to fines, penalties and compliance orders, and to the extent that we need to alter our business model or practices to adapt to these obligations, we could incur additional expenses, which may in turn materially adversely affect our business, financial condition, and results of operations. See "—The varying and rapidly-evolving regulatory framework on privacy and data protection across jurisdictions could result in claims, changes to our business practices, monetary penalties, increased cost of operations, or declines in user growth or engagement, or otherwise harm our business."

Additionally, privacy activist groups have previously and may continue to provide resources to support individuals who wish to pursue privacy claims or put pressure on companies to change data processing practices. High-profile brands such as ours risk being targeted by such groups and there is a risk that if a user became disgruntled with our data processing practices they could leverage support from such privacy activist groups to take legal action, initiate regulatory investigation or gain publicity for their cause. There is a risk that these groups will seek to challenge our practices, particularly in relation to targeted advertising or international data transfers. Any such campaign could require significant resources to mount a response and could lead to negative publicity and potential investigation from regulators, any of which may materially adversely affect our business, financial condition, and results of operations.

The varying and rapidly-evolving regulatory framework on privacy and data protection across jurisdictions could result in claims, changes to our business practices, monetary penalties, increased cost of operations, or declines in user growth or engagement, or otherwise harm our business.

As discussed above, we process personal information, personal data and other regulated information both from our employees and our users. There are numerous laws in the countries in which we operate regarding privacy and the storage, sharing, use, transfer, disclosure, protection and otherwise processing of this kind of information, the scope of which are constantly changing, and in some cases, inconsistent and conflicting and subject to differing interpretations, as new laws of this nature are proposed and adopted and we currently, and from time to time, may not be in technical compliance with all such laws. Such laws also are becoming increasingly rigorous and could be interpreted and applied in ways that may have a material adverse effect on our business, financial condition, results of operations and prospects. Therefore, enforcement practices are likely to remain uncertain for the foreseeable future. In recent years, there has been an increase in attention to and regulations of data protection and data privacy across the globe, including in the United States, the EEA and the United Kingdom. We are subject to various data protection laws, including: the General Data Protection Regulation 2016/679 (GDPR) in the EEA, the United Kingdom data protection regime consisting primarily of (i) the UK General Data Protection Regulation and (ii) the UK Data Protection Act 2018 (collectively (i) and (ii), the UK GDPR), the California Consumer Privacy Act (CCPA) in the United States, and the Brazilian General Data Protection Law, which imposes requirements similar to the GDPR on products and services offered to users in Brazil. We may be subject to additional privacy regulations in the future, including the Virginia Consumer Data Protection Act (VCDPA). Other comprehensive data privacy or data protection laws or regulations have been passed or are under consideration in other jurisdictions, including China, India and Japan. Laws such as these give rise to an increasingly complex set of compliance obligations on us, as well as on many of our service providers. These laws impose restrictions on our ability to gather personal data, provide individuals with the ability to opt out of personal data collection, impose obligations on our ability to share data with others, and potentially subject us to fines, lawsuits, and regulatory scrutiny.

For example, the GDPR and the UK GDPR impose strict data protection compliance requirements including: providing detailed disclosures about how personal data is collected and processed (in a concise, intelligible and easily-accessible form); demonstrating that an appropriate legal basis is in place or otherwise exists to justify data processing activities; granting new rights for data subjects in regard to their personal data (including the right to be “forgotten” and the right to data portability), as well as enhancing current rights (e.g., data subject access requests); introducing the obligation to notify data protection regulators or supervisory authorities (and in certain cases, affected individuals) of significant data breaches; defining pseudonymized (i.e., key-coded) data; imposing limitations on retention of personal data; maintaining a record of processing activities; and complying with the principle of accountability and the obligation to demonstrate compliance through policies, procedures, training and audit. The GDPR and the UK GDPR create compliance obligations that are also applicable to entities established outside the EEA/United Kingdom, which offer goods or services to individuals located in the EEA/United Kingdom or which observe the behavior of individuals located in the EEA/United Kingdom. This has created a greater compliance burden for us and other companies with users in the EEA and the United Kingdom, as the legal regimes may subject non-compliant entities to substantial monetary penalties. In particular, fines for the most serious violations under the GDPR and the UK GDPR may amount to the greater of €20 million/ £17.5 million or, in the case of an undertaking, up to 4% of the total worldwide annual group turnover of the preceding financial year. In addition to potential substantial fines, non-compliance could result in regulatory investigations, reputational damage, orders to cease/ change the processing of personal data, enforcement notices, and/ or assessment notices (for a compulsory audit). We may also face civil claims including representative actions and other class action type litigation (where individuals have suffered harm), potentially amounting to significant compensation or damages liabilities, as well as associated costs, diversion of internal resources, and reputational harm.

As noted above, the CJEU invalidated the Privacy Shield on July 16, 2020 and, while it upheld the adequacy of the EU standard contractual clauses (a standard form of contract approved by the European Commission (SCCs) as an adequate transfer mechanism for personal data, and potential alternative to the Privacy Shield), it made clear that reliance on them alone may not necessarily be sufficient in all circumstances. Use of the SCCs must be assessed on a case-by-case basis taking into account the legal regime applicable in the destination country, in particular surveillance laws and the rights of individuals and additional measures and/or contractual provisions may need to be adopted, however, the nature of these additional measures is currently uncertain. The CJEU went on to state that, if the competent supervisory authority believes that the SCCs cannot be complied with in the destination country and the required level of protection cannot be secured by other means, such supervisory authority is under an obligation to suspend or prohibit that transfer unless the data exporter has already done so itself. We rely on a mixture of mechanisms to transfer personal data from the EEA and the United Kingdom to the United States and are evaluating what additional mechanisms may be required to establish adequate safeguards for personal data. As supervisory authorities continue to issue further guidance on personal data export mechanisms, including circumstances where the SCCs cannot be used and/or start taking enforcement action, there will be uncertainty as to how we comply with EEA and United Kingdom privacy laws and we could suffer additional costs, complaints, and/or regulatory investigations or fines. Moreover, if we are otherwise unable to transfer personal data between and among countries and regions in which we operate, it could affect the manner in which we provide our services, and we may find it necessary to establish systems in the EEA and the United Kingdom to maintain personal data originating from the EEA and the United Kingdom, which may involve substantial expense and distraction from other aspects of our business.

We are also subject to evolving privacy laws in the EEA and the United Kingdom on cookies and e-marketing. Regulators are increasingly focusing on compliance with requirements in the online behavioral advertising ecosystem, and current national laws that implement the ePrivacy Directive are highly likely to

be replaced by an EU regulation known as the ePrivacy Regulation which will significantly increase fines for non-compliance. In the EEA and the United Kingdom, informed consent is required for the placement of non-strictly necessary cookies or similar technologies on users' devices and for direct electronic marketing. The GDPR and the UK GDPR also impose conditions on obtaining valid consent, such as a prohibition on pre-checked consents and a requirement to ensure separate consents are sought for each type of non-strictly necessary cookie or similar technology. While the text of the ePrivacy Regulation is still under development, recent European court decisions and regulators' guidance are driving increased attention to cookies and tracking technologies. If regulators start to enforce the strict approach in recent guidance, this could lead to substantial costs, require significant systems changes, limit the effectiveness of our marketing activities, divert the attention of our technology personnel, adversely affect our margins, increase costs and subject us to additional liabilities. Regulation of cookies and similar technologies, and any decline of cookies or similar online tracking technologies as a means to identify and potentially target users as well as personalize the consumer experience, may lead to broader restrictions and impairments on our marketing and personalization activities and may negatively impact our efforts to understand and tailor our offerings to users.

Brexit (as defined below) and ongoing developments in the United Kingdom have created additional uncertainty as the United Kingdom may become a "third country" for the purposes of personal data transfers from the EEA to the United Kingdom following the expiration of the four to six-month personal data transfer grace period (from January 1, 2021) set out in the EU and United Kingdom Trade and Cooperation Agreement, unless a relevant adequacy decision is adopted in favor of the United Kingdom (which would allow data transfers without additional measures). These changes may require us to find alternative solutions for the compliant transfer of personal data into the United Kingdom. Additionally, following Brexit, we may be exposed to two parallel enforcement regimes, each of which authorize similar fines and other enforcement actions for certain violations.

We depend on a number of third parties in relation to the operation of our business, a number of which process personal data on our behalf. With each such provider we attempt to mitigate the associated risks of using third parties by performing security assessments and detailed due diligence, entering into contractual arrangements to ensure that providers only process personal data according to our instructions, and that they have sufficient technical and organizational security measures in place. Where we transfer personal data outside the EEA or the United Kingdom to such third parties, we do so while considering the relevant data export requirements, as described above. There is no assurance that these contractual measures and our own privacy and security-related safeguards will protect us from the risks associated with the third-party processing, storage and transmission of such information. Any violation of data or security laws by our third party processors could have a material adverse effect on our business and result in the fines and penalties outlined above.

The GDPR and the UK GDPR will continue to be interpreted by data protection regulators in the EEA and the United Kingdom. This may require us to make changes to our business practices, which could be time-consuming and expensive, and could generate additional risks and liabilities. Other countries have also passed or are considering passing laws requiring local data residency and/or restricting the international transfer of data.

Multiple legislative proposals concerning privacy and the protection of user information are being considered by the US Congress. Various US state legislatures have announced intentions to consider additional privacy legislation, and US state legislatures such as California and Virginia have already passed and enacted comprehensive privacy legislation. For example, among other cases, the CCPA requires covered companies to provide new disclosures to California consumers and provide such consumers certain data protection and privacy rights, including the ability to opt-out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of

action for certain data breaches. This private right of action may increase the likelihood of, and risks associated with, data breach litigation. A ballot initiative from privacy rights advocates intended to augment and expand the CCPA called the California Privacy Rights Act (CPRA) was passed in November 2020 and will take effect in January 2023 (with a look back to January 2022). The CPRA will significantly modify the CCPA, including by expanding consumers' rights with respect to certain sensitive personal information. The CPRA also creates a new state agency that will be vested with authority to implement and enforce the CCPA and the CPRA. The VCDPA, which will go into effect in 2023, gives new data protection rights to Virginia residents and imposes additional obligations on controllers and processors of personal data. For example, like the CCPA, the VCDPA grants Virginia residents certain rights to access personal data that is being processed by the controller, the right to correct inaccuracies in that personal data and the right to require that their personal data be deleted by the data controller. In addition, Virginia residents will have the right to request a copy of their personal data in a format that permits them to transmit it to another data controller. Further, under the VCDPA, Virginia residents will have the right to opt out of the sale of their personal data, as well as the right to opt out of the processing of their personal data for targeted advertising. New legislation proposed or enacted in a number of states impose, or have the potential to impose additional obligations on companies that collect, store, use, retain, disclose, transfer and otherwise process confidential, sensitive and personal information, and will continue to shape the data privacy environment nationally. State laws are changing rapidly and there is discussion in Congress of a new federal data protection and privacy law to which we would become subject if it is enacted. Additionally, governmental agencies like the Consumer Financial Protection Bureau and the Federal Trade Commission have adopted, or are considering adopting, laws and regulations concerning personal information and data security. For example, the Federal Trade Commission has increased its focus on privacy and data security practices at digital companies, as evidenced by obtaining increasing fines against companies found to be in violation of the Children's Online Privacy Protection Act (COPPA), and obtaining twenty-year consent decrees mandating enhanced and specific requirements for information security management programs. While the FTC does not have legal authority to seek monetary penalties or relief in the area of data security as a general matter, a violation of a privacy or data security consent decree can subject the responding company to very high monetary penalties, as evidenced by the FTC obtaining $5 billion in negotiated monetary relief against Facebook for violation of a consent decree.

The myriad international and US privacy and data breach laws are not consistent, and compliance in the event of a widespread data breach is difficult and may be costly. In addition to government regulation, privacy advocates and industry groups have and may in the future propose self-regulatory standards from time to time. These and other industry standards may legally or contractually apply to us, or we may elect to comply with such standards. We expect that there will continue to be new proposed laws and regulations concerning data privacy and security, and we cannot yet determine the impact such future laws, regulations and standards may have on our business. Because the interpretation and application of data protection laws, regulations, standards and other obligations are still uncertain, and may be contradictory and in flux, it is possible that the scope and requirements of these laws may be interpreted and applied in a manner that is inconsistent with our practices and our efforts to comply with the evolving data protection rules may be unsuccessful.

We make public statements about our use and disclosure of personal information through our privacy policy, information provided on our website and press statements. Although we endeavor to ensure that our public statements are complete, accurate and fully implemented, we may at times fail to do so or be alleged to have failed to do so. We may be subject to potential regulatory or other legal action if such policies or statements are found to be deceptive, unfair or misrepresentative of our actual practices. In addition, from time to time, concerns may be expressed about whether our products and services compromise the privacy of our users and others. Any concerns about our data privacy and security practices (even if unfounded), or any failure, real or perceived, by us to comply with our posted privacy

policies or with any legal or regulatory requirements, standards, certifications or orders or other privacy or consumer protection-related laws and regulations applicable to us, could cause our users to reduce their use of our products and services.

While we aim to comply with industry standards and applicable laws and industry codes of conduct relating to privacy and data protection in all material respects, there is no assurance that we will not be subject to claims that we have violated applicable laws or codes of conduct, that we will be able to successfully defend against such claims or that we will not be subject to significant fines and penalties in the event of non-compliance. Additionally, to the extent multiple state-level laws are introduced with inconsistent or conflicting standards and there is no federal law to preempt such laws, compliance with such laws could be difficult and costly to achieve and we could be subject to fines and penalties in the event of non-compliance.

Furthermore, enforcement actions and investigations by regulatory authorities related to data security incidents and privacy violations continue to increase. We have in the past received, and may continue to receive inquiries from regulators regarding our data privacy practices. Any failure or perceived failure by us (or the third parties with whom we have contracted to process such information) to comply with applicable privacy and security laws, policies or related contractual obligations, or any compromise of security that results in unauthorized access, use or transmission of, personal user information, could result in a variety of claims against us, including governmental enforcement actions and investigations, class action privacy litigation in certain jurisdictions and proceedings by data protection authorities. We could further be subject to significant fines, other litigation, claims of breach of contract and indemnity by third parties, and adverse publicity. When such events occur, our reputation may be harmed, we may lose current and potential users and the competitive positions of our various brands might be diminished, any or all of which could materially adversely affect our business, financial condition, results of operations and prospects. In addition, if our practices are not consistent or viewed as not consistent with legal and regulatory requirements, including changes in laws, regulations and standards or new interpretations or applications of existing laws, regulations and standards, we may become subject to audits, inquiries, whistleblower complaints, adverse media coverage, investigations, loss of export privileges or severe criminal or civil sanctions, all of which may have a material adverse effect on our business, financial condition, results of operations and prospects.

Online applications are subject to various laws and regulations relating to children's privacy and protection, which if violated, could subject us to an increased risk of litigation and regulatory actions.

A variety of laws and regulations have been adopted in recent years aimed at protecting children using the internet such as the COPPA and Article 8 of the GDPR and the UK GDPR. We implement certain precautions to ensure that we comply. Despite our efforts, no assurances can be given that such measures will be sufficient to completely avoid allegations of COPPA violations, any of which could expose us to significant liability, penalties, reputational harm and loss of revenue, among other things. Additionally, new regulations are being considered in various jurisdictions to require the monitoring of user content or the verification of users' identities and age. Such new regulations, or changes to existing regulations, could increase the cost of our operations.

We are subject to litigation and adverse outcomes in such litigation could have a material adverse effect on our business, financial condition and results of operations.

We are, and from time to time may become, subject to litigation and various legal proceedings, including litigation and proceedings related to intellectual property matters, privacy and consumer protection laws, as well as stockholder derivative suits, class action lawsuits, actions from former employees and other matters, that involve claims for substantial amounts of money or for other relief or that might necessitate

changes to our business or operations. The defense of these actions could be time consuming and expensive and could distract our personnel from their normal responsibilities. We evaluate these litigation claims and legal proceedings to assess the likelihood of unfavorable outcomes and to estimate, if possible, the amount of potential losses. Based on these assessments and estimates, we may establish reserves or disclose the relevant litigation claims or legal proceedings, as and when required or appropriate. These assessments and estimates are based on information available to management at the time of such assessment or estimation and involve a significant amount of judgment. As a result, actual outcomes or losses could differ materially from those envisioned by our current assessments and estimates. Our failure to successfully defend or settle any of these litigations or legal proceedings could result in liability that, to the extent not covered by our insurance, could have a material adverse effect on our business, financial condition and results of operations. See “Business—Legal Proceedings”.

We are subject to taxation related risks in multiple jurisdictions.

We are a US-based multinational company subject to tax in multiple US and foreign tax jurisdictions. Significant judgment is required in determining our global provision for income taxes, deferred tax assets or liabilities and in evaluating our tax positions on a worldwide basis. While we believe our tax positions are consistent with the tax laws in the jurisdictions in which we conduct our business, it is possible that these positions may be challenged by jurisdictional tax authorities, which may have a significant impact on our global provision for income taxes.

Tax laws are being re-examined and evaluated globally. New laws and interpretations of the law are taken into account for financial statement purposes in the quarter or year that they become applicable. Tax authorities are increasingly scrutinizing the tax positions of companies. Many countries in the European Union, as well as a number of other countries and organizations such as the Organization for Economic Cooperation and Development and the European Commission, are actively considering changes to existing tax laws that, if enacted, could increase our tax obligations in countries where we do business. These proposals include changes to the existing framework to calculate income tax, as well as proposals to change or impose new types of non-income taxes, including taxes based on a percentage of revenue. For example, several countries in the European Union have proposed or enacted taxes applicable to digital services, which includes business activities on social media platforms and online marketplaces, and would likely apply to our business. Many questions remain about the enactment, form and application of these digital services taxes. The interpretation and implementation of the various digital services taxes (especially if there is inconsistency in the application of these taxes across tax jurisdictions) could have a materially adverse impact on our business, results of operations and cash flows. Moreover, if the US or other foreign tax authorities change applicable tax laws, our overall taxes could increase, and our business, financial condition or results of operations may be adversely impacted.

The United Kingdom’s withdrawal from the European Union may have a negative effect on global economic conditions, financial markets and our business.

Following a national referendum and enactment of legislation by the government of the United Kingdom, the United Kingdom formally withdrew from the European Union and ratified a trade and cooperation agreement governing its future relationship with the European Union. The agreement, which is being applied provisionally from January 1, 2021 until it is ratified by the European Parliament and the Council of the European Union, addresses trade, economic arrangements, law enforcement, judicial cooperation and a governance framework including procedures for dispute resolution, among other things. Because the agreement merely sets forth a framework in many respects and will require complex additional bilateral negotiations between the United Kingdom and the European Union as both parties continue to work on the rules for implementation, significant political and economic uncertainty remains about how the precise terms of the relationship between the parties will differ from the terms before withdrawal.

We have users in the United Kingdom and the European Union and, as a result, we face risks associated with the potential uncertainty and disruptions that may follow Brexit and the implementation and application of the trade and cooperation agreement, including with respect to volatility in exchange rates and interest rates, disruptions to the free movement of data, goods, services, people and capital between the United Kingdom and the European Union and potential material changes to the regulatory regime applicable to our operations in the United Kingdom. The uncertainty concerning the United Kingdom's future legal, political and economic relationship with the European Union could adversely affect political, regulatory, economic or market conditions in the European Union, the United Kingdom and worldwide and could contribute to instability in global political institutions, regulatory agencies and financial markets. These developments have had and may continue to have a material adverse effect on global economic conditions and the stability of global financial markets and could significantly reduce global market liquidity and limit the ability of key market participants to operate in certain financial markets.

We may also face new regulatory costs and challenges as a result of Brexit that could have a material adverse effect on our operations. For example, as of January 1, 2021, the United Kingdom lost the benefits of global trade agreements negotiated by the European Union on behalf of its members, which may result in increased trade barriers that could make doing business in areas that are subject to such global trade agreements more difficult. In addition, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations as the United Kingdom determines which laws of the European Union to replace or replicate. There may continue to be economic uncertainty surrounding the consequences of Brexit that adversely impact customer confidence resulting in fewer users using or paying for our services, which could materially adversely affect our business, financial condition and results of operations.

The ongoing instability and uncertainty surrounding Brexit and the implementation and application of the Trade and Cooperation Agreement, could require us to restructure our business operations in the United Kingdom and the European Union and could have an adverse impact on our business and staff in the United Kingdom and European Union.

Risks Related to Our Intellectual Property

From time to time, we may be party to intellectual property-related litigation and proceedings that are expensive and time consuming to defend, and, if resolved adversely, could materially adversely impact our business, financial condition and results of operations.

Our commercial success depends in part on avoiding infringement, misappropriation or other violations of the intellectual property rights of third parties. However, we may become party to disputes from time to time over rights and obligations concerning intellectual property held by third parties, and we may not prevail in these disputes. Companies in the internet, technology and social media industries are subject to frequent litigation based on allegations of infringement, misappropriation or other violations of intellectual property rights. Furthermore, various "non-practicing entities" that own patents and other intellectual property rights often attempt to assert claims in order to extract value from technology companies and, given that these patent holding companies or other adverse intellectual property rights holders typically have no relevant product revenue, our own issued or pending patents and other intellectual property rights may provide little or no deterrence to these rights holders in bringing intellectual property rights claims against us. From time to time we may receive claims from third parties which allege that we have infringed upon their intellectual property rights. Further, from time to time we may introduce new products, product features and services, including in areas where we currently do not have an offering, which could increase our exposure to patent and other intellectual property claims from competitors and non-practicing entities. In addition, some of our agreements with third-party partners require us to indemnify them for certain intellectual property claims against them, which could require us to incur considerable

costs in defending such claims, and may require us to pay significant damages in the event of an adverse ruling. Such third-party partners may also discontinue their relationships with us as a result of injunctions or otherwise, which could result in loss of revenue and adversely impact our business operations.

Although we try to ensure that our employees and consultants do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or our employees or consultants have inadvertently or otherwise used or disclosed intellectual property, including trade secrets, software code or other proprietary information, of a former employer or other third parties. Litigation may be necessary to defend against these claims and if we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Further, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own. Additionally, any such assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property.

As we face increasing competition and develop new products, we expect the number of patent and other intellectual property claims against us may grow. There may be intellectual property or other rights held by others, including issued or pending patents, that cover significant aspects of our products and services, and we cannot be sure that we are not infringing or violating, and have not infringed or violated, any third-party intellectual property rights or that we will not be held to have done so or be accused of doing so in the future.

Any claim or litigation alleging that we have infringed or otherwise violated intellectual property or other rights of third parties, with or without merit, and whether or not settled out of court or determined in our favor, could be time-consuming and costly to address and resolve, and could divert the time and attention of our management and technical personnel. The outcome of any litigation is inherently uncertain, and there can be no assurances that favorable final outcomes will be obtained in all cases. In addition, third parties may seek, and we may become subject to, preliminary or provisional rulings in the course of any such litigation, including potential preliminary injunctions requiring us to cease some or all of our operations. We may decide to settle such lawsuits and disputes on terms that are unfavorable to us. Similarly, if any litigation to which we are a party is resolved adversely, we may be subject to an unfavorable judgment that may not be reversed upon appeal, including being subject to a permanent injunction and being required to pay substantial monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a party's intellectual property rights. The terms of such a settlement or judgment may require us to cease some or all of our operations, pay substantial amounts to the other party, or admit liability. Moreover, as part of any settlement or other compromise to avoid complex, protracted litigation, we may agree not to pursue future claims against a third party, including for claims related to alleged infringement of our intellectual property rights. Part of any settlement or other compromise with another party may resolve a potentially costly dispute but may also have future repercussions on our ability to defend and protect our intellectual property rights, which in turn could adversely affect our business, financial conditions, and results of operations and prospects. In addition, we may have to seek a license to continue practices found to be in violation of a third-party's rights. If we are required, or choose to enter into royalty or licensing arrangements, such arrangements may not be available on reasonable terms, or at all, and may significantly increase our operating costs and expenses. Such arrangements may also only be available on a non-exclusive basis such that third parties, including our competitors, could have access to the same licensed technology to compete with us. As a result, we may also be required to develop or procure alternative non-infringing technology, which could require significant effort, time and expense or discontinue use of the technology. There also

can be no assurance that we would be able to develop or license suitable alternative technology to permit us to continue offering the affected products or services as currently offered. If we cannot develop or license alternative technology for any allegedly infringing aspect of our business, we would be forced to limit our products and services and may be unable to compete effectively. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. Any of the foregoing, and any unfavorable resolution of such disputes and litigation, would materially and adversely impact our business, financial condition, results of operations and prospects.

We may fail to adequately obtain, protect and maintain our intellectual property rights or prevent third parties from making unauthorized use of such rights.

Our intellectual property is a material asset of our business and our success depends in part on our ability to protect our proprietary rights and intellectual property. For example, we rely heavily upon our trademarks, designs, copyrights, related domain names, social media handles and logos to market our brands and to build and maintain brand loyalty and recognition. We also rely upon proprietary technologies and trade secrets, as well as a combination of laws, and contractual restrictions, including confidentiality agreements with employees, customers, suppliers, affiliates and others, to establish, protect and enforce our various intellectual property rights. We have generally registered and continue to apply to register and renew, or secure by contract where appropriate, trademarks and service marks as they are developed and used, and reserve, register and renew domain names and social media handles as we deem appropriate. If our trademarks and trade names are not adequately protected, then we may not be able to build and maintain name recognition in our markets of interest and our business may be adversely affected. Effective trademark protection may not be available or may not be sought in every country in which our products are made available, in every class of goods and services in which we operate, and contractual disputes may affect the use of marks governed by private contract. Our registered or unregistered trademarks, tradenames or other intellectual property rights may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. Further, at times, competitors may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. Similarly, not every variation of a domain name or social media handle may be available or be registered by us, even if available. The occurrence of any of these events could result in the erosion of our brands and limit our ability to market our brands using our various domain names and social media handles, as well as impede our ability to effectively compete against competitors with similar technologies or products, any of which could materially adversely affect our business, financial condition and results of operations. We are also party to certain agreements that may limit our trademark rights in certain jurisdictions; while we believe these agreements are unlikely to have a significant impact on our business as currently conducted, our ability to use our existing trademarks in new business lines in the future may be limited.

We cannot guarantee that our efforts to obtain and maintain intellectual property rights are adequate, that we have secured, or will be able to secure, appropriate permissions or protections for all of the intellectual property rights we use or rely on. Furthermore, even if we are able to obtain intellectual property rights, any challenge to our intellectual property rights could result in them being narrowed in scope or declared invalid or unenforceable. In addition, other parties may also independently develop technologies that are substantially similar or superior to ours and we may not be able to stop such parties from using such independently developed technologies from competing with us.

We also rely upon unpatented proprietary information and other trade secrets to protect intellectual property that may not be registrable, or that we believe is best protected by means that do not require public disclosure. While it is our policy to enter into confidentiality agreements with employees and third parties to protect our proprietary expertise and other trade secrets, we cannot guarantee that we have

entered into such agreements with each party that has or may have had access to our proprietary information or trade secrets and, even if entered into, these agreements may otherwise fail to effectively prevent disclosure of proprietary information, may be limited as to their term and may not provide an adequate remedy in the event of unauthorized disclosure or use of proprietary information. Monitoring unauthorized uses and disclosures is difficult, and we do not know whether the steps we have taken to protect our proprietary technologies will be effective. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret can be difficult, expensive and time-consuming, and the outcome is unpredictable. Some courts inside and outside the United States may be less willing or unwilling to protect trade secrets. In addition, trade secrets may be independently developed by others in a manner that could prevent legal recourse by us. If any of our confidential or proprietary information, such as our trade secrets, were to be disclosed or misappropriated, or if any such information was independently developed by a competitor, our competitive position would be materially adversely harmed.

Our intellectual property rights and the enforcement or defense of such rights may be affected by developments or uncertainty in laws and regulations relating to intellectual property rights. Moreover, many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, may not favor the enforcement of trademarks, copyrights, trade secrets and other intellectual property protection, which could make it difficult for us to stop the infringement, misappropriation or other violation of our intellectual property or marketing of competing products in violation of our intellectual property rights generally.

We also may be forced to bring claims against third parties to determine the ownership of what we regard as our intellectual property or to enforce our intellectual property rights against infringement, misappropriation or other violations by third parties. However, the measures we take to protect our intellectual property from unauthorized use by others may not be effective and there can be no assurance that our intellectual property rights will be sufficient to protect against others offering products or services that are substantially similar or superior to ours or that compete with our business. We may not prevail in any intellectual property-related proceedings that we initiate against third parties. Further, in such proceedings or in proceedings before patent, trademark and copyright agencies, our asserted intellectual property could be found to be invalid or unenforceable, in which case we could lose valuable intellectual property rights. In addition, even if we are successful in enforcing our intellectual property against third parties, the damages or other remedies awarded, if any, may not be commercially meaningful. Regardless of whether any such proceedings are resolved in our favor, such proceedings could cause us to incur significant expenses and could distract our personnel from their normal responsibilities. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Despite the measures we take to protect our intellectual property rights, our intellectual property rights may still not be adequate and protected in a meaningful manner, challenges to contractual rights could arise, third parties could copy or otherwise obtain and use our intellectual property without authorization, or laws and interpretations of laws regarding the enforceability of existing intellectual property rights may change over time in a manner that provides less protection. The occurrence of any of these events could impede our ability to effectively compete against competitors with similar technologies, any of which could materially adversely affect our business, financial condition and results of operations.

Our use of "open source" software and materials could subject our proprietary software to general release, adversely affect our ability to sell our products and services and subject us to possible litigation.

We use open source software, content and materials (Open Source Materials) in connection with a portion of our proprietary software and our service offerings and we expect to continue to use Open Source Materials in the future. Under certain circumstances, some open source licenses require users of the Open Source Materials to provide the user's own proprietary source code to third parties upon request, to license the user's own proprietary source code or other materials for the purpose of making derivative works, prohibit users from charging a fee to third parties in connection with the use of the user's proprietary code, or require the relicensing of the Open Source Materials and derivatives thereof under the terms of the applicable license. While we employ practices designed to monitor our compliance with the licenses of third-party Open Source Materials and protect our proprietary source code and content, we cannot guarantee that we will be successful, that all Open Source Materials are reviewed prior to use in our products, that our developers have not incorporated Open Source Materials into our products, or that they will not do so in the future. Accordingly, we may face claims from others challenging our use of Open Source Materials or , seeking to enforce the license terms applicable to such Open Source Materials, including by demanding public release of the Open Source Materials or derivative works or our proprietary source code and content that was developed or distributed in connection with such Open Source Materials. Such claims could also require us to purchase a commercial license or require us to devote additional research and development resources to change our software and content, any of which would have a negative effect on our business and results of operations. In addition, if the license terms for the open source code change, we may be forced to re-engineer our software, revise our content or otherwise incur additional costs. Additionally, the terms of many open source licenses to which we are subject have not been interpreted by US or foreign courts. There is a risk that open source licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to market or provide our products.

In addition, the use of open source software may entail greater risks than the use of third-party commercial software, as open source licensors generally do not provide warranties or other contractual protections regarding infringement claims or the quality of the code. To the extent that our platform depends upon the successful operation of the open source software we use, any undetected errors or defects in this open source software could prevent the deployment or impair the functionality of our platform, delay the introduction of new solutions, result in a failure of our platform, and injure our reputation. For example, undetected errors or defects in open source software could render it vulnerable to breaches or security attacks and make our systems more vulnerable to data breaches.

Our exposure to these risks may be increased as a result of evolving our core source code base, introducing new content and offerings, integrating acquired-company technologies, or making other business changes, including in areas where we do not currently compete. Any of the foregoing could adversely impact the value or enforceability of our intellectual property, and materially adversely affect our business, results of operations, and financial condition.

Risks Related to this Offering and Ownership of our Class A Common Stock

There has been no prior market for our Class A common stock and an active trading market for our Class A common stock may never develop or be sustained, which may cause shares of our Class A common stock to trade at a discount from their initial offering price and make it difficult to sell the shares of Class A common stock you purchase.

Prior to this offering, there has not been a public trading market for shares of our Class A common stock. The initial public offering price per share of Class A common stock will be determined by agreement

among us, the selling stockholders and the representative of the underwriters, and may not be indicative of the price at which shares of our Class A common stock will trade in the public market after this offering. If you purchase shares of our Class A common stock, you may not be able to resell those shares at or above the initial public offering price. We cannot predict the extent to which investor interest in our company will lead to the development of an active trading market on the Nasdaq Global Select Market or how liquid that market might become. An active public market for our Class A common stock may not develop or be sustained after the offering. If an active public market does not develop or is not sustained, it may be difficult for you to sell your shares of Class A common stock at a price that is attractive to you, or at all. The market price of our Class A common stock may decline below the initial public offering price.

In addition, we currently anticipate that up to 1% of the shares of Class A common stock offered hereby will, at our request, be offered to retail investors through Robinhood Financial, LLC, as a selling group member, via its online brokerage platform. There may be risks associated with the use of the Robinhood platform that we cannot foresee, including risks related to the technology and operation of the platform, and the publicity and the use of social media by users of the platform that we cannot control.

The market price of shares of our Class A common stock may be volatile or may decline regardless of our operating performance, which could cause the value of your investment to decline.

Even if a trading market develops, the market price of our Class A common stock may be highly volatile and could be subject to wide fluctuations. Securities markets worldwide experience significant price and volume fluctuations. This market volatility, as well as general economic, market or political conditions, could reduce the market price of shares of our Class A common stock regardless of our operating performance. In addition, our operating results could be below the expectations of public market analysts and investors due to a number of potential factors, including variations in our quarterly operating results or dividends, if any, to stockholders, additions or departures of key management personnel, failure to meet analysts' earnings estimates, publication of research reports about our industry, litigation and government investigations, changes or proposed changes in laws or regulations or differing interpretations or enforcement thereof affecting our business, adverse market reaction to any indebtedness we may incur or securities we may issue in the future, changes in market valuations of similar companies or speculation in the press or investment community, announcements by our competitors of significant contracts, acquisitions, dispositions, strategic partnerships, joint ventures or capital commitments, adverse publicity about the industries we participate in or individual scandals, and in response the market price of shares of our Class A common stock could decrease significantly. You may be unable to resell your shares of Class A common stock at or above the initial public offering price.

Stock markets and the price of our Class A shares may experience extreme price and volume fluctuations. In the past, following periods of volatility in the overall market and the market price of a company's securities, securities class action litigation has often been instituted against these companies. This litigation, if instituted against us, could result in substantial costs and a diversion of our management's attention and resources.

If securities or industry analysts do not publish research or reports about our business, or if they downgrade their recommendations regarding our Class A common stock, our stock price and trading volume could decline.

The trading market for our Class A common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. If any of the analysts who cover us downgrade our Class A common stock or publish inaccurate or unfavorable research about our business, our Class A common stock price may decline. If analysts cease coverage of us or fail to regularly publish

reports on us, we could lose visibility in the financial markets, which in turn could cause our Class A common stock price or trading volume to decline and our Class A common stock to be less liquid.

The dual class structure of our common stock has the effect of concentrating voting control with those stockholders who held our capital stock prior to the listing of our Class A common stock on the Nasdaq Global Select Market, including our directors, executive officers, and 5% stockholders and their respective affiliates, who held in the aggregate 91.5% of the voting power of our capital stock as of March 31, 2021. This ownership will limit or preclude your ability to influence corporate matters, including the election of directors, amendments of our organizational documents, and any merger, consolidation, sale of all or substantially all of our assets, or other major corporate transaction requiring stockholder approval.

Our Class B common stock has 20 votes per share, and our Class A common stock, which is the stock that is being sold in this offering, has one vote per share. As of March 31, 2021, our directors, executive officers, and 5% stockholders and their affiliates held in the aggregate 91.5% of the voting power of our capital stock. Because of the 20-to-one voting ratio between our Class B and Class A common stock, the holders of our Class B common stock collectively could continue to control a significant percentage of the combined voting power of our common stock and therefore be able to control all matters submitted to our stockholders for approval until all outstanding shares of Class A and Class B common stock have converted automatically into shares of a single class of common stock. This concentrated control may limit or preclude your ability to influence corporate matters for the foreseeable future, including the election of directors, amendments of our organizational documents, and any merger, consolidation, sale of all or substantially all of our assets, or other major corporate transaction requiring stockholder approval. In addition, this may prevent or discourage unsolicited acquisition proposals or offers for our capital stock that you may believe are in your best interest as one of our stockholders.

In addition, future transfers by holders of Class B common stock will generally result in those shares converting to Class A common stock, subject to limited exceptions, such as certain transfers effected for estate planning purposes. The conversion of Class B common stock to Class A common stock will have the effect, over time, of increasing the relative voting power of those holders of Class B common stock who retain their shares in the long term. As a result, it is possible that one or more of the persons or entities holding our Class B common stock could gain significant voting control as other holders of Class B common stock sell or otherwise convert their shares into Class A common stock.

In addition, while we do not expect to issue any additional shares of Class B common stock following this offering, any future issuances of Class B common stock would be dilutive to holders of Class A common stock.

We cannot predict the impact our dual class structure may have on the market price of our Class A common stock.

We cannot predict whether our dual class structure will result in a lower or more volatile market price of our Class A common stock, in adverse publicity or other adverse consequences. Certain index providers have announced restrictions on including companies with multiple class share structures in certain of their indices. For example, S&P Dow Jones has stated that companies with multiple share classes will not be eligible for inclusion in the S&P Composite 1500 (composed of the S&P 500, S&P MidCap 400 and S&P SmallCap 600), although existing index constituents in July 2017 were grandfathered. Under the announced policies, our dual class capital structure would make us ineligible for inclusion in any of these indices. Given the sustained flow of investment funds into passive strategies that seek to track certain indices, exclusion from stock indices would likely preclude investment by many of these funds and could make our Class A common stock less attractive to other investors. As a result, the market price of our Class A common stock could be materially adversely affected.

Our management has broad discretion in the use of the net proceeds from this offering and may not use the net proceeds effectively.

Our management will have broad discretion in the application of the net proceeds of this offering, which may include working capital, operating expenses, and capital expenditures. We may also use a portion of the net proceeds to acquire or make investments in businesses, products, offerings, and technologies, although we do not have agreements or commitments for any material acquisitions or investments at this time. We cannot specify with certainty the uses to which we will apply these net proceeds. We may also spend or invest these proceeds in a way with which our stockholders disagree. The failure by our management to apply these funds effectively could adversely affect our ability to pursue our growth strategies and expand our business. Pending their use, the net proceeds from our initial public offering may be invested in a way that does not produce income or that loses value.

Investors in this offering will suffer immediate and substantial dilution.

The initial public offering price per share of Class A common stock will be substantially higher than our pro forma net tangible book value per share immediately after this offering. As a result, you will incur immediate and substantial dilution in net tangible book value when you buy our Class A common stock in this offering. This means that you will pay a higher price per share than the amount of our total tangible assets, less our total liabilities, divided by the number of shares of all of our common stock outstanding. In addition, you may also experience additional dilution if options or other rights to purchase our common stock that are outstanding or that we may issue in the future are exercised or converted or we issue additional shares of our common stock at prices lower than our net tangible book value at such time. See the section entitled “Dilution.”

Future sales and issuances of our Class A common stock or rights to purchase our Class A common stock, including pursuant to our equity incentive plans, or other equity securities or securities convertible into our Class A common stock, could result in additional dilution of the percentage ownership of our stockholders and could cause the stock price of our Class A common stock to decline.

We may issue additional securities following the closing of this offering. In the future, we may sell Class A common stock, convertible securities, or other equity securities, including preferred securities, in one or more transactions at prices and in a manner we determine from time to time. We also expect to issue Class A common stock to employees, consultants, and directors pursuant to our equity incentive plans. If we sell Class A common stock, convertible securities, or other equity securities in subsequent transactions, or Class A common stock or Class B common stock is issued pursuant to equity incentive plans, investors may be materially diluted. New investors in subsequent transactions could gain rights, preferences, and privileges senior to those of holders of our Class A common stock.

We may issue preferred stock whose terms could materially adversely affect the voting power or value of our Class A common stock.

Our amended and restated certificate of incorporation will authorize us to issue, without the approval of our stockholders, one or more classes or series of preferred stock having such designations, preferences, limitations and relative rights, including preferences over our Class A common stock respecting dividends and distributions, as our board of directors may determine. The terms of one or more classes or series of preferred stock could adversely impact the voting power or value of our Class A common stock. For example, we might grant holders of preferred stock the right to elect some number of our directors in all events or on the happening of specified events or the right to veto specified transactions. Similarly, the repurchase or redemption rights or liquidation preferences we might assign to holders of preferred stock could affect the residual value of the Class A common stock.

A significant portion of our total outstanding shares are restricted from immediate resale but may be sold into the market in the near future. Future sales of our common stock in the public market could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market after this offering, or the perception that these sales might occur in large quantities, could cause the market price of our Class A common stock to decline and could impair our ability to raise capital through the sale of additional equity securities. Upon the closing of this offering, based on the number of shares outstanding as of March 31, 2021, we will have 11,293,655 shares of Class A common stock outstanding and 24,598,497 shares of Class B common stock outstanding.

We and our officers and directors and the holders of substantially all of our shares of capital stock, including the selling stockholders, have agreed with the underwriters, subject to certain exceptions, not to dispose of or hedge any of their Class A common stock or securities convertible into or exchangeable for shares of Class A common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus (the "lock-up period"), except with the prior written consent of Goldman Sachs & Co. LLC. Notwithstanding the foregoing, certain shares may automatically be released during the lock-up period pursuant to certain conditions being met. See "Shares Eligible for Future Sale" for a discussion of certain early release and other exceptions to transfer restrictions that would allow for sales during the lock-up period.

All of the Class A common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act of 1933, as amended, or the Securities Act, except for any shares held by our affiliates as defined in Rule 144 under the Securities Act (Rule 144). See the section titled "Shares Eligible for Future Sale" for additional information regarding shares of our Class A common stock that will be eligible for resale after this offering.

Moreover, following this offering, the holders of up to 17,668,163 shares of our Class B common stock will have rights, subject to some conditions, to require us to file registration statements for the public resale of the Class A common stock issuable upon conversion of such shares or to include such shares in registration statements that we may file for us or other stockholders, as described in the section of this prospectus entitled "Description of Capital Stock—Registration Rights." Any registration statement we file to register additional shares, whether as a result of registration rights or otherwise, could cause the market price of our Class A common stock to decline or be volatile.

Further, as of March 31, 2021, we had options outstanding that, if fully exercised, would result in the issuance of 6,736,002 shares of Class A common stock and 1,034,500 shares of Class B common stock, as well as 41,917 shares of Class A common stock issuable upon vesting and settlement of outstanding RSUs. After March 31, 2021, we issued additional options exercisable for 71,700 shares of Class A common stock and additional RSUs representing the right to receive an aggregate of 552,788 shares of Class A common stock upon vesting. We intend to file a registration statement on Form S-8 under the Securities Act to register the shares of our common stock subject to outstanding stock options and RSUs as of the date of this prospectus and shares that will be issuable pursuant to future awards granted under our equity incentive plan. Once we register these shares, they can be freely sold in the public market upon issuance, subject to applicable vesting requirements, compliance by affiliates with Rule 144, the market stand-off provisions and lock-up agreements described in the section of this prospectus entitled "Underwriting," and other restrictions provided under the terms of the applicable plan and/or the award agreements entered into with participants.

We may issue our shares of common stock or securities convertible into our common stock from time to time in connection with financings, acquisitions, investments, or otherwise. Any such issuance could result

in substantial dilution to our existing stockholders and cause the trading price of our Class A common stock to decline.

We do not intend to pay dividends for the foreseeable future. Consequently, any gains from an investment in our Class A common stock will likely depend on whether the price of our Class A common stock increases.

We have only paid one dividend in our history and do not intend to pay any dividends on our Class A common stock in the foreseeable future. We anticipate that we will retain all of our future earnings for use in the operation and growth of our business and for general corporate purposes. Any determination to pay dividends in the future will be at the discretion of our board of directors. Accordingly, investors must rely on sales of their Class A common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments. For more information, see the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources.”

Anti-takeover provisions contained in our amended and restated certificate of incorporation and amended and restated bylaws, as well as provisions of Delaware law, could impair a takeover attempt.

Our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective immediately prior to the completion of this offering, contain and Delaware law contains provisions which could have the effect of rendering more difficult, delaying or preventing an acquisition deemed undesirable by our board of directors. Our corporate governance documents provide for:

- a dual-class structure;
- a classified board of directors with three-year staggered terms, who can only be removed for cause, which may delay the ability of stockholders to change the membership of a majority of our board of directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of our board of directors to set the size of the board of directors and to elect a director to fill a vacancy, however occurring, including by an expansion of the board of directors, which prevents stockholders from being able to fill vacancies on our board of directors;
- the ability of our board of directors to authorize the issuance of shares of preferred stock and to determine the price and other terms of those shares, including voting or other rights or preferences, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquiror;
- the ability of our board of directors to alter our amended and restated bylaws without obtaining stockholder approval;
- in addition to our board of director’s ability to adopt, amend, or repeal our amended and restated bylaws, our stockholders may adopt, amend, or repeal our amended and restated bylaws only with the affirmative vote of the holders of at least 66 2/3% of the voting power of all our then-outstanding shares of capital stock;
- the required approval of (i) at least 66 2/3% of the voting power of the outstanding shares of capital stock entitled to vote generally in the election of directors, voting together as a single class, to adopt, amend, or repeal certain provisions of our restated certificate of incorporation and (ii) for so long as any shares of Class B common stock are outstanding, the holders of at least 80% of the shares of Class B common stock outstanding at the time of such vote, voting as a

separate series, to adopt, amend, or repeal certain provisions of our restated certificate of incorporation;

- the ability of stockholders to act by written consent only as long as holders of our Class B common stock hold at least 50% of the voting power of our capital stock;
- the requirement that a special meeting of stockholders may be called only by an officer of our company pursuant to a resolution adopted by a majority of our board of directors then in office or the chairperson of our board; and
- advance notice procedures that stockholders must comply with in order to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of us.

These provisions, alone or together, could delay or prevent hostile takeovers and changes in control or changes in our management.

As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the General Corporation Law of the State of Delaware (the Delaware General Corporation Law), which prevents some stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations without approval of the holders of substantially all of our outstanding common stock.

Any provision of our certificate of incorporation, bylaws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock.

Claims for indemnification by our directors and officers may reduce our available funds to satisfy successful third-party claims against us and may reduce the amount of money available to us.

Our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective immediately prior to the completion of this offering, provide that we will indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law.

In addition, as permitted by Section 145 of the Delaware General Corporation Law, our amended and restated bylaws to be effective immediately prior to the completion of this offering and our indemnification agreements that we have entered or intend to enter into with our directors and officers provide that:

- we will indemnify our directors and officers for serving us in those capacities or for serving other business enterprises at our request, to the fullest extent permitted by Delaware law. Delaware law provides that a corporation may indemnify such person if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the registrant and, with respect to any criminal proceeding, had no reasonable cause to believe such person's conduct was unlawful;
- we may, in our discretion, indemnify employees and agents in those circumstances where indemnification is permitted by applicable law;
- we are required to advance expenses, as incurred, to our directors and officers in connection with defending a proceeding, except that such directors or officers shall undertake to repay such advances if it is ultimately determined that such person is not entitled to indemnification;

- the rights conferred in our amended and restated bylaws are not exclusive, and we are authorized to enter into indemnification agreements with our directors, officers, employees and agents and to obtain insurance to indemnify such persons; and
- we may not retroactively amend our amended and restated bylaw provisions to reduce our indemnification obligations to directors, officers, employees, and agents.

While we have procured directors' and officers' liability insurance policies, such insurance policies may not be available to us in the future at a reasonable rate, may not cover all potential claims for indemnification, and may not be adequate to indemnify us for all liability that may be imposed.

Our amended and restated certificate of incorporation and amended and restated bylaws will provide for an exclusive forum in the Court of Chancery of the State of Delaware for certain disputes between us and our stockholders, and that the federal district courts of the United States of America will be the exclusive forum for the resolution of any complaint asserting a cause of action under the Securities Act, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that the Court of Chancery of the State of Delaware is the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a breach of fiduciary duty, any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine; provided that, the exclusive forum provision will not apply to suits brought to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction; and provided further that, if and only if the Court of Chancery of the State of Delaware dismisses any such action for lack of subject matter jurisdiction, such action may be brought in another state or federal court sitting in the State of Delaware. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide that the federal district courts of the United States of America will be the exclusive forum for the resolution of any complaint asserting a cause of action against us or any of our directors, officers, or employees arising under the Securities Act. Nothing in our amended and restated certificate of incorporation or amended and restated bylaws precludes stockholders that assert claims under the Exchange Act from bringing such claims in state or federal court, subject to applicable law.

We believe these provisions may benefit us by providing increased consistency in the application of Delaware law and federal securities laws by chancellors and judges, as applicable, particularly experienced in resolving corporate disputes, efficient administration of cases on a more expedited schedule relative to other forums and protection against the burdens of multi-forum litigation. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims. If a court were to find the choice of forum provision that will be contained in our amended and restated certificate of incorporation or amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could materially adversely affect our business, results of operations, and financial condition.

We are an emerging growth company and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an "emerging growth company" as defined in the JOBS Act, and we may take advantage of certain exemptions and relief from various reporting requirements that are applicable to other public

companies that are not emerging growth companies. In particular, while we are an emerging growth company, we will not be required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act; we will be exempt from any rules that could be adopted by the Public Company Accounting Oversight Board requiring mandatory audit firm rotations or a supplement to the auditor's report on financial statements; we will be subject to reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements; and we will not be required to hold non-binding advisory votes on executive compensation or stockholder approval of any golden parachute payments not previously approved.

In addition, under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards would otherwise apply to private companies. While we have not historically delayed the adoption of new or revised accounting standards until such time as those standards would apply to private companies, we have elected to take advantage of this extended transition period and, as a result, our operating results and financial statements in the future may not be comparable to the operating results and financial statements of companies who have adopted the new or revised accounting standards.

We may remain an emerging growth company until the earliest of (1) the last day of the fiscal year following the fifth anniversary of the consummation of this offering, (2) the last day of the fiscal year in which we have total annual gross revenue of at least $1.07 billion, (3) the last day of the fiscal year in which we are deemed to be a "large accelerated filer" as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our common stock held by non-affiliates exceeded $700.0 million as of the last business day of the second fiscal quarter of such year or (4) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

The exact implications of the JOBS Act are subject to interpretation and guidance by the SEC and other regulatory agencies, and we cannot assure you that we will be able to take advantage of all of the benefits of the JOBS Act. In addition, investors may find our common stock less attractive to the extent we rely on the exemptions and relief granted by the JOBS Act. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may decline or become more volatile.

General Risk Factors

We will incur significant expenses as a result of being a public company, which could materially adversely affect our business, results of operations, and financial condition.

As a public company, we will incur significant legal, accounting, and other expenses that we have not incurred as a private company. We will be subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the Exchange Act), the applicable requirements of the Sarbanes-Oxley Act, the Dodd-Frank Act, the rules and regulations of the SEC, and the Listing Rules of the Nasdaq Global Select Market. Stockholder activism and the level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional significant compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate. The increased costs will increase our net loss or decrease our net income, and may require us to reduce costs in other areas of our business or increase our service fees which could result in a reduction in bookings. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, on our board committees, or as executive officers. Furthermore, if we are unable to satisfy our obligations as a public company, we could be subject to delisting of our Class A common stock, fines, sanctions, and other regulatory action and potentially civil litigation.

Further, the majority of our management team, including our Chief Executive Officer and Chief Financial Officer, have either no or limited experience in managing publicly-traded companies. Our management team may not successfully or efficiently manage our transition to being a public company and the continuous scrutiny of securities analysts and investors. These new obligations and constituents will require significant attention from our senior management and could divert their attention away from the day-to-day management of our business, and could materially adversely affect our business, results of operations, and financial condition.

We have identified a material weakness in our internal control over financial reporting. If we experience material weaknesses in the future or otherwise fail to implement and maintain an effective system of internal controls in the future, we may not be able to accurately report our financial condition or results of operations which may adversely affect investor confidence in us and, as a result, the value of our common stock.

As a result of becoming a public company, we will be required, under Section 404 of the Sarbanes-Oxley Act, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting beginning with our Annual Report on Form 10-K for the year ended December 31, 2022. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. A material weakness is a deficiency or combination of deficiencies in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of a company's annual and interim financial statements will not be detected or prevented on a timely basis.

The rules governing the standards that must be met for management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation. To comply with the requirements of being a reporting company under the Exchange Act, including performing the evaluation needed to comply with Section 404, we will need to implement additional financial and management controls, reporting systems and procedures and hire additional accounting and finance staff. We may not be able to complete our evaluation, testing and any required remediation in a timely fashion. During the evaluation and testing process, if we identify one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal controls are effective. The effectiveness of our controls and procedures may be limited by a variety of factors, including:

- faulty human judgment and simple errors, omissions or mistakes;
- fraudulent action of an individual or collusion of two or more people;
- inappropriate management override of procedures; and
- the possibility that any enhancements to controls and procedures may still not be adequate to assure timely and accurate financial control.

In fiscal year 2019, we identified a material weakness with our internal control over financial reporting as we had not designed or maintained an effective control environment and associated control activities to meet our accounting and reporting requirements. Specifically we did not have a sufficient complement of personnel with an appropriate degree of internal controls and accounting knowledge, we did not have a sufficiently documented risk assessment process to identify and analyze risks of misstatement due to error and/or fraud and in certain cases we did not have appropriate reviews over journal entries and third party reported information to allow for reliable and timely financial reporting.

During 2020, we established a remediation plan to address our material weakness and we have been actively engaged in the implementation of remediation efforts to address the material weakness. As part

of our commitment we have hired a complement of personnel, have established a risk assessment process, established reviews over journal entries and third party reported information and continue to evaluate the additional internal controls we have designed during 2020 and 2021. When we are satisfied these internal controls associated with the material weakness have operated within our business for a sufficient period of time, we will determine if we have remediated our material weakness. We have not been required to provide a management assessment of internal controls under section 404(a) of the Sarbanes-Oxley Act. It is possible that if we had a 404(a) assessment, additional material weaknesses may have been identified. Additionally, our registered independent public accounting firm has not been engaged to perform an audit of our internal controls over financial reporting.

In the future, it is possible that additional material weaknesses or significant deficiencies may be identified that we may be unable to remedy before the requisite deadline for those reports. Our ability to comply with the annual internal control reporting requirements will depend on the effectiveness of our financial reporting and data systems and controls across our company. Any weaknesses or deficiencies or any failure to implement required new or improved controls, or difficulties encountered in the implementation or operation of these controls, could harm our operating results and cause us to fail to meet our financial reporting obligations, or result in material misstatements in our consolidated financial statements, which could adversely affect our business and reduce our stock price.

If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines we have a material weakness in our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could decline, and we could be subject to sanctions or investigations by the SEC or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

When we cease to be an “emerging growth company” as defined under the JOBS Act, our auditors will be required to express an opinion on the effectiveness of our internal controls, unless we are then eligible for any other exemption from such requirement. If we are unable to confirm that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion on the effectiveness of our internal controls, we could lose investor confidence in the accuracy and completeness of our financial reports, which could cause the price of our common stock to decline.

Changes in accounting principles or their application to us could result in unfavorable accounting charges or effects, which could adversely affect our operating results and prospects.

We prepare consolidated financial statements in accordance with accounting principles generally accepted in the United States. The accounting for our business is subject to change based on the evolution of our business model, interpretations of relevant accounting principles, enforcement of existing or new regulations, and changes in policies, rules, regulations, and interpretations, of accounting and financial reporting requirements of the SEC or other regulatory agencies. For example, we make certain assumptions about the interpretation of these principles and accounting treatment of our non-cash stock-based compensation expense and related obligations with respect to our financial statements. If these assumptions turn out to be unfounded, our stock-based compensation expense could be materially higher than expected for current and future periods, which could have a material adverse effect on our net loss. A change in any of these principles or guidance, or in their interpretations or application to us, may have a significant effect on our reported results, as well as our processes and related controls, and may retroactively affect previously reported results, which may negatively impact our financial statements, which may in turn adversely affect our prospects. It is difficult to predict the impact of future changes to accounting principles and accounting policies over financial reporting, any of which could adversely affect

our results of operations and financial condition and could require significant investment in systems and personnel.

Special Note Regarding Forward-Looking Statements

This prospectus contains forward-looking statements about us and our industry that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this prospectus, including statements regarding our strategy, future financial condition, future operations, projected costs, prospects, plans, objectives of management, and expected market growth, are forward-looking statements. In some cases, you can identify forward-looking statements because they contain words such as “may,” “will,” “shall,” “should,” “expects,” “plans,” “anticipates,” “could,” “intends,” “target,” “projects,” “contemplates,” “believes,” “estimates,” “predicts,” “potential,” “goal,” “objective,” “seeks,” or “continue” or the negative of these words or other similar terms or expressions that concern our expectations, strategy, plans, or intentions. Forward-looking statements contained in this prospectus include, but are not limited to, statements about:

- our expectations regarding our financial performance;
- our expectations regarding future operating performance;
- the sufficiency of our cash and cash equivalents to meet our liquidity needs;
- our ability to compete in our industry;
- the size of our addressable markets, market share, and market trends, including our ability to grow our business in the countries we have identified as near-term priorities;
- anticipated trends, developments, and challenges in our industry, business, and the highly competitive markets in which we operate;
- our ability to anticipate market needs or develop new or enhanced offerings and services to meet those needs;
- our ability to manage expansion into international markets and new industries;
- our ability to stay in compliance with laws and regulations that currently apply or may become applicable to our business both in the United States and internationally and our expectations regarding various laws and restrictions that relate to our business;
- our ability to effectively manage our growth and expand our infrastructure and maintain our corporate culture;
- our ability to identify, recruit, and retain skilled personnel, including key members of senior management;
- our ability to maintain, protect, and enhance our intellectual property; and
- our intended use of the net proceeds from this offering.

We caution you that the foregoing list does not contain all of the forward-looking statements made in this prospectus.

You should not rely upon forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this prospectus primarily on our current expectations, estimates, forecasts, and projections about future events and trends that we believe may affect our business, results of operations, financial condition, and prospects. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we cannot guarantee that the future results, levels of activity, performance, or events and circumstances reflected in the forward-looking statements will be achieved or occur at all. The outcome of the events described in these forward-looking statements

is subject to risks, uncertainties, and other factors described in the section titled “Risk Factors” and elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this prospectus. The results, events, and circumstances reflected in the forward-looking statements may not be achieved or occur, and actual results, events, or circumstances could differ materially from those described in the forward-looking statements. You should not place undue reliance on our forward-looking statements.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain, and you are cautioned not to unduly rely upon these statements.

The forward-looking statements made in this prospectus relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this prospectus to reflect events or circumstances after the date of this prospectus or to reflect new information or the occurrence of unanticipated events, except as required by law.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus by these cautionary statements.

Market and Industry Data

This prospectus contains estimates, projections and other information concerning our industry and our business, as well as data regarding market research, estimates, and forecasts prepared by our management. Information that is based on estimates, forecasts, projections, market research, or similar methodologies is inherently subject to uncertainties, and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section titled “Risk Factors.” Unless otherwise expressly stated, we obtained this industry, business, market, and other data from reports, research surveys, studies, and similar data prepared by market research firms and other third parties, industry and general publications, government data, and similar sources. In some cases, we do not expressly refer to the sources from which this data is derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from sources which we paid for, sponsored, or conducted, unless otherwise expressly stated or the context otherwise requires. While we have compiled, extracted, and reproduced industry data from these sources, we have not independently verified the data. Forecasts and other forward-looking information with respect to industry, business, market, and other data are subject to the same qualifications and additional uncertainties regarding the other forward-looking statements in this prospectus. See “Special Note Regarding Forward-Looking Statements.”

Among others, we refer to estimates compiled by the following industry sources:

- Global Web Index, a market research and intelligence company;
- GSV Ventures, a venture capital firm;
- Comscore, a media measurement and analytics company;
- eMarketer (Insider Intelligence Inc.), a market research and intelligence company;
- App Annie Intelligence, a market research and intelligence company;
- GSMA Intelligence (GSMA), an industry organization that represents the interests of mobile network operators worldwide;
- The Harris Poll, a market research and intelligence company;
- HolonIQ, a market research and intelligence company; and
- Adjust, a marketing analytics company.

We have not independently verified the market and industry data from these third-party sources and thus the accuracy and completeness of such information cannot be guaranteed.

Use of Proceeds

We estimate that we will receive net proceeds to us from this offering of approximately $309.3 million (or $374.2 million if the underwriters exercise their option to purchase additional shares of Class A common stock in full), based upon an assumed initial public offering price of $90.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We will not receive any proceeds from the sale of shares of our Class A common stock by the selling stockholders.

Each $1.00 increase or decrease in the assumed initial public offering price per share of $90.00, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the net proceeds to us from this offering by approximately $3.5 million, assuming the number of shares of Class A common stock offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each 1.0 million share increase or decrease in the number of shares of Class A common stock offered by us in this offering would increase or decrease the net proceeds to us from this offering by approximately $84.7 million, assuming that the initial public offering price per share remains at $90.00, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

The principal purposes of this offering are to increase our capitalization and financial flexibility and to create a public market for our Class A common stock.

We currently intend to use the net proceeds from this offering for general corporate purposes, including working capital, operating expenses, and capital expenditures. We may also use a portion of the net proceeds to acquire or make investments in businesses, products, offerings, and technologies, although we do not have agreements or commitments for any material acquisitions or investments at this time.

The expected use of net proceeds from this offering represents our intentions based upon our present plans and business conditions. We cannot predict with certainty all of the particular uses for the proceeds of this offering or the amounts that we will actually spend on the uses set forth above. Accordingly, our management will have broad discretion in applying the net proceeds of this offering. The timing and amount of our actual expenditures will be based on many factors, including cash flows from operations and the anticipated growth of our business. Pending their use, we intend to invest the net proceeds of this offering in a variety of capital-preservation investments, including short- and intermediate-term investments, interest-bearing investments, investment-grade securities, government securities, and money market funds.

Dividend Policy

We have never declared or paid any cash dividends on our common stock, and we do not currently intend to pay any cash dividends on our common stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to support operations and to finance the growth and development of our business. Any future determination related to dividend policy will be made at the discretion of our board of directors, subject to applicable laws and the restrictions set forth in any of our contractual agreements, and will depend upon, among other factors, our results of operations, financial condition, contractual restrictions and capital requirements. Our future ability to pay cash dividends on our common stock may also be limited by the terms of any future debt or preferred securities we may issue or any future credit facilities we may enter into.

Capitalization

The following table sets forth cash and cash equivalents, as well as our capitalization, as of March 31, 2021 as follows:

- on an actual basis;
- on a pro forma basis, giving effect to (1) the Transactions as if such Transactions had occurred on March 31, 2021, and (2) the filing and effectiveness of our amended and restated certificate of incorporation in Delaware, which will occur immediately prior to the completion of this offering; and
- on a pro forma as adjusted basis, giving effect to (1) the pro forma adjustments set forth above and (2) our sale and issuance of 3,700,000 shares of our Class A common stock in this offering at an assumed initial public offering price per share of $90.00, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

The information below is illustrative only, and our cash and cash equivalents, additional paid-in capital, accumulated deficit, total stockholders' (deficit) equity, and total capitalization following the closing of this offering will be adjusted based on the actual initial public offering price and other terms of the offering determined at the pricing of this offering. You should read this table together with our consolidated financial statements and related notes, and the sections titled "Selected Consolidated Financial and Other Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" that are included elsewhere in this prospectus.

	As of March 31, 2021		
	Actual	Pro Forma	Pro Forma As Adjusted(1)
	(unaudited)		
	(in thousands, except share and per share data)		
Cash and cash equivalents	$ 117,459	$ 117,459	$ 426,764
Convertible preferred stock, $0.0001 par value; 19,074,276 shares authorized, issued and outstanding, actual; no shares authorized, issued and outstanding, pro forma and pro forma as adjusted	$ 182,609	$ —	$ —
Stockholders' equity (deficit):			
Preferred stock, $0.0001 par value; no shares authorized, issued and outstanding, actual; 20,000,000 shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	—	—	—
Common stock, $0.0001 par value; 42,800,000 shares authorized, 13,117,876 issued and outstanding, actual, no shares issued and outstanding, pro forma and pro forma as adjusted	1	—	—
Class A common stock, $0.0001 par value; no shares authorized, issued and outstanding, actual; 2,000,000,000 shares authorized, 6,187,542 shares issued and outstanding, pro forma; 2,000,000,000 shares authorized, 11,293,655 shares issued and outstanding, pro forma as adjusted	—	1	1
Class B common stock, $0.0001 par value; no shares authorized, issued and outstanding, actual; 30,000,000 shares authorized, 26,004,610 shares issued and outstanding, pro forma; shares authorized, 24,598,497 shares issued and outstanding, pro forma as adjusted	—	3	2
Additional paid-in capital	26,465	209,074	518,379
Accumulated deficit	(124,251)	(124,251)	(124,251)
Total stockholders' (deficit) equity	$ (97,785)	$ 84,826	$ 394,131
Total capitalization	$ 19,674	$ 84,826	$ 394,131

(1) Each $1.00 increase or decrease in the assumed initial public offering price per share of $90.00, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease each of cash and cash equivalents, additional paid-in capital, total stockholders' (deficit) equity, and total capitalization on a pro forma as adjusted basis by approximately $3.5 million, assuming the number of shares offered, as set forth on the cover page of this prospectus, remains

the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each 1.0 million share increase or decrease in the number of shares offered by us in this offering would increase or decrease each of cash and cash equivalents, additional paid-in capital, total stockholders' (deficit) equity, and total capitalization on a pro forma as adjusted basis by approximately $84.7 million, assuming that the initial public offering price per share remains at $90.00, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

Dilution

If you invest in our Class A common stock in this offering, your ownership interest will be diluted to the extent of the difference between the initial public offering price per share of Class A common stock and the pro forma as adjusted net tangible book value per share of our Class A and Class B common stock immediately after this offering.

Our historical net tangible book value as of March 31, 2021 was $(108.2) million, or $(8.25) per share. Net tangible book value per share represents the amount of our total tangible assets less our total liabilities and convertible preferred stock, divided by the number of shares of our Class A and Class B common stock outstanding as of March 31, 2021.

Our pro forma net tangible book value as of March 31, 2021 was $74.4 million, or $2.31 per share. Pro forma net tangible book value per share represents the amount of our total tangible assets less our total liabilities, divided by the number of our shares of Class A and Class B common stock outstanding as of March 31, 2021, after giving effect to (1) the Transactions as if such Transactions had occurred on March 31, 2021 and (2) the filing and effectiveness of our amended and restated certificate of incorporation in Delaware, which will occur immediately prior to the completion of this offering.

After giving effect to the sale and issuance by us of 3,700,000 shares of Class A common stock in this offering at an assumed initial public offering price per share of $90.00, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting underwriting discounts and commissions and estimated offering expenses, our pro forma as adjusted net tangible book value as of March 31, 2021 would have been $383.7 million, or $10.69 per share. This amount represents an immediate increase in pro forma as adjusted net tangible book value of $8.38 per share to our existing stockholders and an immediate dilution in pro forma as adjusted net tangible book value of $79.31 per share to new investors purchasing Class A common stock in this offering.

We determine dilution by subtracting the pro forma as adjusted net tangible book value per share after this offering from the initial public offering price per share paid by new investors for a share of Class A common stock. The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share		$ 90.00
Historical net tangible book value per share as of March 31, 2021	$ (8.25)	
Increase per share attributable to the pro forma adjustments described above	10.56	
Pro forma net tangible book value per share as of March 31, 2021	2.31	
Increase in pro forma net tangible book value per share attributable to new investors purchasing shares of Class A common stock in this offering	8.38	
Pro forma as adjusted net tangible book value per share immediately after this offering		10.69
Dilution in pro forma as adjusted net tangible book value per share to new investors in this offering		$ 79.31

The dilution information discussed above is illustrative only and may change based on the actual initial public offering price and other terms of this offering. Each $1.00 increase or decrease in the assumed initial public offering price per share of $90.00, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, our pro forma as adjusted net tangible book value per share after this offering by $0.10 per share and the dilution per share to new investors participating in this offering by $0.10 per share, assuming that the number of shares of Class A common stock offered by us, as set forth on the cover page of this prospectus, remains the same and

after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, a 1.0 million share increase in the number of shares of Class A common stock offered by us would increase the pro forma as adjusted net tangible book value after this offering by $2.01 per share and decrease the dilution per share to new investors participating in this offering by $2.01 per share, and a 1.0 million share decrease in the number of shares of Class A common stock offered by us would decrease the pro forma as adjusted net tangible book value by $2.12 per share, and increase the dilution per share to new investors in this offering by $2.12 per share, assuming that the assumed initial public offering price per share of $90.00, which is the midpoint of the price range set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise in full their option to purchase additional shares of Class A common stock from us, the pro forma as adjusted net tangible book value per share after giving effect to this offering would be $12.24 per share, and the dilution to investors participating in this offering would be $77.76 per share.

The following table summarizes on the pro forma as adjusted basis described above, the differences between the number of shares purchased from us, the total consideration paid and the average price per share paid to us by existing stockholders and by investors purchasing shares of Class A common stock in this offering at the assumed initial public offering price per share of $90.00, which is the midpoint of the price range set forth on the cover page on this prospectus, before deducting underwriting discounts and commissions and estimated offering expenses payable by us:

	Shares Purchased		Total Consideration		Weighted-Average Price Per Share
	Number	Percent	Amount (in thousands)	Percent	
Existing stockholders	32,192,152	89.7 %	$ 191,515,231	36.5 %	$ 5.95
New investors	3,700,000	10.3 %	333,000,000	63.5 %	$ 90.00
Total	35,892,152	100 %	$ 524,515,231	100 %	

A $1.00 increase or decrease in the assumed initial public offering price per share of $90.00, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the total consideration paid by new investors by $3.7 million and, in the case of an increase, would increase the percentage of total consideration paid by new investors to 63.7% and, in the case of a decrease, would decrease the percentage of total consideration paid by new investors to 63.2%, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. Similarly, a 1.0 million share increase or decrease in the number of shares offered by us would increase or decrease, as applicable, the total consideration paid by new investors by $90.0 million and, in the case of an increase, would increase the percentage of total consideration paid by new investors to 69.0% and, in the case of a decrease, would decrease the percentage of total consideration paid by new investors to 56.3%, assuming that the assumed initial public offering price per share of $90.00, which is the midpoint of the price range set forth on the cover page of this prospectus, remains the same.

If the underwriters exercise their option to purchase additional shares of Class A common stock in full, our existing stockholders would own 87.8% and our new investors would own 12.2% of the total number of shares of our common stock outstanding upon the completion of this offering.

We will not receive any proceeds from the sale of shares of the Class A common stock by the selling stockholders in this offering. Accordingly, there will be no dilutive impact as a result of such sales.

Selected Consolidated Financial and Other Data

The following tables set forth our selected consolidated financial and other data. The selected consolidated statements of operations data for the years ended December 31, 2019 and 2020 and the selected consolidated balance sheet data as of December 31, 2019 and 2020 have been derived from our audited consolidated financial statements included elsewhere in this prospectus. The selected consolidated statements of operations data for the three months ended March 31, 2020 and 2021 and the selected consolidated balance sheet data as of March 31, 2021 have been derived from our unaudited interim consolidated financial statements included elsewhere in this prospectus. In our opinion, the unaudited interim consolidated financial statements have been prepared on a basis consistent with our audited consolidated financial statements and contain all adjustments, consisting only of normal and recurring adjustments, necessary for a fair presentation of such interim financial statements. Our historical results are not necessarily indicative of the results that may be expected in the future and our interim results are not necessarily indicative of the results that may be expected for the full fiscal year or any other future period. You should read the following selected consolidated financial and other data in conjunction with the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements included elsewhere in this prospectus. The selected consolidated financial and other data in this section are not intended to replace, and are qualified in their entirety by, the consolidated financial statements and related notes.

Consolidated Statements of Operations Data:

	Year Ended December 31,		Three Months Ended March 31,	
(In thousands, except per share data)	**2019**	**2020**	**2020**	**2021**
Revenues	$ 70,760	$ 161,696	$ 28,112	$ 55,360
Cost of revenues (1)	20,737	45,987	8,214	15,019
Gross profit	50,023	115,709	19,898	40,341
Operating expenses:				
Research and development (1)	31,560	53,024	9,576	22,529
Sales and marketing (1) (2)	14,989	34,983	5,511	19,773
General and administrative (1) (3)	16,371	43,713	7,266	11,453
Impairment of capitalized software	1,228	—	—	—
Total operating expenses	64,148	131,720	22,353	53,755
Loss from operations	(14,125)	(16,011)	(2,455)	(13,414)
Other income, net	571	303	233	(41)
Loss before provision for income taxes	(13,554)	(15,708)	(2,222)	(13,455)
Provision for income taxes	—	68	11	17
Net loss	$ (13,554)	$ (15,776)	$ (2,233)	$ (13,472)
Basic and diluted net loss per share (4)	$ (1.10)	$ (1.24)	$ (0.18)	$ (1.04)
Weighted-average shares used in computing net loss per share attributable to common stockholders, basic and diluted (4)	12,373	12,735	12,403	12,916
Pro forma net loss per share attributable to common stockholders—basic and diluted (unaudited)(5)		$ (0.68)		$ (0.60)
Weighted-average shares used in computing pro forma net loss per share attributable to common stockholders —basic and diluted (unaudited)(5)		31,809		31,992

(1) Includes stock-based compensation expenses as follows:

(*In thousands*)	Year Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
Cost of revenues	$ 6	$ 6	$ 1	$ 2
Research and development	1,552	2,773	447	1,111
Sales and marketing	341	348	73	68
General and administrative	1,826	13,904	633	1,370
Total	$ 3,725	$ 17,031	$ 1,154	$ 2,551

During the year ended December 31, 2020, we recorded compensation costs of $10.2 million related to a secondary transaction where certain employees sold shares of stock to an outside investor at a price above fair market value of the stock. In addition, subsequent to March 31, 2021, we granted (1) options to purchase 71.7 thousand shares of common stock at an exercise price of $52.80 per share and 552.8 thousand RSUs to employees, which have aggregate estimated unrecognized compensation expense of approximately $1.8 million and $29.2 million, respectively, that is expected to be recognized over a period of four years, and (2) 1.8 million performance-based RSUs to our Founders, which have aggregate estimated unrecognized compensation expense of approximately $100.5 million that is expected to be recognized over a period of one to seven years, depending on the achievement of performance-based vesting conditions. See “Executive Compensation—Narrative to Summary Compensation Table—Fiscal 2021 Equity-Based Compensation” for additional information regarding these awards to our Founders.

(2) Includes amortization of capitalized software as follows:

(*In thousands*)	Year Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
Cost of revenues	$ 103	$ 86	$ 26	$ —
Sales and marketing	621	546	33	148
Total	$ 724	$ 632	$ 59	$ 148

(3) Depreciation of property and equipment is predominately included within General and administrative, with nominal amounts in Cost of revenues, Research and development and Sales and marketing in the Company’s consolidated statement of operations.

(4) See Note 13 to our audited consolidated financial statements and Note 12 to our unaudited interim condensed consolidated financial statements included elsewhere in this prospectus for an explanation of the method used to calculate our basic and diluted net loss per share attributable to common stockholders.

(5) We have presented the unaudited pro forma basic and diluted net loss per share which has been computed to give effect to the conversion of our stock-based awards and convertible preferred stock into common stock (using the if-converted method) as though the conversion had occurred as of the beginning of the period. The unaudited pro forma net loss per share does not include shares being offered in this offering.

The following table sets forth the computation of our unaudited pro forma basic and diluted net loss per share:

(In thousands, except per share data)	Year Ended December 31, 2020	Three Months Ended March 31, 2021
Numerator:		
Net loss	$ (15,776)	$ (13,472)
Pro forma adjustment for RSU compensation expense(a)	(107)	(224)
Pro forma adjustment for executive stock option compensation expense(b)	(5,724)	(5,649)
Pro forma net loss	(21,607)	(19,345)
Denominator:		
Weighted-average shares used in computing net loss per share attributable to common stockholders, basic and diluted	12,735	12,916
Pro forma adjustment to reflect assumed vesting and settlement of RSUs(c)	—	2
Pro forma adjustment to reflect assumed conversion of convertible preferred stock	19,074	19,074
Weighted-average shares used in computing pro forma net loss per share, basic and diluted	31,809	31,992
Pro forma net loss per share, basic and diluted	$ (0.68)	$ (0.60)

(a) Reflects stock-based compensation expenses related to RSUs subject to both a service-based vesting condition and a performance-based vesting condition, where the performance-based vesting condition will be satisfied in connection with

this offering. There was $1.2 million and $1.4 million of unrecognized expense as of December 31, 2020 and March 31, 2021, respectively, remaining after the pro forma RSU compensation expense.

(b) Reflects compensation expense for options granted to our executive officers whereby the vesting accelerates in connection with this offering. There was $2.9 million and $2.5 million of unrecognized expense remaining as of December 31, 2020 and March 31, 2021, respectively, after giving effect to the pro forma stock-based compensation expense.

(c) Reflects RSUs that have vested as of December 31, 2020 and March 31, 2021 for which the service-based vesting condition had been satisfied as of December 31, 2020 and March 31, 2021, respectively, and for which the performance-based vesting condition will be satisfied in connection with this offering.

Consolidated Balance Sheet Data:

	As of December 31,		As of March 31,
(In thousands)	**2019**	**2020**	**2021**
Cash and cash equivalents	$ 59,843	$ 120,490	$ 117,459
Working capital	46,816	92,690	74,916
Total assets	95,059	175,739	176,874
Total deferred revenues	26,307	54,792	65,262
Total stockholders' deficit	(83,976)	(80,691)	(97,785)

Key Operating Metrics and Non-GAAP Financial Measures

We regularly review a number of key operating metrics and non-GAAP financial measures to evaluate our business, measure our performance, identify trends, prepare financial projections and make business decisions. The measures set forth below should be considered in addition to, not as a substitute for or in isolation from, our financial measures prepared in accordance with GAAP. Other companies, including companies in our industry, may calculate these measures differently or not at all, which reduces their usefulness as comparative measures. A reconciliation of the non-GAAP financial measures, Adjusted EBITDA and free cash flow to the most directly comparable financial measure calculated in accordance with GAAP is set forth below under "—Non-GAAP Financial Measures."

(***In millions, except dollar amounts in thousands)***	Year Ended December 31,		Three Months Ended March 31,	
	2019	**2020**	**2020**	**2021**
Operating Metrics				
Monthly active users (MAUs)(1)	27.3	36.7	33.5	39.9
Daily active users (DAUs)(2)	5.2	8.2	6.8	9.5
Paid subscribers(3)	0.9	1.6	1.1	1.8
Subscription bookings(4)	$ 72,115	$ 144,379	$ 30,737	$ 50,466
Total bookings(5)	$ 88,033	$ 190,181	$ 36,880	$ 65,830
Non-GAAP Financial Measures				
Net loss (GAAP)	$ (13,554)	$ (15,776)	$ (2,233)	$ (13,472)
Adjusted EBITDA(6)	$ (7,969)	$ 3,630	$ (867)	$ 871
Net cash provided by operating activities (GAAP)	$ 2,152	$ 17,708	$ 4,719	$ 5,123
Free cash flow(6)	$ (3,094)	$ 13,976	$ 2,996	$ 3,825

(1) MAUs are defined as unique Duolingo users who engage with our mobile language learning application or the language learning section of our website each month. MAUs are reported for a measurement period by taking the average of each calendar month in that measurement period. MAUs are a measure of the size of our global active user community on Duolingo.

(2) DAUs are defined as unique Duolingo users who engage with our mobile language learning application or the language learning section of our website each calendar day. DAUs are reported for a measurement period by taking the average of the

DAUs for each day in that measurement period. DAUs are a measure of the consistent engagement of our global user community on Duolingo.

(3) Paid subscribers are defined as users who pay for access to Duolingo Plus and had an active subscription as of the end of the measurement period. Each unique user account is treated as a single paid subscriber regardless of whether such user purchases multiple subscriptions, and the count of paid subscribers does not include users who are currently on a free trial.

(4) Subscription bookings represent the amounts we receive from a purchase of a subscription to Duolingo Plus.

(5) Total bookings represent the amounts we receive from a purchase of a subscription to Duolingo Plus, a registration for a Duolingo English Test, an in-app purchase for a virtual good and from advertising networks for advertisements served to our users.

(6) See "—Non-GAAP Financial Measures" below for more information.

Non-GAAP Financial Measures

We use certain non-GAAP financial measures to supplement our consolidated financial statements, which are presented in accordance with GAAP. These non-GAAP financial measures include Adjusted EBITDA and free cash flow. We use these non-GAAP financial measures for financial and operational decision-making and as a means to evaluate period-to-period comparisons. By excluding certain items that may not be indicative of our recurring core operating results, we believe that Adjusted EBITDA and free cash flow provide meaningful supplemental info regarding our performance. Accordingly, we believe these non-GAAP financial measures are useful to investors and others because they allow for additional information with respect to financial measures used by management in its financial and operational decision-making and they may be used by our institutional investors and the analyst community to help them analyze the health of our business. However, there are a number of limitations related to the use of non-GAAP financial measures, and these non-GAAP measures should be considered in addition to, not as a substitute for or in isolation from, our financial results prepared in accordance with GAAP. Other companies, including companies in our industry, may calculate these non-GAAP financials measures differently or not at all, which reduces their usefulness as comparative measures.

Adjusted EBITDA: Adjusted EBITDA is defined as net loss excluding interest (income) expense, net, income tax provision, depreciation and amortization, IPO and public company readiness costs, stock-based compensation expense, tender offer-related costs, other expenses, and the impairment of capitalized software. Adjusted EBITDA is used by management to evaluate the financial performance of our business and we present Adjusted EBITDA because we believe it is helpful in highlighting trends in our operating results and that it is frequently used by analysts, investors and other interested parties to evaluate companies in our industry. The following table presents a reconciliation of our net loss, the most directly comparable financial measure presented in accordance with GAAP, to Adjusted EBITDA.

(*In thousands*)	Year Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
Net loss	$ (13,554)	$ (15,776)	$ (2,233)	$ (13,472)
Interest (income) expense, net	(619)	(231)	(198)	(2)
Income tax provision	—	68	11	17
Depreciation and amortization	1,251	2,256	399	600
IPO and public company readiness costs(1)	—	282	—	480
Stock-based compensation expense	3,725	17,031	1,154	2,551
Tender offer-related costs(2)	—	—	—	5,599
Other expenses(3)	—	—	—	5,098
Impairment of capitalized software(4)	1,228	—	—	—
Adjusted EBITDA	$ (7,969)	$ 3,630	$ (867)	$ 871

(1) IPO and public company readiness costs include costs associated with IPO readiness and establishment of our public company structure and processes, including consultant costs. These costs are included within General and administrative expenses within our Consolidated Statement of Operations.

(2) Includes costs related to our tender offer initiated in February 2021 (see Note 14 to our audited consolidated financial statements and Note 9 to our unaudited interim condensed consolidated financial statements included elsewhere in this prospectus), including fees incurred, as follows:

(*In thousands*)	Cost of revenues	Research and development	Sales and marketing	General and administrative	Total
Tender offer	$ 10	$ 3,302	$ 173	$ 1,790	$ 5,275
Fees and taxes paid on tender offer	—	—	—	324	324
Total	$ 10	$ 3,302	$ 173	$ 2,114	$ 5,599

(3) Represents one-time cash awards to Duolingo contributors under our non-employee volunteer program included within Sales and marketing expenses within our Consolidated Statement of Operations. See Note 14 to our audited consolidated financial statements and Note 2 to our unaudited interim consolidated financial statements included elsewhere in this prospectus.

(4) Represents the write off of the capitalization of an internal-use software project prior to being launched to the user base.

Free Cash Flow: Free cash flow represents net cash provided by operating activities, reduced by purchases of property and equipment, capitalized software development costs, and increased by IPO and public company readiness costs, as we believe they are not indicative of future liquidity. We believe that free cash flow is a measure of liquidity that provides useful information to our management, investors and others in understanding and evaluating the strength of our liquidity and future ability to generate cash that can be used for strategic opportunities or investing in our business in the same manner as our management and board of directors. The following table presents a reconciliation of net cash provided by operating activities, the most directly comparable financial measure calculated in accordance with GAAP to free cash flow:

	Year Ended December 31,		Three Months Ended March 31,	
(In thousands)	2019	2020	2020	2021
Net cash provided by operating activities	$ 2,152	$ 17,708	$ 4,719	$ 5,123
Less: Capitalized software development costs	(1,476)	(638)	(123)	(939)
Less: Purchases of property and equipment	(3,770)	(3,376)	(1,600)	(839)
Plus: IPO and public company readiness costs(1)	—	282		480
Free cash flow	$ (3,094)	$ 13,976	$ 2,996	$ 3,825

(1) IPO and public company readiness costs include costs associated with IPO readiness and establishment of our public company structure and processes, including consultant costs. These costs are included within General and administrative expenses within our Consolidated Statement of Operations.

management's discussion and analysis of financial condition and results of operations

Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations together with the "Selected Consolidated Financial and Other Data" and our consolidated financial statements and related notes included elsewhere in this prospectus. This discussion contains forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under the section titled "Risk Factors" or in other parts of this prospectus. Our historical results are not necessarily indicative of the results that may be expected for any period in the future. Except as otherwise noted, all references to 2019 refer to the year ended December 31, 2019 and references to 2020 refer to the year ended December 31, 2020. Subscriber metrics refer to the specific date denoted.

Overview

Duolingo is the leading global mobile learning platform, offering courses in 40 languages to approximately 40 million monthly active users. Our flagship app has organically become the world's most popular way to learn languages and the top-grossing app in the Education category on both Google Play and the Apple App Store. We believe that we have become the preeminent online destination for language learning due to our beautifully designed products, exceptional user engagement, and demonstrated learning efficacy.

Our mission is to develop the best education in the world and make it universally available. Education has the ability to transform lives and create opportunities for social and economic advancement. However, access to high quality education is out of reach for too many people worldwide. We started Duolingo to provide access to quality education to everyone, and we started with a focus on language learning because of its potential to power both economic advancement and deep human connection.

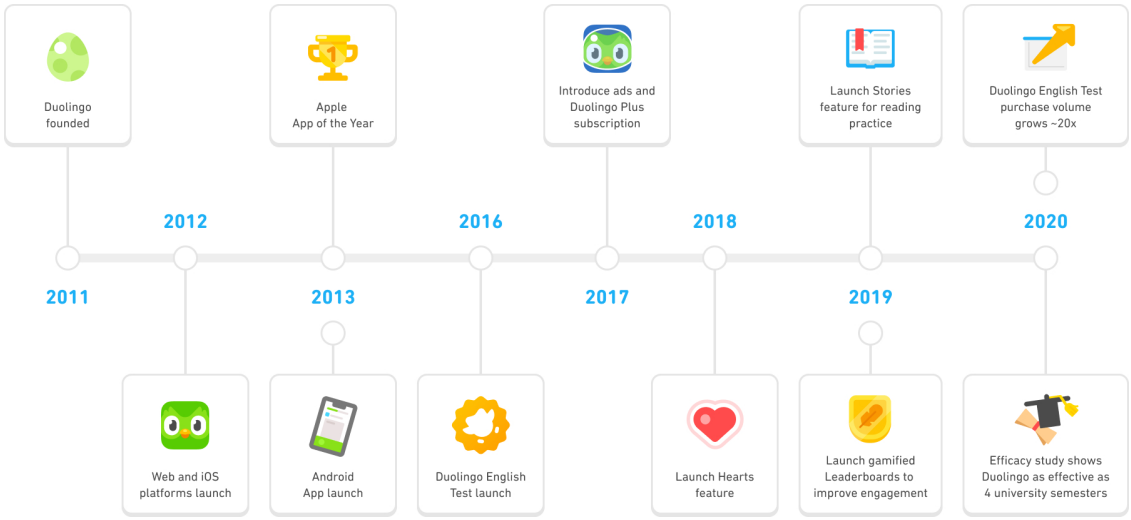
The global market for consumer language learning is large, growing, and shifting online, and we believe we have a significant opportunity to expand our impact. There are 1.8 billion people in the world learning a new language, according to HolonIQ. In addition, we believe we are expanding the language learning market. For example, according to a survey we conducted in 2021, almost 80% of Duolingo users in the US were not already learning a language when they began using Duolingo.

Duolingo's products are built on the belief that the hardest thing about learning a new language is staying motivated. Our product philosophy is centered around ensuring that learners have fun while also achieving their learning goals. We encourage our learners to return to our products day after day through our gamified experience. Our engaged learner base completes more than 500 million exercises each day.

Our technology is at the core of everything we do. In addition to our obsession with beautiful, engaging design, we utilize the latest in machine learning and data analytics, along with a relentless focus on A/B testing, to leverage our significant data scale to improve our learners' experience. We have an industry-leading team of approximately 280 software engineers, product designers and product managers. Approximately 20% of them are on functional engineering teams, building and maintaining foundational infrastructure, and approximately 80% are on product teams, iterating on features as well as researching and prototyping new product extensions.

Since Duolingo's launch in 2011, we have consistently invested in improving our platform to provide our learners a fun, engaging, and effective learning experience while remaining committed to our mission of making high quality education universally available. Over the years, we have experienced significant

growth in learners on our platform, primarily through organic word-of-mouth virality rather than paid user acquisition. Below are some of the most important milestones in our journey:



Our core competencies in engineering, A/B testing, data analytics, product design, gamification, personalization, and assessment are applicable not only to language learning but also to additional subjects. For example, in 2016, we launched the Duolingo English Test, which is our modern approach to testing and a pioneer in online, on-demand, high-stakes English proficiency assessment. In 2020, over 344,000 individual Duolingo English Tests were purchased compared to approximately 17,000 in 2019, a growth of approximately 2,000%. In early 2020, we launched Duolingo ABC, a new product focused on early literacy designed for children ages three to six.

Since our founding, we have made extensive investments in technology and data analytics. Both the Duolingo English Test and Duolingo ABC leverage our shared technology infrastructure, and we believe our platform and its capabilities are extensible to additional products and subject areas.

For the years ended December 31, 2019 and 2020, we generated:

- Total revenues of $70.8 million and $161.7 million, respectively, representing year-over-year growth of 129%;
- Subscription revenues of $54.8 million and $117.5 million, respectively, representing year-over-year growth of 114%;
- Gross profit of $50.0 million and $115.7 million, respectively, representing year-over-year growth of 131%;
- Net loss of $13.6 million and $15.8 million, respectively;
- Adjusted EBITDA of $(8.0) million and $3.6 million, respectively;
- Net cash provided by operating activities of $2.2 million and $17.7 million, respectively; and
- Free cash flow of $(3.1) million and $14.0 million, respectively.

For the three months ended March 31, 2020 and 2021, we generated:

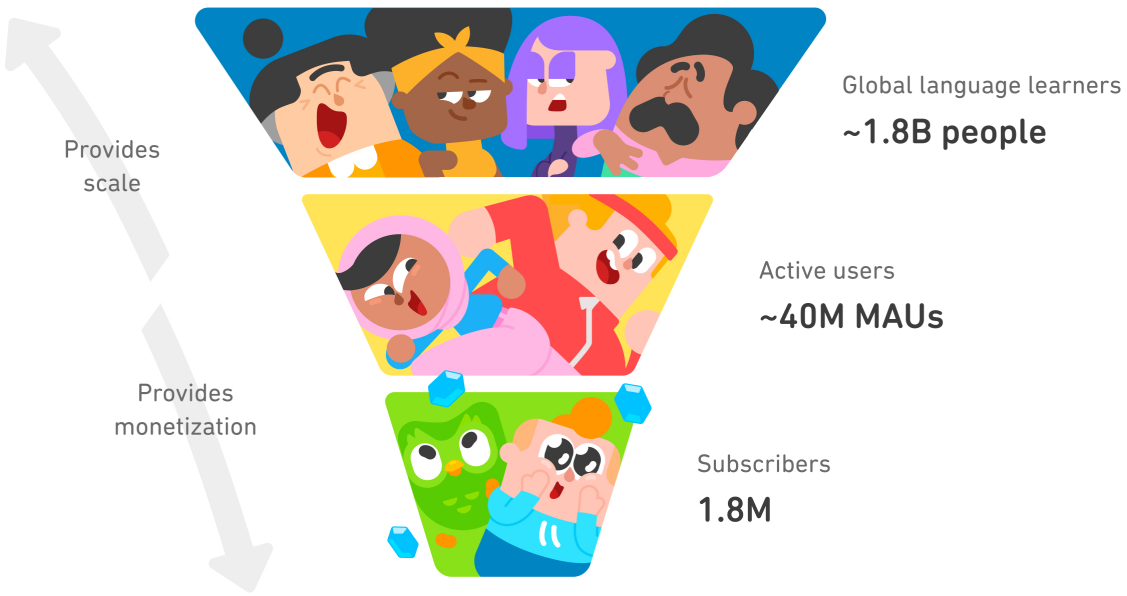
- Total revenues of $28.1 million and $55.4 million, respectively, representing period-over-period growth of 97%;
- Subscription revenues of $22.2 million and $40.1 million, respectively, representing period-over-period growth of 81%;
- Gross profit of $19.9 million and $40.3 million, respectively, representing period-over-period growth of 103%;
- Net loss of $2.2 million and $13.5 million, respectively;
- Adjusted EBITDA of $(0.9) million and $0.9, million respectively;
- Net cash provided by operating activities of $4.7 million and $5.1 million, respectively; and
- Free cash flow of $3.0 million and $3.8 million, respectively.

Our Business Model

How We Generate Revenue

We use a freemium business model that relies on a premium subscription offering, advertising, and in-app-purchases (IAPs) to produce revenue. We believe the following key attributes of our freemium subscription business model are core to our success.

- **Large Market**: There is an enormous pool of potential language learners globally that HolonIQ estimates at 1.8 billion people.
- **Free Users**: Since none of our learning content is behind a paywall, anyone can download the Duolingo app, use it for as long as they like, and complete any of our courses free of charge. This has allowed us to scale to 40 million MAUs for the quarter ended March 31, 2021. These millions of learners provide two benefits to our business model:
    - They become advocates for Duolingo and provide word-of-mouth publicity for our product, which enables our growth and has allowed us to make very selective and efficient marketing investments. From 2011 through the end of 2019, we spent a cumulative $14.5 million dollars on external marketing, even as Duolingo was downloaded hundreds of millions of times.
    - Our users complete over 500 million exercises every day, generating large amounts of data that powers our high-volume A/B testing and novel AI techniques. We use this data and the insights that come from it to continually improve both engagement and efficacy.
- **Paid Subscriber Conversion**: As learners tend to use our product for months or even years before they decide to subscribe, we enjoy economic benefits from attracting new users well into their tenure on the platform. In 2020, approximately 4% of our MAUs were paying subscribers. As of March 31, 2021, approximately 5% of our MAUs were paying subscribers.



Subscription

Our subscription offering is called Duolingo Plus. It offers learners features such as an ad-free experience, along with additional learning and gamification features that enhance their learning experience. One such enhancement is unlimited Hearts, which give learners more flexibility in how they move through course content. As of December 31, 2020, Duolingo Plus has approximately 1.6 million paying subscribers, and in 2020 subscriptions accounted for approximately 73% of our revenue. As of March 31, 2021, Duolingo Plus had approximately 1.8 million paid subscribers, and in the three months ended March 31, 2021 subscriptions accounted for approximately 72% of our revenue.

As of March 31, 2021, Duolingo Plus has three primary subscription plans:

Learning app plans	Payment Basis	Duration	iOS/Android Price (US$)(1)	Web Price (US$)
1-month	Upfront, subscription	1 month from date of purchase (28-31 days)	12.99/mo	12.99/mo
6-month(2)	Upfront, subscription	6 months from date of purchase	47.99 (7.99/mo)	47.94 (7.99/mo)
12-month	Upfront, subscription	12 month from date of purchase (365-366 days)	79.99 (6.67/mo)	83.88 (6.99/mo)

(1) Prices listed in the table are list prices only. Internationally, prices across all platforms are adjusted to match the US dollar price based on country exchange rates.

(2) 6-month subscription plan is being deprecated starting from the fourth quarter of 2020.

Advertising and Other Revenue

For users who are unable or unwilling to pay a subscription fee, we provide free access to our product and generate advertising revenue from the sale of display and video advertising delivered through advertising impressions. We generally enter into arrangements with the major programmatic advertising networks to monetize our advertising inventory. Our advertising revenue is primarily a function of the number of our free users, hours of engagement of our free users, and our ability to provide innovative

advertising products that are relevant to our users and enhance returns for our advertising partners. Advertising revenue represented approximately 17% of our revenue in 2020.

In-app purchases consist of learners purchasing one-time benefits within the app, such as “streak freezes” and “timer boosts.” In 2020, we generated approximately 1% of our revenue from in-app purchases.

In addition to monetizing the Duolingo language learning app, we generate revenue from the Duolingo English Test by charging test takers a one-time fee of $49. University program acceptance is a driver of Duolingo English Test revenue. As of June 2021, over 3,000 higher education programs around the world accept the Duolingo English Test results as proof of English proficiency for international student admissions, including 17 of the top 20 undergraduate programs in the United States according to US News and World Report. Fee revenue from the Duolingo English Test accounted for approximately 9% of our revenue in 2020.

How We Invest in Our Business

We are a product-driven company and believe that by investing in engineering, product development, and design we will see measurable return on investment (ROI) as we improve existing products and launch new offerings that will serve our learners’ needs. Our continual investment in research and development drives learner engagement and efficacy on our platform. This, in turn, drives organic user growth, and our user growth leads to subscriber growth.

Research and development expenses were 45% and 33% of our total revenue in 2019 and 2020, and 34% and 41% of our total revenue in the three months ended March 31, 2020 and 2021. We expect to continue to spend a significant portion of our revenue on research and development in the future. We anticipate funding this spending on research and development through improvements in our gross profit. For example, because we pay fees to app platforms (i.e., Google Play and Apple App Store) representing approximately 30% of revenue for sales in the first 12 months of a subscriber’s tenure and 15% of revenue for bookings thereafter, we believe we can improve our gross margin by retaining subscribers past 12 months.

Because of our focus on our organic growth, we have been able to spend efficiently on marketing. Our investments to date are focused on high-leverage brand advertising and, to a lesser extent, performance marketing. From our founding in 2011 to the end of 2020, we have grown to our current scale while having spent only $41.8 million in aggregate on external marketing, $27.4 million of which was in 2020. In total in 2020, we spent 22% of revenue on sales and marketing—including the costs of our sales and marketing personnel—and we expect these costs to grow at a slower pace than revenue over time.

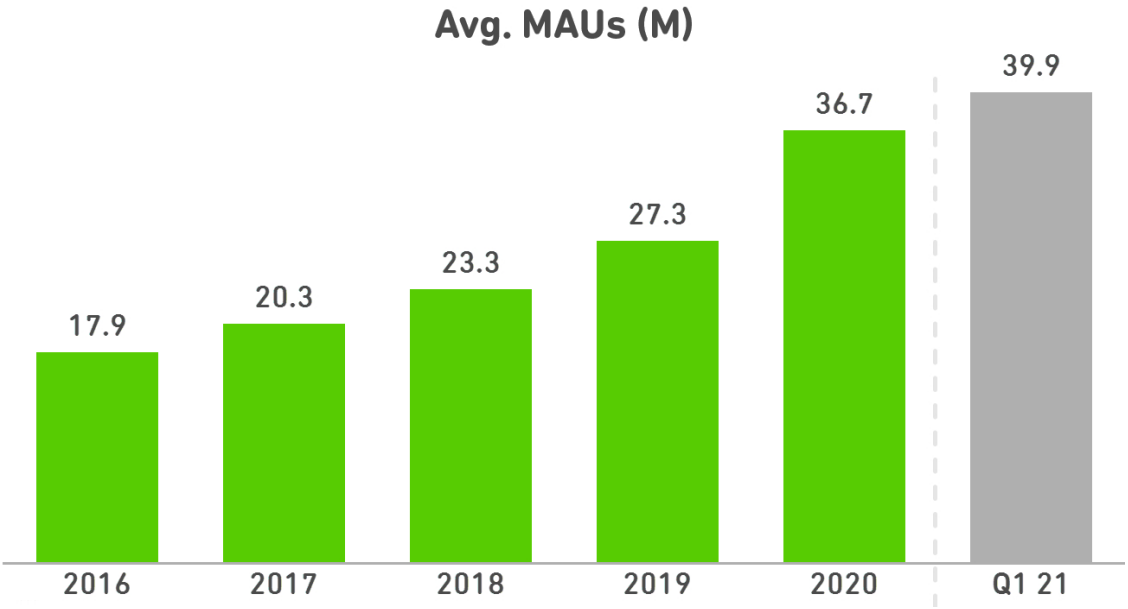
Key Operating Metrics and Non-GAAP Financial Measures

We regularly review a number of key operating metrics and non-GAAP financial measures to evaluate our business, measure our performance, identify trends, prepare financial projections and make business decisions. See “Selected Consolidated Financial and Other Data—Key Operating Metrics and Non-GAAP Financial Measures” for additional information on the operating metrics and non-GAAP financial measures set forth below, including a reconciliation of the non-GAAP financial measures Adjusted EBITDA and free cash flow to the most directly comparable financial measure calculated in accordance with GAAP.

(In millions, except dollar amounts in thousands)	Year Ended December 31, 2019	Year Ended December 31, 2020	Three Months Ended March 31, 2020	Three Months Ended March 31, 2021
Operating Metrics				
Monthly active users (MAUs)	27.3	36.7	33.5	39.9
Daily active users (DAUs)	5.2	8.2	6.8	9.5
Paid subscribers	0.9	1.6	1.1	1.8
Subscription bookings	$ 72,115	$ 144,379	$ 30,737	$ 50,466
Total bookings	$ 88,033	$ 190,181	$ 36,880	$ 65,830
Non-GAAP Financial Measures				
Net loss (GAAP)	$ (13,554)	$ (15,776)	$ (2,233)	$ (13,472)
Adjusted EBITDA	$ (7,969)	$ 3,630	$ (867)	$ 871
Net cash provided by operating activities (GAAP)	$ 2,152	$ 17,708	$ 4,719	$ 5,123
Free cash flow	$ (3,094)	$ 13,976	$ 2,996	$ 3,825

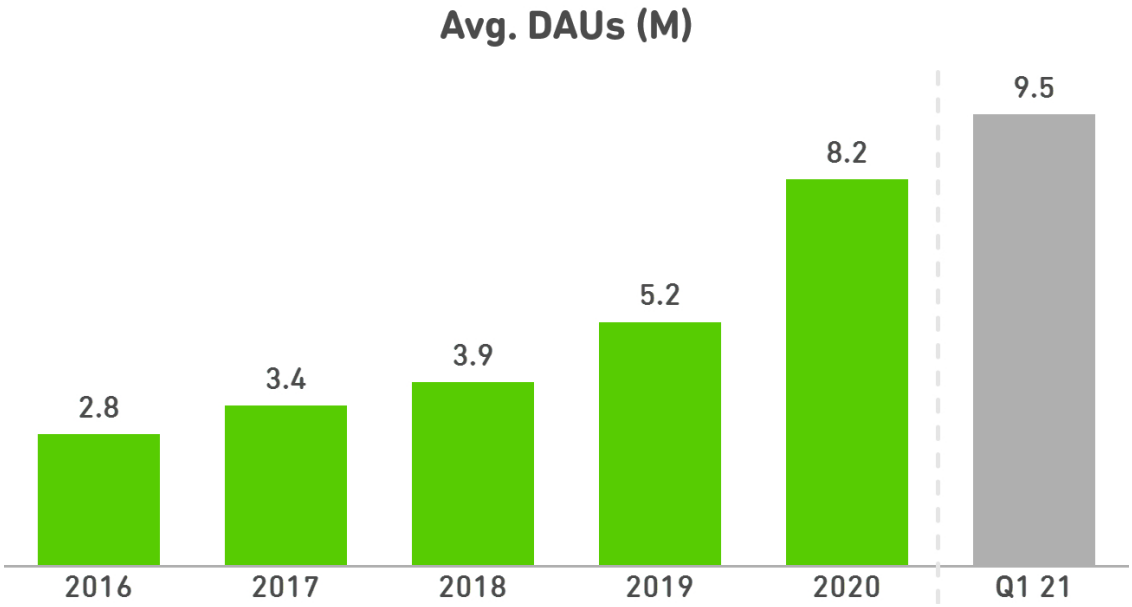
Operating Metrics

Monthly Active Users (MAUs). MAUs are defined as unique Duolingo users who engage with our mobile language learning application or the language learning section of our website each month. MAUs are reported for a measurement period by taking the average of each calendar month in that measurement period. MAUs are a measure of the size of our global active user community on Duolingo.



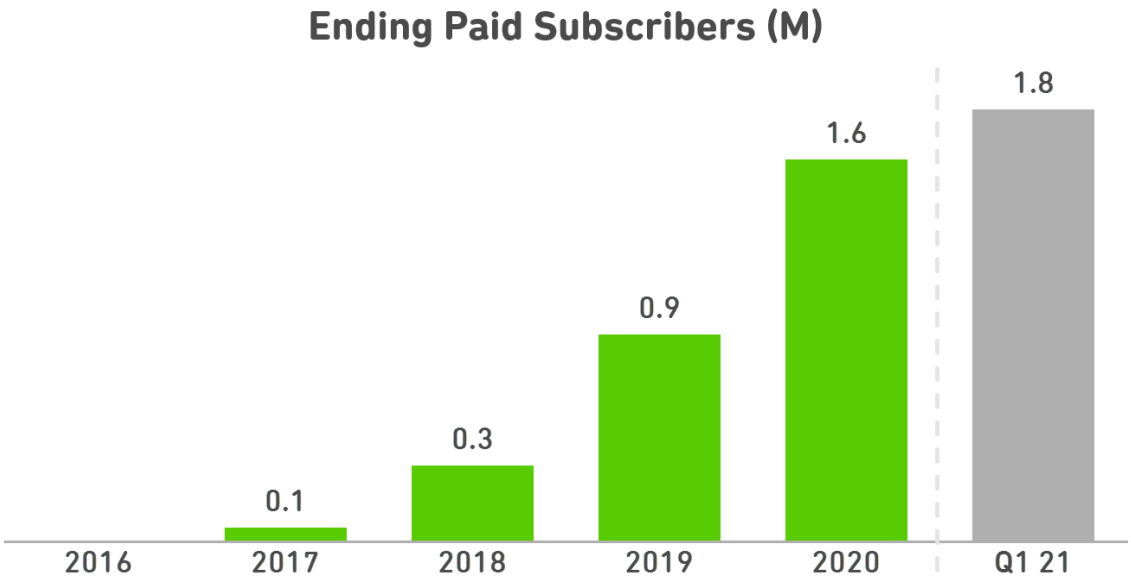
For 2019 and 2020, we had approximately 27.3 million and 36.7 million MAUs, respectively, representing a year-over-year increase of 34% and a CAGR of 20% from 2016 to 2020. We grow MAUs by attracting new users, retaining existing users, and by tapping into the millions of former users who return to our language learning app because of our product initiatives and brand marketing.

Daily Active Users (DAUs). DAUs are defined as unique Duolingo users who engage with our mobile language learning application or the language learning section of our website each calendar day. DAUs are reported for a measurement period by taking the average of the DAUs for each day in that measurement period. DAUs are a measure of the consistent engagement of our global user community on Duolingo.



For 2019 and 2020, we had approximately 5.2 million and 8.2 million DAUs, respectively, representing a year-over-year increase of 58% and a CAGR of 31% from 2016 to 2020. From 2019 to 2020, the DAU / MAU ratio, which we believe is another indicator of user engagement, increased from 19% to 22%. We grow DAUs by making the product more fun and engaging, as well as through our marketing efforts.

Paid Subscribers. Paid subscribers are defined as users who pay for access to Duolingo Plus and had an active subscription as of the end of the measurement period. Each unique user account is treated as a single paid subscriber regardless of whether such user purchases multiple subscriptions, and the count of paid subscribers does not include users who are currently on a free trial.



As of December 31, 2019 and 2020, we had approximately 0.9 million and 1.6 million paid subscribers, respectively, representing an increase of 84% year-over-year and a CAGR of 195% from 2017 to 2020. We grow paid subscribers by growing our free user base, converting a greater number of users to paid subscribers, and retaining subscribers.

Subscription Bookings and Total Bookings. Subscription bookings represent the amounts we receive from a purchase of a subscription to Duolingo Plus. Total bookings represent the amounts we receive from a purchase of a subscription to Duolingo Plus, a registration for a Duolingo English Test, an in-app purchase for a virtual good and from advertising networks for advertisements served to our users. We believe bookings provide an indication of trends in our operating results, including cash flows, that are not necessarily reflected in our revenue because we recognize subscription revenue ratably over the lifetime of a subscription, which is generally from one to twelve months.

For the years ended December 31, 2019 and 2020, we generated $88.0 million and $190.2 million total bookings, respectively, representing a year-over-year increase of 116%. For the years ended December 31, 2019 and 2020, we generated $72.1 million and $144.4 million of subscription bookings, respectively, representing a year-over-year increase of 100%. For the three months ended March 31, 2020 and 2021, we generated $36.9 million and $65.8 million total bookings, respectively, representing a year-over-year increase of 78%. For the three months ended March 31, 2020 and 2021, we generated $30.7 million and $50.5 million of subscription bookings, respectively, representing a period-over-period increase of 64%. We generate subscription bookings by selling first time and renewal subscriptions as well as subscriptions to subscribers who previously had a subscription and return. As we grow our user base, convert a greater proportion of users to first time subscribers, increase renewal rates, and increase the proportion of re-subscribers, we increase subscription bookings.

Non-GAAP Financial Measures

Adjusted EBITDA. Earnings (loss) before interest, taxes, depreciation and amortization (EBITDA) is one of the metrics used by management to evaluate the financial performance of our business. Adjusted EBITDA is defined as net loss excluding interest (income) expense, net, income tax provision, depreciation and amortization, IPO and public company readiness costs as we prepare to be a public company, stock-based compensation expense, tender offer-related costs, other expenses and the

impairment of capitalized software. Adjusted EBITDA is used by management to evaluate the financial performance of our business, and we present Adjusted EBITDA because we believe it is helpful in highlighting trends in our operating results and that it is frequently used by analysts, investors and other interested parties to evaluate companies in our industry.

Adjusted EBITDA increases as we grow revenue, improve gross margin, and reduce operating expenses as a percentage of revenue, or through a combination of those drivers. For the years ended December 31, 2019 and 2020, we generated $(8.0) million and $3.6 million of Adjusted EBITDA, respectively. The year-over-year increase in Adjusted EBITDA occurred because gross margin improved and revenue grew at a faster rate than the growth of our operating expenses. For the three months ended March 31, 2020 and 2021, we generated $(0.9) million and $0.9 million of Adjusted EBITDA, respectively. The period-over-period increase in Adjusted EBITDA occurred because gross profit improved and operating expenses in the three months ended March 31, 2021 grew less rapidly than revenue when adjusted for costs incurred related to IPO and public company readiness and other costs which did not occur in the prior year.

Free Cash Flow. Free cash flow represents net cash provided by operating activities, reduced by purchases of property and equipment, capitalized software development costs, and increased by IPO and public company readiness costs, as we believe they are not indicative of future liquidity. We believe that free cash flow is a measure of liquidity that provides useful information to our management, investors and others in understanding and evaluating the strength of our liquidity and future ability to generate cash.

For the years ended December 31, 2019 and 2020, we generated $(3.1) million and $14.0 million of free cash flow, respectively. Subscribers prepay for subscriptions at the time of purchase, so the year-over-year increase in subscription bookings led to this increase in free cash flow. Growing bookings and reducing costs as a percentage of bookings generate improvements in free cash flow. For the three months ended March 31, 2020 and 2021, we generated $3.0 million and $3.8 million of free cash flow, respectively. Free cash flow was impacted by an increase in cash from operations related to increased bookings and improvements in working capital.

Key Factors Affecting our Performance

Our results of operations and financial condition have been, and will continue to be, affected by a number of factors that present significant opportunities for us but also pose risks and challenges, including those discussed below and in the section of this prospectus titled “Risk Factors.”

Growth in Users and Paid Subscribers

Our business model is dependent upon our ability to grow and maintain a large user base, and it also requires that we grow and keep paid subscribers.

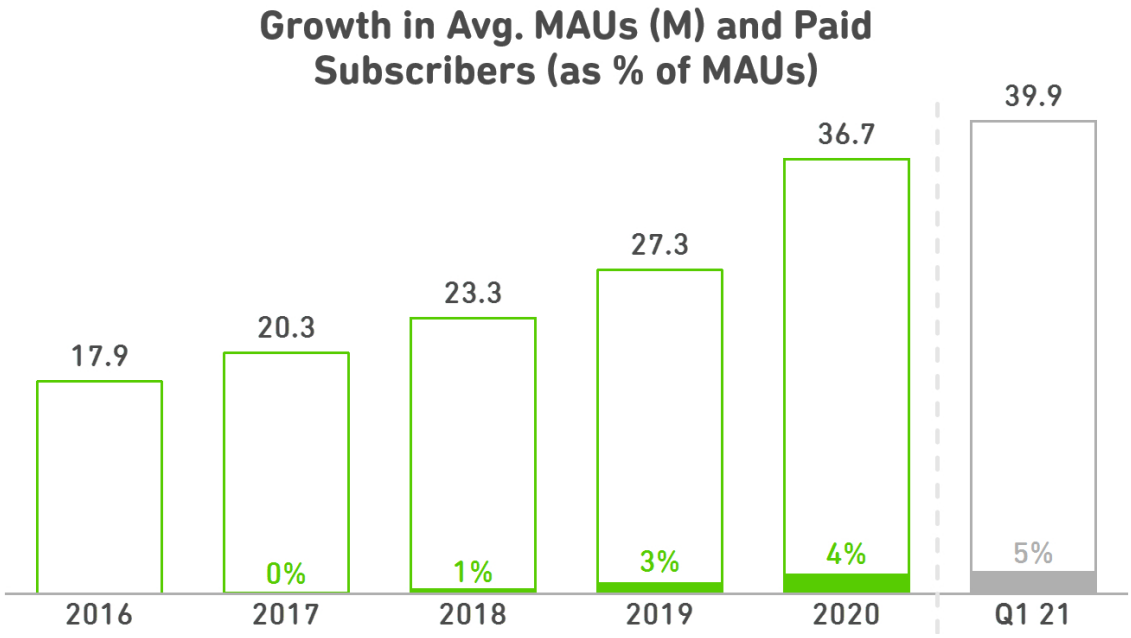
Since 2016, our free users, as measured by MAUs, have more than doubled. This increase in free user scale enables our learning and investment flywheels.

- **Learning flywheel:** The greater the scale of our learner base, the more we can use insights from data analytics to improve both engagement and efficacy. The more engaging our products are, and the more effectively we teach, the more our learners tell their friends about Duolingo and the more we continue to grow our learner base.
- **Investment flywheel**: Our user scale and word-of-mouth growth allow us to focus our capital investments on product innovation and data analytics, as opposed to brand or performance marketing. The more learners use Duolingo and convert into paid subscribers, the more we are able to invest in creating an even more delightful, engaging and effective learning experience. In

turn, this increases our popularity and user scale, as well as the effectiveness of our data analytics, further widening our competitive moat.

In addition to the growth in free users, we have consistently grown the percentage of MAUs that pay us a subscription. Learners on our platform typically begin by engaging with our free offering, which serves as a funnel to grow our user base as well as drive conversion to our paid subscription. We engage our free learners by providing them a highly engaging and fun user experience and a well-designed product. Over time, as they experience the product or want to access more features, a portion of our free user base purchases our subscription offering. Starting from less than 1% paid subscriber penetration in 2017, we have increased to approximately 4% paid subscriber penetration in 2020.

While we believe we are in the early days of increasing the number of learners on our platform and increasing our paid subscriber penetration, at some point we may face challenges to increasing both of the metrics. These challenges may include increasing competition from alternative products and a lack of appealing new product features. We may also at some point find that growth in paid subscribers slows due to saturation of our paid subscribers as a percentage of our total learners.

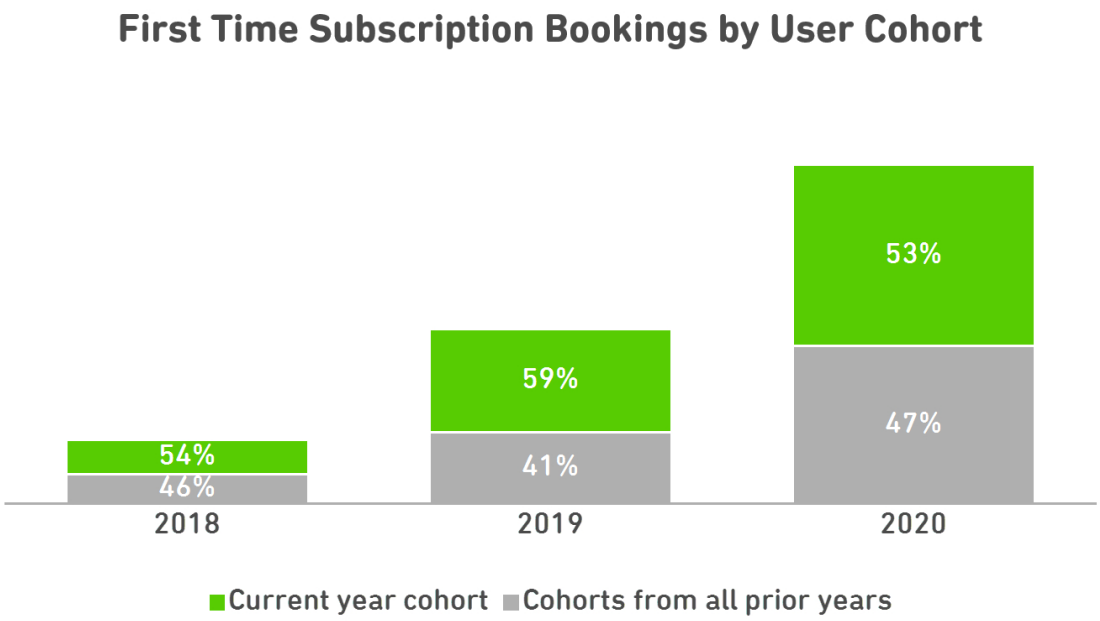


Our User and Subscriber Cohort Characteristics

We believe that our business has attractive cohort characteristics because of our user growth, the improving conversion of free users to paid subscribers, and the stickiness of subscribers. As a result of our freemium model, we are able to cost-effectively attract learners to the platform, and these learners often use our product for months or even years for free before becoming subscribers.

In the chart below we illustrate the power of this dynamic. User cohorts convert into paid subscribers over time, not solely in the year they first use Duolingo. For example, in 2020, approximately 53% of our first time subscription bookings came from users who joined the platform that year (in green), and approximately 47% came from users who joined before 2020 (in gray). We believe this is a business justification for having a high quality, deeply engaging free user experience: it leads to users staying on

the platform over long-periods of time and provides us with repeated opportunities to convert them to paid subscribers.



There is no guarantee that these trends in user growth or conversion improvement will continue in the future. If any of these trends degrades, it will diminish the attractiveness of our user and subscriber cohorts.

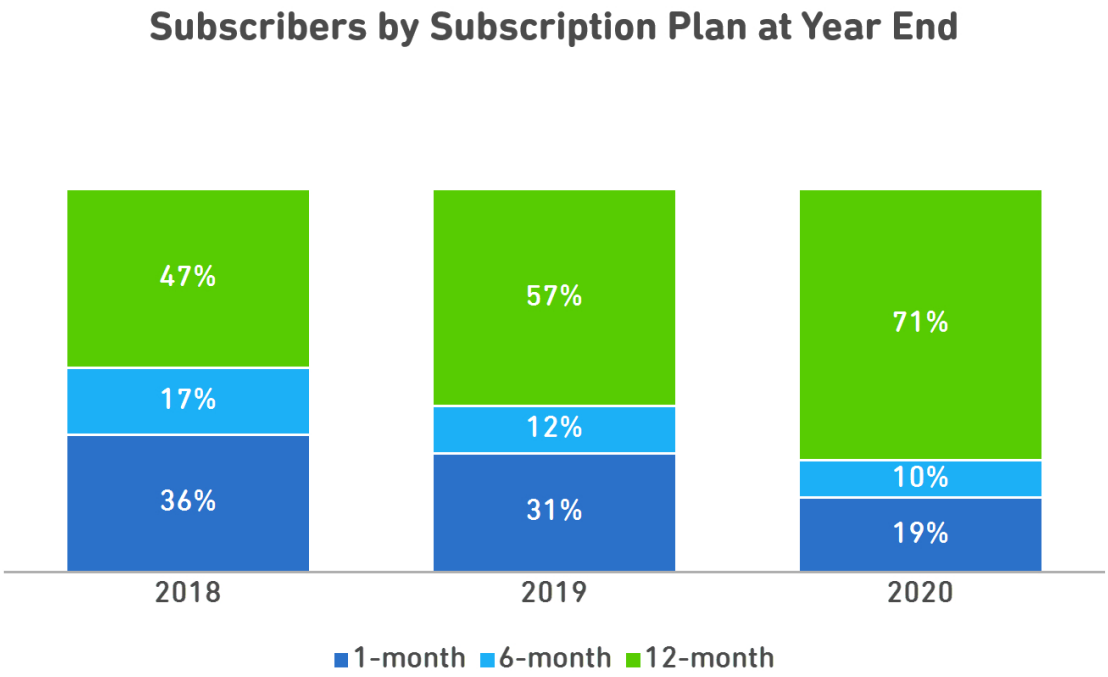
Ability to Expand Lifetime Value of Subscribers

The average lifetime value of our subscribers is driven by the length of their subscription plans and by the mix of plans purchased.

Subscribers on our annual subscription plan tend to stay on our platform longer and are stickier than subscribers on our monthly plan. As of March 31, 2021, for subscribers who purchased annual plans in 2018, 2019, and 2020, the percentage who renewed their subscription after 12 months was approximately 40% for each period. For monthly subscribers over that same period, the percentage of subscribers who renewed their subscription after 12 months was approximately 9% for each period. As a result, even though the annual plan has a lower average revenue per user, the lifetime value of subscribers on our annual plan is approximately twice as high as the lifetime value of subscribers on our monthly plan. Given the limited history of our subscription product, which we launched in late 2017, we calculate lifetime value of our subscribers based on three-year historical cohort behavior and extrapolate this data for recent cohorts that have less than three years of data. At some point, the stickiness of our subscribers and their lifetime value may decrease if we do not continue to improve our subscriber experience or product features, or if competition increases in our industry.

We have been successful in shifting our mix of paid subscribers to favor annual subscriptions over time. For example, annual subscribers made up approximately 47% of our paid subscribers as of the end of 2018, increasing to 71% of paid subscribers as of the end of 2020. This shift toward annual subscribers

has had a positive impact on subscriber lifetime value. We plan to continue to shift our subscriber mix toward annual subscribers, but we may face increased challenges in doing so.



Maintaining Efficient User Acquisition and Strong Unit Economics

Our investment in developing free, fun, engaging, and effective products creates an efficient user acquisition model, which drives strong unit economics.

Our gross margins are over 70% of revenue, with payment-processing and platform fees we pay the app platforms (i.e., Google Play and Apple App Store) making up a majority of our Cost of Revenue. This gross margin, coupled with our primarily word-of-mouth driven, unpaid organic user acquisition model, leads to strong unit economics. For our paid user acquisition, we take a balanced and disciplined approach to marketing with no dependency on one channel. Our strategy includes brand marketing campaigns and our owned media marketing.

We expect to continue to invest in product and marketing, while balancing growth with strong unit economics. Our marketing investments could increase, particularly as we expand internationally, if we need to spend more to acquire new users.

Our Expansion into New Geographic Markets

Consistent with our mission, we are focused on providing global access to learning and we are working to grow our platform reach around the world. Because we believe that language learning is even more valuable to users in certain international markets than it is in the United States, we are focused on entering new markets while investing in under-penetrated markets. Specifically, we see a significant opportunity to expand our learner base in many regions in Asia and Latin America. Expanding our learner base and increasing our paid subscribers in new geographies will require increased costs related to marketing and localization of product features. Potential risks to our expansion into new geographies

include competition and compliance with foreign laws and regulations, as well as risks that our pricing and subscription plans are received differently or adopted at different rates across geographies.

Growth in Adoption of the Duolingo English Test

The Duolingo English Test has grown significantly from 2019 to 2020, driven in part by an expansion of accepting programs and by increased demand due to the COVID-19 pandemic. As of June 2021, over 3,000 higher education programs around the world accept the Duolingo English Test as proof of English proficiency for international student admissions. Going forward, we may face challenges in increasing the number of schools that accept the Duolingo English Test as the pandemic recedes, and we may see a decrease in demand as competition intensifies.

Investing in Growth While Driving Long-Term Profitability

We have demonstrated our ability to balance investment in product, technology and marketing while managing cash flow and achieving positive Adjusted EBITDA. Our language product has offered us a proven playbook for how to efficiently acquire users and drive monetization. We believe we can leverage this playbook across new areas of growth, like our recent entry into the literacy market with the release of Duolingo ABC.

We expect to continue to invest in technology, product innovation, and marketing, while balancing growth with a focus on increasing our long-term margins. Key investment areas for our platform include: machine learning capabilities, including continually improving our personalized learning technology; features that prioritize security and privacy; and new premium offerings that add incremental value to paid subscribers.

Expanding the Offerings on Our Platform

We are continually evaluating new product offerings that are aligned with our mission, core competencies, and learner demand. For example, in early 2020, partly in response to the needs created by the COVD-19 pandemic, we released Duolingo ABC to teach early childhood literacy. We will continue to invest in and launch products where we see opportunities to grow our platform.

Attracting and Retaining Talent

Our business relies on our ability to attract and retain our talent, including engineers, data scientists, product designers and product developers. As of June 30, 2021, we had over 400 employees. Of these employees, approximately 70% work in engineering, product development, and design. We believe that people want to work at a company that is values-driven like Duolingo, and therefore our ability to recruit talent is aided by our mission and brand reputation. We compete for talent within the technology industry.

Impact of COVID-19

To date, the COVID-19 pandemic has not had a significant negative impact on our operations or financial performance. We believe that COVID-19 increased our bookings for a period of time in 2020 due, in part, to stay at home and other social distancing measures, most notably in the second quarter. Our revenue was $28.1, $40.0, $45.3, and $48.3 million in the first, second, third, and fourth quarter of 2020, respectively. Our total bookings were $36.9, $49.6, $46.7, and $57.1 million in the first, second, third, and fourth quarter of 2020, respectively. The pandemic also increased adoption of the Duolingo English Test. To this end, in 2019, the Duolingo English Test generated approximately $1 million of revenue and in 2020 it generated approximately $15 million in revenue. Because this increase was driven in part by increased acceptance of the test, and because we believe universities are unlikely to stop accepting the test when the pandemic ends, we do not expect the Duolingo English Test to revert to pre-pandemic levels.

The extent of the impact of the COVID-19 pandemic on our operational and financial performance, however, depends on certain developments, including ongoing social distancing measures, and future prevention and mitigation measures, as well as the potential for some of these measures to be reinstituted in the event of repeat waves of the virus. Any such developments may have adverse impacts on global economic conditions and consumer confidence and spending, and could materially adversely affect demand, or subscribers' ability to pay, for our products and services. For additional information, see "Risk Factors—General Risk Factors—Our business and results of operations may be materially adversely affected by the recent COVID-19 outbreak or other similar outbreaks."

Results of Operations

Revenue

We generate revenue primarily from the sale of subscriptions. The term-length of our subscription agreements are primarily monthly or annual. We have historically had a six-month subscription plan but during the fourth quarter of 2020, we began to phase it out. We also generate revenue from advertising, the in-app sale of virtual goods, and our English assessment test, the Duolingo English Test.

Cost of Revenue

Cost of revenue predominantly consists of third-party payment processing fees charged by various distribution channel and hosting fees. To a much lesser extent, cost of revenue includes wages and share-based compensation for certain employees in the capacity of customer support, amortization of revenue generating capitalized software, and depreciation of certain property and equipment.

We intend to continue to invest additional resources in our infrastructure and our customer support and success organization to expand the capabilities of our platform and ensure that our users are realizing the full benefit of our products. The level, timing, and relative investment in these areas could affect our cost of revenue in the future.

Gross Profit and Gross Margin

Gross profit represents revenue less cost of revenue. Gross margin is gross profit expressed as a percentage of revenue. Our gross profit may fluctuate from period to period as our revenue fluctuates, and also as a result of the timing and amount of investments we make in items related to cost of revenue.

Operating Expenses

Our operating expenses consist of research and development, sales and marketing, and general and administrative expenses. Personnel costs are the most significant component of operating expenses and consist of salaries, benefits, and stock-based compensation expense. Operating expenses also include overhead costs for facilities, including depreciation expense.

Research and Development. We invest heavily in research and development in order to drive user engagement and customer satisfaction on our platform, which we believe helps to drive organic growth in new users. This, in turn, drives additional growth in, and better lifetime value of, our paid subscribers, as well as increased advertising revenue from impressions from our free users. Expenses are primarily made up of costs incurred for the development of new and improved products and features in our applications. Such expenses include compensation of engineers, designers, product managers, including share-based compensation, materials, travel and direct costs associated with the design and required testing of our platform. We expect engineers, designers, and product managers to represent a significant portion of our employees for the foreseeable future. Many of our new products and improvements to our platform require large investments and involve substantial time and risks to develop and launch. Some of these

products may not be well received or may take a long time for users to adopt. As a result, the benefits of our research and development investments may be difficult to forecast. We expect to continue to spend a significant portion of our revenue on research and development in the future.

Sales and Marketing. Sales and marketing expenses are expensed as incurred and consists primarily of brand advertising, marketing, digital and social media spend, field marketing, travel, trade show sponsorships and events, conferences and other employee related compensation, including share-based compensation for personnel engaged in sales and marketing functions, and amortization of non-revenue generating capitalized software used to promote Duolingo. We expect our sales and marketing expenses will decline as a percentage of revenue as our revenue grows over the long-term.

General and Administrative. General and administrative expenses primarily consist of employee related compensation (including share-based compensation) for management and administrative functions, including our finance and accounting, legal, and people teams. General and administrative expenses also include certain professional services fees, general corporate and director and officer insurance, our facilities costs, and other general overhead costs that support our operations. We expect to incur additional general and administrative expenses as a result of operating as a public company, including expenses to comply with the rules and regulations of the SEC and Listing Rules of the Nasdaq Global Select Market, as well as higher expenses for corporate insurance, director and officer insurance, investor relations, and professional services. We expect that our general and administrative expenses will increase in absolute dollars as our business grows. However, we expect that our general and administrative expenses will decrease as a percentage of our revenue as our revenue grows over the long-term.

Other Income, Net

Other income, net consists primarily of income earned on our money market funds included in cash and cash equivalents and on our marketable securities, offset by interest expense. Other income, net also includes a minimal amount of foreign currency exchange gains and losses.

Results of Operations

The following table sets forth our consolidated statements of operations data, including percentage of revenue, and year-over-year change, for the periods indicated:

	Year Ended December 31,			Three Months Ended March 31,		
(In thousands)	2019	2020	% Change	2020	2021	% Change
Revenues	$ 70,760	$ 161,696	129 %	$ 28,112	$ 55,360	97 %
Cost of revenues(1)(2)	20,737	45,987	122	8,214	15,019	83
Gross profit	50,023	115,709	131	19,898	40,341	103
Operating expenses:						
Research and development(1)	31,560	53,024	68	9,576	22,529	135
Sales and marketing(1)(2)	14,989	34,983	133	5,511	19,773	259
General and administrative(1)	16,371	43,713	167	7,266	11,453	58
Impairment of capitalized software	1,228	—	(100)	—	—	—
Total operating expenses	64,148	131,720	105	22,353	53,755	140
Operating loss	(14,125)	(16,011)	13	(2,455)	(13,414)	446
Other income, net	571	303	(47)	233	(41)	(118)
Loss before provision for income taxes	(13,554)	(15,708)	16	(2,222)	(13,455)	506
Provision for income taxes	—	68	—	11	17	55
Net loss	$ (13,554)	$ (15,776)	16 %	$ (2,233)	$ (13,472)	503 %

(1) Includes stock-based compensation expenses as follows:

	Year Ended December 31,		Three Months Ended March 31,	
(In thousands)	2019	2020	2020	2021
Cost of revenues	$ 6	$ 6	$ 1	$ 2
Research and development	1,552	2,773	447	1,111
Sales and marketing	341	348	73	68
General and administrative	1,826	13,904	633	1,370
Total	$ 3,725	$ 17,031	$ 1,154	$ 2,551

During the year ended December 31, 2020, we recorded compensation costs of $10.2 million related to a secondary transaction where certain employees sold shares of stock to an outside investor at a price above fair market value of the stock.

(2) Includes amortization of capitalized software as follows:

	Year Ended December 31,		Three Months Ended March 31,	
(In thousands)	2019	2020	2020	2021
Cost of revenues(a)	$ 103	$ 86	$ 26	$ —
Sales and marketing(a)	621	546	33	148
Total	$ 724	$ 632	$ 59	$ 148

(a) Amortization of capitalized software is recorded to cost of revenue and selling and marketing for revenue and non-revenue generating capitalized software, respectively.

The following table sets forth the components of our consolidated statements of operations for each of the periods presented as a percentage of revenue.

	Year Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
Revenues	100 %	100 %	100 %	100 %
Cost of revenues	29	28	29	27
Gross profit	71	72	71	73
Operating expenses:				
Research and development	45	33	34	41
Sales and marketing	21	22	20	36
General and administrative(1)	23	27	26	21
Impairment of capitalized software	2	—	—	—
Total operating expenses	91	82	80	98
Operating loss	(20)	(10)	(9)	(24)
Other income, net	1	—	1	—
Loss before provision for income taxes	(19)	(10)	(8)	(24)
Provision for income taxes	—	—	—	—
Net loss	(19)%	(10)%	(8)%	(24)%

(1) Includes a charge in 2020 of $10.2 million related to a secondary offering, which increased the percentage of revenue from 21% to 27%.

Revenues. Revenues increased $90.9 million, or 129%, to $161.7 million during the year ended December 31, 2020, from revenue of $70.8 million during the year ended December 31, 2019. The main driver was an increase in subscription revenue of $62.7 million, primarily due to a 107% increase in the average number of paid subscribers during 2020 as compared to 2019, with the remainder of the increase driven by a change in mix of plans purchased and increased pricing. We also saw an increase in advertising revenues, primarily due to a 58% increase in DAUs during 2020 as compared to 2019, which resulted in increased advertisements served. Average revenue per DAU for our ads also increased year over year, accounting for the remainder of the increase in advertising revenues. Duolingo English Test revenue grew as well, which can at least partially be attributed to the COVID-19 pandemic with the closing of many in-person test centers, as well as the growth initiatives we have taken during 2020.

Revenues increased $27.2 million, or 97%, to $55.4 million during the three months ended March 31, 2021, from revenue of $28.1 million during the three months ended March 31, 2020. The main driver was an increase in subscription revenue of $17.9 million, primarily due to a 78% increase in the average number of paid subscribers during the three months ended March 31, 2021 as compared to the three months ended March 31, 2020, in addition to a change in mix of plans purchased. In addition, advertising revenues increased $4.3 million. The increase was driven by the 39% increase in DAUs during the three months ended March 31, 2021 as compared to the three months ended March 31, 2020, which resulted in increased advertisements served. Average revenue per DAU for our ads also increased period over period. These drivers each contributed approximately half of the increase in advertising revenues. Duolingo English Test revenue also increased by $4.3 million during the three months ended March 31, 2021 compared to same period a year ago, which we believe highlights the durability of the growth that began during the COVID-19 pandemic.

The table below provides the changes in revenue:

	Year Ended December 31,				Three Months Ended March 31,			
(In thousands)	2019	2020	Change	% Change	2020	2021	Change	% Change
Subscription	$ 54,848	$ 117,501	$ 62,653	114.2 %	$ 22,171	$ 40,055	$ 17,884	80.7 %
Advertising	14,118	27,043	12,925	91.5	5,008	9,275	4,267	85.2
Duolingo English Test	1,022	15,155	14,133	1382.9	753	5,035	4,282	568.7
Other	772	1,997	1,225	158.7	180	995	815	452.8
Total revenues	$ 70,760	$ 161,696	$ 90,936	128.5 %	$ 28,112	$ 55,360	$ 27,248	96.9 %

Cost of Revenues and Gross Margin. Total gross margin increased during both the year ended December 31, 2020 and the three months ended March 31, 2021, as compared to same periods in the previous year. This increase is mainly due to cost efficiencies we implemented in the Duolingo English Test, in addition to increased advertisements served to free users which positively impacted advertising margins, and reduced payment processing fees due to improved stickiness and mix.

The following table provides the change in cost of revenue, along with related gross margins:

	Year Ended December 31,				Three Months Ended March 31,			
	2019		2020		2020		2021	
(In thousands)	Costs	Gross Margin	Costs	Gross Margin	Costs	Gross Margin	Costs	Gross Margin
Total cost of revenues	$ 20,737	70.7 %	$ 45,987	71.6 %	$ 8,214	70.8 %	$ 15,019	72.9 %

Operating expenses

Research and development. Research and development increased $21.5 million, or 68%, to $53.0 million during the year ended December 31, 2020 from $31.6 million during the year ended December 31, 2019. Research and development also increased $13.0 million, or 135%, to $22.5 million during the three months ended March 31, 2021 from $9.6 million during the three months ended March 31, 2020. The increase in both periods is mainly attributable to an increase in employee growth and contractor costs incurred to help sustain the revenue growth. Additionally, during the three months ended March 31, 2021, we incurred costs of $3.3 million related to the tender offer we initiated in February 2021. Research and development continues to be our highest operating expense as we invest heavily in it in order to drive user engagement and customer satisfaction on our platform, which we believe helps to drive organic growth in new MAUs and DAUs, which in turn drives additional growth in, and better stickiness of, paid subscribers, as well as increased advertising opportunities from free users.

Sales and marketing. Sales and marketing increased $20.0 million, or 133%, to $35.0 million during the year ended December 31, 2020 from $15.0 million during the year ended December 31, 2019. While we incurred $2.0 million of additional expenses related to employee costs, the majority of the increase is due to increased spending on media and brand to support our revenue growth.

Sales and marketing increased $14.3 million, or 259%, to $19.8 million during the three months ended March 31, 2021 from $5.5 million during the three months ended March 31, 2020. While we incurred $5.1 million of costs related to one-time cash awards we granted to Duolingo contributors under our non-employee volunteer program, which we refer to as contributor awards, and $1.0 million of additional expenses related to employee costs, of which $0.2 million was related to the tender offer, the majority of the increase is from spending on media and brand advertising. See Note 14 to our audited consolidated financial statements and Note 2 to our unaudited interim consolidated financial statements included elsewhere in this prospectus for additional information regarding the contributor awards.

General and administrative. General and administrative increased $27.3 million, or 167%, to $43.7 million during the year ended December 31, 2020 from $16.4 million during the year ended December 31, 2019. The main driver of this increase is related to increased employee related costs of $10.7 million, including costs incurred as we begin to prepare to operate as a public company. A Secondary Transaction took place in November 2020, resulting in additional stock compensation expense of $10.2 million. Additionally, we recorded $2.3 million during the year ended December 31, 2020 for estimated taxes we expect to pay related to Sales and Value Added Taxes (VAT). A further $2.9 million is related to increased facility and office related costs and $0.9 million for accounting and legal fees. While we did have a reduction of $1.5 million in meals and travel related costs due to COVID-19, the remaining increase is due to increased costs incurred to expand to our facilities footprint.

General and administrative increased $4.2 million, or 58%, to $11.5 million during the three months ended March 31, 2021 from $7.3 million during the three months ended March 31, 2020. The main driver of this increase was related to increased employee related costs of $2.9 million, of which $1.8 million was related to the tender offer. We also incurred an additional $0.9 million of professional fees, of which $0.4 million was related to IPO and public readiness costs and $0.3 million was related to the tender offer. The expansion of the Pittsburgh office footprint resulted in another $0.3 million of expense. These increases were partially offset by a $0.4 million reduction in travel related costs due to COVID-19.

Other (expense) income, net. Other (expense) income, net decreased $0.3 million, or 47%, to $0.3 million during the year ended December 31, 2020 as compared to $0.6 million during the year ended December 31, 2019. Other (expense) income, net decreased $0.3 million, or (118)%, to $41 thousand during the three months ended March 31, 2021 as compared to income of $0.2 million during the three months ended March 31, 2020. In both periods, the decrease was driven by a change in our investment policy as we moved excess cash to more conservative funds with lower interest rates beginning in early 2020. The remaining decrease is due to losses arising from translation of foreign currency transactions, whereas in the prior year period, we saw gains.

Unaudited Quarterly Results of Operations Data

The following tables set forth our unaudited quarterly consolidated statements of operations data for each of the quarters indicated, as well as the percentage that each line item represents of our revenue for each quarter presented. The information for each quarter has been prepared on a basis consistent with our audited consolidated financial statements included in this prospectus, and reflects, in the opinion of management, all adjustments of a normal, recurring nature that are necessary for a fair statement of the financial information presented. Our historical results are not necessarily indicative of the results that may be expected in the future. The following quarterly financial data should be read in conjunction with our consolidated financial statements included elsewhere in this prospectus.

	Quarter Ended								
(in thousands)	March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019	March 31, 2020	June 30, 2020	September 30, 2020	December 31, 2020	March 31, 2021
Total revenues	$ 12,489	$ 15,646	$ 19,420	$ 23,205	$ 28,112	$ 40,011	$ 45,305	$ 48,268	$ 55,360
Total cost of revenues	3,747	4,604	5,657	6,729	8,214	11,809	13,101	12,863	15,019
Gross profit	8,742	11,042	13,763	16,476	19,898	28,202	32,204	35,405	40,341
Operating expenses:									
Research and development	6,274	7,422	8,598	9,266	9,576	12,111	15,894	15,444	22,529
Sales and marketing	2,608	2,738	4,348	5,295	5,511	8,625	11,142	9,705	19,773
General and administrative	3,361	3,805	3,992	5,213	7,266	7,385	8,235	20,827	11,453
Impairment of capitalized software	—	—	—	1,228	—	—	—	—	—
Total operating expenses	12,243	13,965	16,938	21,002	22,353	28,120	35,271	45,976	53,755
Loss from operations	(3,501)	(2,923)	(3,175)	(4,526)	(2,455)	82	(3,067)	(10,571)	(13,414)
Other income, net	150	170	136	115	233	(31)	(86)	187	(41)
Loss before provision for income taxes	(3,351)	(2,753)	(3,039)	(4,411)	(2,222)	51	(3,153)	(10,384)	(13,455)
Provision for income taxes	—	—	—	—	11	11	23	23	17
Net loss	$ (3,351)	$ (2,753)	$ (3,039)	$ (4,411)	$ (2,233)	$ 40	$ (3,176)	$ (10,407)	$ (13,472)
Interest (income) expense, net	(167)	(173)	(153)	(126)	(198)	(25)	(7)	(1)	(2)
Income tax provision	—	—	—	—	11	11	23	23	17
Depreciation and amortization	413	294	262	282	399	623	627	607	600
IPO and public company readiness costs	—	—	—	—	—	—	127	155	480
Tender related costs	—	—	—	—	—	—	—	—	5,599
Other	—	—	—	—	—	—	—	—	5,098
Stock-based compensation	807	829	878	1,211	1,154	1,682	1,682	12,513	2,551
Impairment of capitalized software	—	—	—	1,228	—	—	—	—	—
Adjusted EBITDA	$ (2,298)	$ (1,803)	$ (2,052)	$ (1,816)	$ (867)	$ 2,331	$ (724)	$ 2,890	$ 871

The following table sets forth our results of operations for the last eight quarterly periods presented as a percentage of our total revenues for those periods:

	Quarter Ended								
	March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019	March 31, 2020	June 30, 2020	September 30, 2020	December 31, 2020	March 31, 2021
Total revenues	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
Total cost of revenues	30 %	29 %	29 %	29 %	29 %	30 %	29 %	27 %	27 %
Gross profit	70 %	71 %	71 %	71 %	71 %	70 %	71 %	73 %	73 %
Operating expenses:									
Research and development	50 %	47 %	44 %	40 %	34 %	30 %	35 %	32 %	41 %
Sales and marketing	21 %	17 %	22 %	23 %	20 %	22 %	25 %	20 %	36 %
General and administrative	27 %	24 %	21 %	22 %	26 %	18 %	18 %	43 %	21 %
Impairment of capitalized software	— %	— %	— %	5 %	— %	— %	— %	— %	— %
Total operating expenses	98 %	89 %	87 %	91 %	80 %	70 %	78 %	95 %	97 %
Loss from operations	(28)%	(19)%	(16)%	(20)%	(9)%	— %	(7)%	(22)%	(24)%
Other income, net	1 %	1 %	1 %	— %	1 %	— %	— %	— %	— %
Loss before provision for income taxes	(27)%	(18)%	(16)%	(19)%	(8)%	— %	(7)%	(22)%	(24)%
Provision for income taxes	— %	— %	— %	— %	— %	— %	— %	— %	— %
Net loss	(27)%	(18)%	(16)%	(19)%	(8)%	— %	(7)%	(22)%	(24)%
Interest (income) expense, net	(1)%	(1)%	(1)%	(1)%	(1)%	— %	— %	— %	— %
Income tax provision									— %
Depreciation and amortization	3 %	2 %	1 %	1 %	1 %	2 %	1 %	1 %	1 %
IPO and public company readiness costs	— %	— %	— %	— %	— %	— %	— %	— %	1 %
Tender related costs	— %	— %	— %	— %	— %	— %	— %	— %	10 %
Other	— %	— %	— %	— %	— %	— %	— %	— %	9 %
Stock-based compensation	6 %	5 %	5 %	5 %	4 %	4 %	4 %	26 %	5 %
Impairment of capitalized software	— %	— %	— %	5 %	— %	— %	— %	— %	— %
Adjusted EBITDA	(18)%	(12)%	(11)%	(8)%	(3)%	6 %	(2)%	6 %	2 %

Liquidity and Capital Resources

Since inception, we have financed operations primarily through revenues from our operations and the net proceeds we have received from the issuance of equity and debt securities. We have raised a total of $183.3 million in capital financing, less issuance costs of $0.7 million.

As of March 31, 2021 we had $117.5 million in cash and cash equivalents. Our cash and cash equivalents primarily consist of bank deposits and money market funds. Our marketable securities consist of commercial debt, certificates of deposit, US government treasury and agency securities, and commercial paper.

We believe that our existing cash and cash equivalents, and cash flow from operations will be sufficient to support working capital and capital expenditure requirements for at least the next 12 months. Our future

capital requirements will depend on many factors, including our subscription growth rate and renewal activity, the timing of cash received from our payment-processing platforms, the expansion of our sales and marketing activities, the introduction of new products, and the improvements to existing products. We may be required to seek additional capital. If we are unable to raise additional capital or generate cash flows necessary to expand our operations and invest in continued innovation, we may not be able to compete successfully, which would harm our business, operations and financial condition.

A substantial source of our cash from operations is from amounts paid by our subscription users, which is included in the liabilities section of our condensed consolidated balance sheet. Deferred revenue consists of the unearned portion of customer billings, which is recognized as revenue in accordance with our revenue recognition policy. As of March 31, 2021, we had deferred revenue of $65.3 million, which is recorded as a current liability and expected to be recognized as revenue in the next 12 months, provided all other revenue recognition criteria have been met.

The following table summarizes our cash flows for the periods presented:

	Year Ended December 31,		Three Months Ended March 31,	
(In thousands)	**2019**	**2020**	**2020**	**2021**
Net cash provided by operating activities	$ 2,152	$ 17,708	$ 4,719	$ 5,123
Net cash provided by (used for) investing activities	2,431	(4,014)	(1,723)	(1,778)
Net cash provided by (used for) financing activities	30,970	46,953	282	(6,376)
Net increase (decrease) in cash and cash equivalents	$ 35,553	$ 60,647	$ 3,278	$ (3,031)

Operating Activities

Cash flows from operating activities can fluctuate significantly from period to period due to timing of payments and cash collections. Our largest source of operating cash is cash collection from sales of subscriptions to our users. Our primary uses of cash from operating activities are for personnel expenses, marketing expenses, hosting expenses and overhead expenses. We have generated positive cash flows and have supplemented working capital requirements through net proceeds from the sale of equity and debt securities.

Cash provided by operating activities for the year ended December 31, 2020 increased by $15.6 million, or 723%, from $2.2 million for the year ended December 31, 2019 to $17.7 million for the year ended December 31, 2020. This increase is due mainly to: an increase in cash received from users for subscriptions, resulting in an increase to deferred revenue; an increase in the non-cash charges from stock compensation expense, depreciation and amortization; an increase in accrued expenses; and a reduction in the non-current assets and liabilities. These increases were partially offset by an increase in accounts receivable and other current assets and liabilities; an increase in deferred costs of revenues; and a decrease in accounts payable.

Cash provided by operating activities for the three months ended March 31, 2021 increased by $0.4 million, or 9%, from $4.7 million for the three months ended March 31, 2020 to $5.1 million for the three months ended March 31, 2021. The main drivers of the increase were accrued expenses and other current liabilities, accounts payable, prepaid expenses and other current assets, deferred revenue and stock-based compensation expense. These increases were partially offset by an increase in net loss.

Investing Activities

Cash provided by (used in) investing activities was $4.0 million for the year ended December 31, 2020, as compared to $2.4 million in cash provided from investing activities for the year ended December 31, 2019. During the prior year, the maturity of an investment resulted in a source of cash of $7.7 million. The capitalization of software development costs and capital expenditures to purchase property and equipment to support office space and site operations decreased by $1.2 million from period to period.

Cash used in investing activities was $1.8 million for the three months ended March 31, 2021, as compared to a use of $1.7 million for the three months ended March 31, 2020. The slight increase is due to increased capitalized software, partially offset by a reduction in spending on property and equipment.

Financing Activities

Cash provided by financing activities for the year ended December 31, 2020 was $47.0 million, and primarily relates to the net proceeds from the issuance of convertible preferred stock of $44.9 million, in addition to proceeds from exercises of stock options of $2.0 million. Cash provided by financing activities for the year ended December 31, 2019 was $31.0 million and was mostly the result of net proceeds from the issuance of convertible preferred stock.

Cash used by financing activities for the three months ended March 31, 2021 was $6.4 million, and was driven by payments made as a result of the tender offer of $8.2 million. These payments were partially offset by proceeds from the exercise of stock options of $2.0 million. Cash provided by financing activities for the three months ended March 31, 2020 was $0.3 million and was almost entirely from proceeds from exercises of stock options.

Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily the result of fluctuations in interest rates and foreign currency exchange rates.

Interest Rate Risk

As of March 31, 2021, of our $117.5 million of cash and cash equivalents, $104.1 million was invested in money market funds. Our cash and cash equivalents are held for working capital purposes in addition to future investments in our products. We do not enter into investments for trading or speculative purposes. Our investments are exposed to market risk due to a fluctuation in interest rates, which may affect our interest income and the fair market value of our investments. As of March 31, 2021, a hypothetical 10% relative change in interest rates would not have a material impact on our consolidated financial statements.

Foreign Currency Exchange Risk

Our reporting currency and the functional currency of our wholly owned foreign subsidiaries is the US dollar. Certain of our payment providers translate our payments from local currency into USD at time of settlement, which means that during periods of a strengthening US dollar, our international receipts could be reduced. Our operating expenses are denominated in the currencies of the countries in which our operations are located, which are primarily in the United States and China. Our consolidated results of operations and cash flows are, therefore, subject to fluctuations due to changes in foreign currency exchange rates and may be adversely affected in the future due to changes in foreign exchange rates. In addition, as foreign currency exchange rates fluctuate, the translation of our international receipts into US

dollars affects the period-over-period comparability of our operating results and can result in foreign currency exchange gains and losses. To date, we have not entered into any hedging arrangements with respect to foreign currency risk or other derivative financial instruments, although we may choose to do so in the future. A hypothetical 10% increase or decrease in the relative value of the US dollar to other currencies would not have a material effect on our operating results.

Contractual Obligations

We enter into long-term obligations in the normal course of business related to our non-cancelable operating leases for our offices.

As of December 31, 2020, our contractual cash obligations over the next several periods were as follows:

(***In thousands)***

	Total	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years
Operating lease commitments	$ 12,471	$ 1,696	$ 2,403	$ 2,496	$ 5,876

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet financing arrangements or any relationships with unconsolidated entities or financial partnerships, including entities sometimes referred to as structured finance or special purpose entities, that were established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Critical Accounting Policies and Estimates

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions about future events that affect amounts reported in our Consolidated Financial Statements and related notes, as well as the related disclosure of contingent assets and liabilities at the date of the financial statements. Management evaluates its accounting policies, estimates and judgments on an ongoing basis. Management bases its estimates and judgments on historical experience, current trends and various other factors that are believed to be relevant at the time Consolidated Financial Statements are prepared. Actual results may differ from these estimates under different assumptions and conditions.

Management evaluated the development and selection of its critical accounting policies and estimates and believes that the following involve a higher degree of judgment, complexity or uncertainty and are most significant to reporting our results of operations and financial position, and are therefore discussed as critical. The following critical accounting policies reflect the significant estimates and judgments used in the preparation of our Consolidated Financial Statements.

Revenue Recognition

Nature of Revenue

We account for revenue contracts with customers by applying the five step model in Accounting Standards Codification (ASC) 606, *Revenue from Contracts with Customers*,. Our predominant sources of revenue are time-based subscriptions, in-app advertising placement by third parties and the Duolingo English Test. Revenue is recognized upon transfer of control of promised goods or services to customers in an amount that reflects the consideration expected to be received in exchange for those goods or services. Revenue is recognized net of any taxes collected from customers, which are subsequently remitted to governmental authorities.

Revenue from time-based subscriptions includes a stand-ready obligation to provide hosting services that are consumed by the customer over the subscription period. Users can purchase Duolingo monthly or they can purchase a six-month or year-long subscription and pay for the subscription at the time of purchase. Therefore, such payments are initially recorded to deferred revenue. The user has the ability to download limited content offline. However, as there is a significant level of integration and interdependency with the online functionality, we consider the service to be a single performance obligation for the online and offline content.

We enter into arrangements with advertising networks to monetize the in-app advertising inventory. Revenue from in-app advertising placement is recognized at a point in time when the advertisement is placed and is based upon the amount received.

Duolingo English Test revenue is generally recognized once the tests have gone through the proctoring process and a certification decision has been made. This process usually takes less than 48 hours after the test has been completed and uploaded. Customers have 90 days from the date of purchase to take the exam or their purchase will expire and revenue will be recognized. Virtually all customers complete their exams prior to expiration. Sometimes organizations may purchase tests in bulk via coupons with a one year expiration date. We defer revenue from all tests that have not been proctored nor expired.

Our users have the option to purchase consumable in-app virtual goods. We recognize revenue over the period in which the user consumes the virtual good, which is generally within a month.

Principal Agent Considerations—We make our application available to be downloaded through third-party digital distribution service providers. Users who purchase subscriptions also pay through the respective app stores. We evaluate the purchases via third-party payment processors to determine whether its revenues should be reported gross or net of fees retained by the payment processor. We are the principal in the transaction with the end user as a result of controlling, hosting, and integrating the delivery of the virtual items to the end user. We record revenue gross as a principal and record fees paid to third-party payment processors as Cost of revenues.

Significant Judgment Around Revenue Arrangements with Multiple Deliverables

Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. Our time-based subscriptions allow users the ability to download limited content offline. Significant judgment is required to determine whether this offline content should be considered distinct and accounted for separately, or not distinct and accounted for together with the online functionality provided and recognized over time. As there is a significant level of integration and interdependency with the online functionality, which is not the case with the offline functionality, we believe we have a single performance obligation for the online functionality and offline content.

Equity Based Compensation

We follow ASC 718, *Compensation-Stock Compensation*, to account for our equity based compensation.

Stock-based Compensation

ASC 718 requires all stock-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values. We generally grant our option awards in a combination of service-based and performance-based. We measure the fair value of our options on the date of grant using the Black-Scholes pricing model which requires the use of several estimates, including the volatility of our share price, the expected life of the option, risk free interest rates and expected dividend yield. The use of different assumptions in the Black-Scholes pricing model would result

in different amounts of equity based compensation expense. Furthermore, if different assumptions are used in future periods, our equity based compensation expense could be materially impacted in the future.

Prior to the completion of this offering, we were not a publicly traded company and had only limited historical information on the price of our common stock as well as employees' option exercise behavior. As a result, we could not rely on historical experience alone to develop assumptions for our share price volatility. As such, our share price volatility was estimated with reference to a peer group of companies. Subsequent to the completion of this offering, we will transition to utilize the closing price of our publicly-traded stock to determine our volatility. We determined the expected life of our options using the simplified method described in the SEC Staff Accounting Bulletin Topic 14, Share-Based Payment, which defines the expected life as the average of the contractual term and the vesting period. The risk-free interest rate is based on the yield curve of a zero-coupon US Treasury bond on the date the option award was granted with a maturity equal to the expected term of the option award. We have not and do not expect to pay dividends on our common shares. See Note 9, "Stock Based Compensation," to our consolidated financial statements appearing elsewhere in this prospectus, for further information on equity based compensation.

Restricted Stock Units (RSUs)

We began to grant RSUs in November 2020. The fair value of RSUs is estimated based on the fair value of our common stock on the date of grant. Each RSU award vests based upon the satisfaction, during the term of the RSUs, of two requirements: length of service and a liquidity event defined as a change in control or a qualified IPO. The service-based vesting condition for the majority of these awards is satisfied over four years. The liquidity-based vesting condition is satisfied upon the occurrence of a qualifying liquidity event. We measure and recognize compensation expense for all stock-based awards based on the estimated fair value of the award. As of December 31, 2020, no stock-based compensation expense had been recognized for RSUs because the liquidity-based vesting condition had not been probable of being satisfied. In the period in which our liquidity-based vesting condition becomes probable, we will begin recording stock-based compensation expense for these RSUs with a liquidity-based vesting condition using the accelerated attribution method, net of forfeitures, based on the grant-date fair value of the RSUs.

Common Stock Valuations

Determining the fair value of our common stock requires complex and subjective judgment and estimates. There is inherent uncertainty in making these judgments and estimates. The absence of an active market for our common stock required our board of directors to estimate the fair value of the common stock for purpose of setting the exercise price of the options and estimating the fair value of the common stock at the time options were granted based on factors such as valuations of comparable companies, the status of our development and sales efforts, revenue growth, and additional objective and subjective factors relating to our business. We performed its analysis in accordance with applicable elements of the practice aid issued by the American Institute of Certified Public Accountants' (AICPA) Practice Guide, Valuation of Privately Held Company Equity Securities Issued as Compensation; with this guidance, our board of directors exercised reasonable judgment and considered numerous and subjective factors to determine the best estimate of fair value of our common stock, including the following:

Company Specific Factors

- Actual and forecasted operating and financial performance based on management's estimate;
- The development and maintenance of client relationships;
- Client and industry recognition;

- The hiring and retention of key personnel;
- The historical lack of a public market for our common stock;

General Economic Factors

- Industry trends and competitive environment;
- Trends in client and the at-large public spending, including client and public confidence;
- Overall economic indicators;
- The general economic outlook; and
- The common stock valuations have historically leveraged the historical appraisals we have received to value our common stock, utilizing an income approach.

Income Taxes

Deferred tax assets and liabilities are recognized principally for the expected tax consequences of temporary differences between the tax basis of assets and liabilities and their reported amounts, using currently enacted tax rates. The measurement of a deferred tax asset is reduced, if necessary, by a valuation allowance if it is more likely than not that some portion or all of the deferred tax asset will not be realized. Significant judgment is required in evaluating the need for and magnitude of appropriate valuation allowances. The realization of our deferred tax assets is dependent on generating future taxable income and the reversal of existing temporary differences. Changes in tax laws and assumptions with respect to future taxable income could result in adjustment to these allowances. As of December 31, 2020, we maintained a valuation allowance of approximately $26.2 million against certain deferred tax assets related to both domestic and foreign net operating loss carryforwards, and state R&D credit carryovers as its future utilization remained uncertain.

In addition, we recognize a tax benefit for uncertain tax positions only if we believe it is more likely than not that the position will be upheld on audit based solely on the technical merits of the tax position. We evaluate uncertain tax positions after the consideration of all available information.

Recent Accounting Pronouncements

See Note 2 of the notes to our consolidated financial statements included elsewhere in this prospectus for more information.

Emerging Growth Company Status

We are an “emerging growth company” as defined under the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards would otherwise apply to private companies. While we have not historically delayed the adoption of new or revised accounting standards until such time as those standards would apply to private companies, we have elected to take advantage of this extended transition period and, as a result, our operating results and financial statements in the future may not be comparable to the operating results and financial statements of companies who have adopted the new or revised accounting standards.

letter from luis von ahn co-founder and ceo

Dear potential investors,

The main thing you need to know is that I plan to dedicate my life to building a future in which, through technology, every person on this planet has access to the best quality of education. And not only that, but a future in which people *want* to spend their time learning.

Duolingo is the platform for building that future, and we are just getting started.

Luis von Ahn
CEO and Co-Founder
Duolingo, Inc.

business

Business

Our Mission

Our Mission is to develop the best education in the world and make it universally available.

Although education can open the door to economic opportunity, it is also among the principal sources of inequality: the privileged can get the best education in the world, while those with fewer resources, especially in developing countries, may not be able to get even basic schooling. That is why we started Duolingo. We believe that everyone, regardless of how wealthy they are, should have access to high quality education. And for the first time in history, the technology necessary to enable this is in the hands of billions of people, in the form of a smartphone. At Duolingo, we build products native to the smartphone—bite-sized, on-demand and engaging—to make learning accessible and effective, opening doors for everyone alike.

Who We Are

Duolingo is a technology company founded by two engineers, Luis von Ahn and Severin Hacker. Luis and Severin met at Carnegie Mellon University, where Luis was a professor in the Computer Science Department and Severin was his Ph.D. student. Luis, a MacArthur Fellow, grew up in Guatemala and witnessed firsthand the tremendous impact that access to high quality education can have on people's lives. Luis and Severin bonded over the dream of building an intelligent learning system informed by massive amounts of user engagement data that could deliver superior learning outcomes.

Our team of over 400 passionate employees, including more than 170 engineers, aims to build the most sophisticated education platform in the world. We believe that by using modern technology, the very best engineering talent, and a mission-driven approach, we can create better learning experiences and meaningful improvements in efficacy. Our products are powered by sophisticated data analytics and artificial intelligence that make it easier for learners to stay motivated, master new material, and achieve their learning goals.

Our Business

Duolingo is the leading mobile learning platform globally. With over 500 million downloads, our flagship app has organically become the world's most popular way to learn languages and the top-grossing app in the Education category on both Google Play and the Apple App Store. For many, Duolingo has become synonymous with language learning: for example, on Google, people search the term "Duolingo" nine times more often than "learn Spanish." We are particularly proud that our learners come from the entire socioeconomic spectrum, ranging from billionaires and celebrities to recently resettled refugees, a rare instance in which more money does not imply better access to a high quality educational platform.

We started with a focus on teaching languages because of the profound impact learning a new language can have on people's lives, as well as the large market opportunity. According to HolonIQ, 1.8 billion people across the world are learning a new language, and in 2019, consumer spend on both online and offline language learning represented a $61 billion market. Driving much of the demand for language learning is the reality that English can unlock tremendous economic opportunity. According to the World Economic Forum, job seekers around the world with exceptional English skills can expect to earn 30-50% higher salaries than their peers with average English ability. And the power of language learning is not limited to economic advancement. Learning another language can unlock new experiences and deep human connections, ranging from navigating a first trip to another country, to communicating with family members of an older generation.

Duolingo offers courses in 40 languages to approximately 40 million monthly active users. To put our scale in context, there are more people in the United States learning languages on Duolingo than there are foreign language learners in all US high schools combined, and there are more people learning certain languages on Duolingo, like Irish and Hawaiian, than there are native speakers of those languages worldwide.

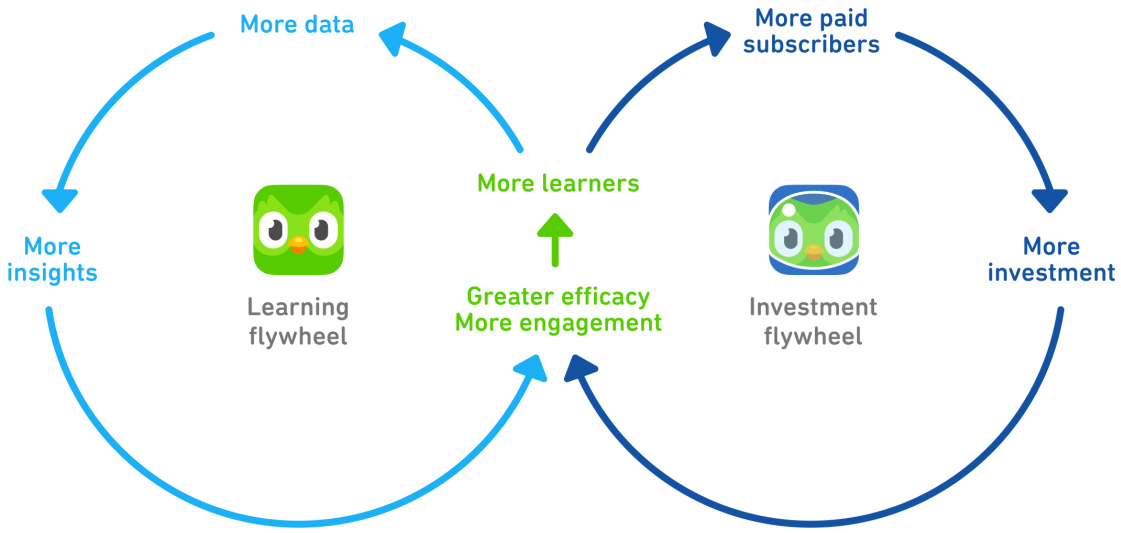
Duolingo is the learning product built for the mobile generation: bite-sized, on-demand and fun. We believe that the hardest part of learning something new is staying motivated, so we build gamification features into our platform to motivate our learners, and we run thousands of A/B tests to optimize each feature for maximum engagement. Our obsession with user experience has yielded affinity and loyalty in our learners, which in turn has helped us cultivate millions of brand advocates who tell their friends and families about our products. Indeed, our brand has become part of pop culture, appearing in internet memes and sketches on late night comedy shows. All of this has allowed us to grow our business organically, primarily relying on word-of-mouth virality rather than paid user acquisition.

Our millions of learners complete over 500 million exercises every day, creating what we believe to be the world's largest learning dataset. This data powers the high volume A/B testing and novel artificial intelligence (AI) that we use to continually improve how well we teach. According to an internal study, people who complete five “Units” of Duolingo, or roughly half of one of our courses, learn as much as students taking four university semesters of language education—and they do so in half the time.

We intentionally do not put our learning content behind a paywall. Anyone can download the Duolingo app, use it for as long as they like, and complete as many of our courses as they choose, all without paying anything. Learners who use Duolingo for free see an ad at the end of each Lesson, whereas learners who purchase Duolingo Plus, our premium subscription, enjoy an ad-free experience and access to additional features. As of March 31, 2021, approximately 5% of our monthly active users were paid subscribers of Duolingo Plus. Our paid subscriber penetration has increased steadily since we launched Duolingo Plus in 2017 and, combined with our user growth, has led to our revenue more than doubling every year since. We have a strong future roadmap of feature improvements and optimizations, and believe we are in the early stages of increasing our paid subscriber penetration.

Our freemium business model is core to our success because it enables significant user scale. Our growth and competitive differentiation have been driven by two mutually-reinforcing flywheels: our learning flywheel and our investment flywheel.

- **Learning flywheel:** The greater the scale of our learner base, the more we can use insights from data analytics to improve both engagement and efficacy. The more engaging our products are, and the more effectively we teach, the more our learners tell their friends about Duolingo and the more we continue to grow our learner base.
- **Investment flywheel:** Our learner scale and word-of-mouth growth allow us to focus our capital investments on product innovation and data analytics, as opposed to brand or performance marketing. The more learners use Duolingo and convert into paid subscribers, the more we are able to invest in creating an even more delightful, engaging and effective learning experience. In turn, this increases our popularity and user scale, as well as the effectiveness of our data analytics, further widening our competitive moat.

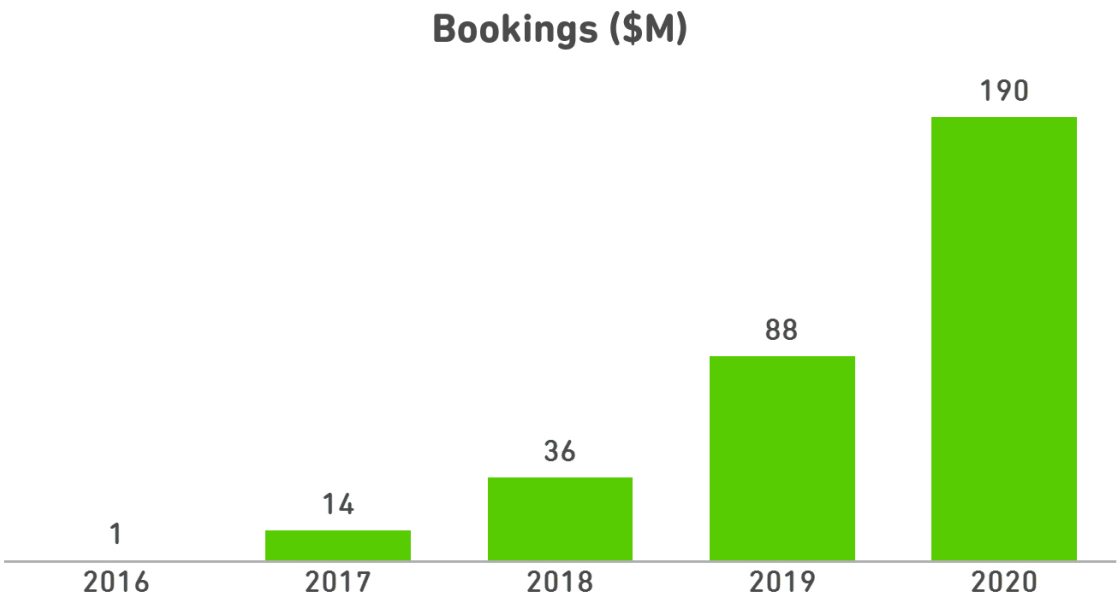


In 2016, we launched our second product, the Duolingo English Test, an online, on-demand assessment of English proficiency. Every year, millions of people around the world seek to demonstrate English proficiency for a variety of reasons, including university admissions, work visas, and job applications. We developed the Duolingo English Test because language assessment has lacked innovation, with the most popular English proficiency tests still administered in physical testing centers and usually costing hundreds of dollars per test. By offering a more accessible, online option that is both rigorous and accurate, we provide greater opportunities for aspiring students and professionals dependent on successful completion of these high stakes assessments. As of June 2021, over 3,000 higher education programs around the world accept Duolingo English Test results as proof of English proficiency for international student admissions. These include 17 of the top 20 undergraduate programs in the United States according to US News and World Report—for example, Yale, Stanford, MIT, Duke and Columbia. In 2020, roughly 344,000 individual Duolingo English Tests were purchased, mostly by prospective international students.

We believe we are just getting started. As the language learning market continues to shift online and digital subscriptions become increasingly prevalent in both mature and emerging markets, we expect to grow our number of monthly active users, as well as the portion of users who pay for a subscription. We also have a significant opportunity to impact more learners around the world by extending our platform to teach subjects beyond language, such as literacy and math. We believe that the investments we have made in our technology platform and our core competencies in data analytics, product design, gamification, and assessment position us well to extend into new subject areas. In 2020, for example, we launched Duolingo ABC, an app designed to teach early literacy skills to children ages three to six.

Our business has experienced rapid growth since our founding in 2011. For the years ended December 31, 2019 and 2020, we had 27 million and 37 million monthly active users, respectively, representing year-over-year growth of 34%, and we grew our paying subscribers from 0.9 million as of December 31, 2019 to 1.6 million as of December 31, 2020, respectively, or 84% year over year. For the quarter ended March 31, 2021, we had 40 million monthly active users, and as of March 31, 2021, we had 1.8 million

paying subscribers. Our revenue was $70.8 million in 2019 and $161.7 million in 2020, representing 129% year-over-year growth. Our revenue was $28.1 million in the three months ended March 31, 2020 and $55.4 million in the three months ended March 31, 2021, representing 97% period-over-period growth. In 2020 and the three months ended March 31, 2021, approximately 73% and 72%, respectively, of our revenue came from subscriptions to Duolingo Plus, approximately 17% came from advertising in both periods, and approximately 10% and 11%, respectively, came from the Duolingo English Test and other revenue. Given the momentum in our business and the size of our market opportunity, we continue to invest in product innovation and data analytics. In the three months ended March 31, 2020 and 2021, we had net losses of $2.2 million and $13.5 million, respectively. Our Adjusted EBITDA improved from $(8.0) million in 2019 to $3.6 million in 2020, and was $(0.9) million and $0.9 million in the three months ended March 31, 2020 and 2021, respectively. Our total bookings were $88.0 million in 2019 compared to $190.2 million in 2020, representing 116% year-over-year growth, and $36.9 million in the three months ended March 31, 2020 compared to $65.8 million in the three months ended March 31, 2021, representing 78% period-over-period growth.



Mark
Chicago, USA

With a Puerto Rican wife and Spanish-speaking in-laws, Mark always wanted to learn Spanish — a language he studied in high school but never learned well. When Mark found out he was going to be a father, he decided to elevate Spanish to a daily effort on Duolingo. “I wanted a bilingual household,” he says, “so my son is comfortable speaking both Spanish and English.”

After more than 1,600 consecutive days on Duolingo, Mark is flourishing in his new language: he can converse with his in-laws and Spanish-speaking neighbors, and he even gives presentations in Spanish at work. He keeps his skills sharp with one or two Duolingo lessons a day.

These days when Mark practices Spanish, his son does too. “When he hears the ding of the bell when I get a correct answer, he will run into the room. He wants to be part of it with me.” Now 3 years old, Mark’s son has another Duolingo habit, as well — he’s starting to learn to read with Duolingo ABC.

Pilar

Bogota, Colombia

Pilar loves to challenge herself. She studied English in school, but found that her teachers often didn't speak English well themselves — and her family didn't have the means for private classes. So Pilar took matters into her own hands: she started learning on Duolingo. "That's when I really got confident in English," she says, and her career has taken off ever since.

With her new English skills, Pilar got a job at a call center. Later, she learned German, and then Portuguese, both on Duolingo — and with each new language, she got a promotion at the call center. Now, she's a manager.

Pilar's dream is to teach Spanish abroad. For now, she's taking night classes to pursue an economics degree. She appreciates how Duolingo can fit into her busy schedule, completing her lessons every morning after exercising. Somehow, she still finds time to watch TV. "My favorite show is The Simpsons," she says. "I watch it in German."

Alexandre
Berlin, Germany

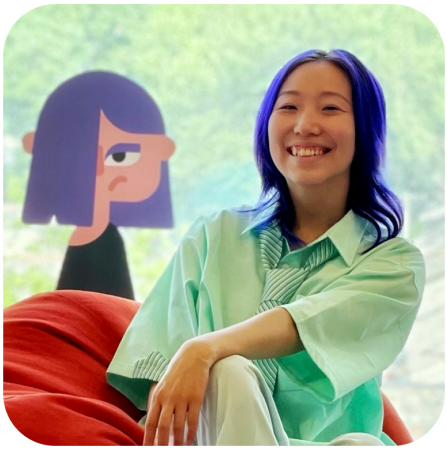
Growing up in the favelas of São Paulo, Alexandre never expected to get a good education. His school offered minimal English instruction, and as Alex puts it, "Only the rich kids at private schools actually got to learn."

It wasn't until the 2014 World Cup, when he was a teenager working as cleaning staff in a hotel, that Alex got interested in English. He tried but dropped an expensive business English course. Then he discovered Duolingo. "The most important part is the encouragement," he says. "Duolingo gave me the confidence to keep going."

He first set a goal of understanding Kendrick Lamar lyrics. That shifted when he met and fell in love with a German girl, and for the first time, started to imagine a life outside of São Paulo. He worked harder at English, their common language, and picked up German lessons on Duolingo too.

An opportunity to go to Berlin first sparked Alex's interest in college. The Duolingo English Test let him certify his English and apply to colleges without returning to Brazil for an in-person language assessment — and he ultimately earned a scholarship to Bard College Berlin.

Before Alex starts his college career, he's virtually organized a group in São Paulo for kids to practice their English. "It's funny," he says. "My journey has come full circle."



Ming
Beijing, China

From her sizable anime collection to her dog, a Shiba Inu, Ming has always been fascinated by Japanese culture. She wanted to learn Japanese to read her favorite manga series, Naruto, in its original language. But in China, English is typically the only language taught in schools and on apps. That's why Ming was so excited to discover Duolingo.

Ming practices Japanese for about 30 minutes a day. Her job in advertising keeps her busy, so she likes how Duolingo lessons fit into her spare time. To her, it feels like a game: "It's like 'leveling up' and gives me a sense of achievement." She loves the characters, especially Lily — she even dyed her hair purple to match Lily's look.

Beyond hair color, Ming is excited to see where Duolingo takes her. Developing a deeper understanding of Japanese advertising has already helped her at work. "Learning Japanese has opened a whole new world for me," she says. "I might want to live in Japan someday."

Industry Trends

We believe the following market trends will contribute to the continued success of our platform:

Mobile-first behaviors are reshaping industries. In categories ranging from retail to music to dating, consumers are increasingly gravitating to mobile, app-based experiences. A study by Comscore showed that in 2020 mobile usage represented at least 75% of digital minutes in every region of the world, with the share continuing to rise. And mobile app usage makes up the significant majority of time spent on mobile devices: for example, almost 90% of mobile minutes in the United States are spent within apps, according to a 2020 study by eMarketer. We believe that consumer behavior will continue to be shaped by a preference for the convenient, on-demand nature of mobile experiences.

The shift towards online learning is accelerating. Historically, education has lagged behind other industries in the shift from offline to online. According to GSV Ventures, the 2019 digital learning market represented $160 billion in spend—already a sizable number, but still only 2.3% of total global education expenditures. However, the COVID-19 pandemic sparked a radical shift towards online learning, and its effects are likely to be enduring. GSV Ventures now predicts that digital learning will reach 11% of education market expenditures by 2026, representing approximately $1 trillion in spend and a 26% CAGR from 2019 to 2026.

Online learners seek engaging, mobile-first experiences. Consumers are increasingly accustomed to the highly engaging design of social media apps and mobile games. According to the Global Web Index, 95% of the global online population uses social websites or apps, and the typical user spends two hours and 25 minutes on social media every day. On the gaming front, App Annie Intelligence reports that games accounted for 36% of mobile downloads in 2020, and that users across the globe spent 296 billion hours playing mobile games that year. We believe that consumers turning to online learning will not only prefer the convenience and control that mobile apps provide, but also expect experiences to be highly engaging.

Adoption of subscription models is growing globally. Rising adoption of subscription models across the globe is further enabling the shift towards mobile experiences. According to a Zuora survey conducted by the Harris Poll, 78% of consumers globally paid for subscriptions in 2020, up from 71% in 2018. Even in Japan, the market with the lowest rate among surveyed countries, more than half of consumers pay for subscriptions, growing from 53% in 2018 to 59% in 2020. In the United States, the figure is 82%, and according to a 2020 survey by Adjust, the average US consumer spends $53 per month on digital subscriptions, including an average of four app subscriptions. We believe that as subscriptions increase in popularity across categories, consumers will also gravitate towards subscription models in online learning.

Market Opportunity

The global market for direct-to-consumer language learning is large, growing, and shifting online. According to HolonIQ, total consumer spend on both online and offline language learning represented $61 billion in 2019, and will grow to $115 billion in 2025, implying a CAGR of 11% over this period. Online language learning is the fastest-growing market segment, projected to grow from $12 billion in 2019 to $47 billion in 2025, representing a CAGR of approximately 26% over this period, and to comprise 41% of total consumer spend on language learning in 2025. We believe that growth in digital spend will be driven in part by a shift away from offline offerings, as consumers seek more affordable, convenient, and higher quality online solutions. Today, the offline market is highly fragmented, and dominated by local players offering high-priced solutions: for example, an English course at a private language institute often costs over $1,000, even in developing countries.

We also believe that growth in online language learning spend will be driven by consumers who would not have paid for offline offerings, but now choose to purchase online products. For example, according to a survey we conducted in 2021, almost 80% of Duolingo users in the US were not already learning a language when they began using Duolingo. Globally, GSMA reports that the number of mobile internet users is projected to grow from 3.8 billion at the end of 2019 to 5.0 billion by 2025. Growth in smartphone adoption can open up new access to the convenience and affordability of mobile-first learning to hundreds of millions of people.

We also have a significant opportunity to impact more learners around the world by extending our platform beyond language learning. According to HolonIQ, approximately $6 trillion was spent on education globally in 2019. And GSV Ventures reports that $160 billion was spent on digital learning, with digital spend expected to grow at a 26% CAGR from 2019 to 2026. We believe we can expand our addressable market by extending our scalable platform to other segments of learning such as literacy and math.

The Duolingo Learning Experience

The Duolingo learning experience sits at the rare intersection of fun and self-improvement. Learners love Duolingo because:

- **It's fun.** Duolingo feels more like a mobile game than an education product. Our bite-sized lessons and gamification features motivate learners to come back each day to continue learning.
- **It's effective.** Learners stick with Duolingo at first because it’s fun, and then over time also because they find that it works. Our expert-designed courses help learners build robust speaking, reading, listening, and writing skills, and our data analytics power personalization and superior learning outcomes.
- **It's free.** Every language course on Duolingo is free to access. Learners can spend as much time learning as they want and complete any and every course without paying. This lowers barriers to start learning and to keep learning.

In a world where people are increasingly engaged in immersive, bite-sized, mobile-first experiences, we provide such an experience that also results in learning valuable skills. Indeed, many of our learners prefer to spend time on Duolingo rather than on social media or mobile games because they can learn while still feeling entertained.

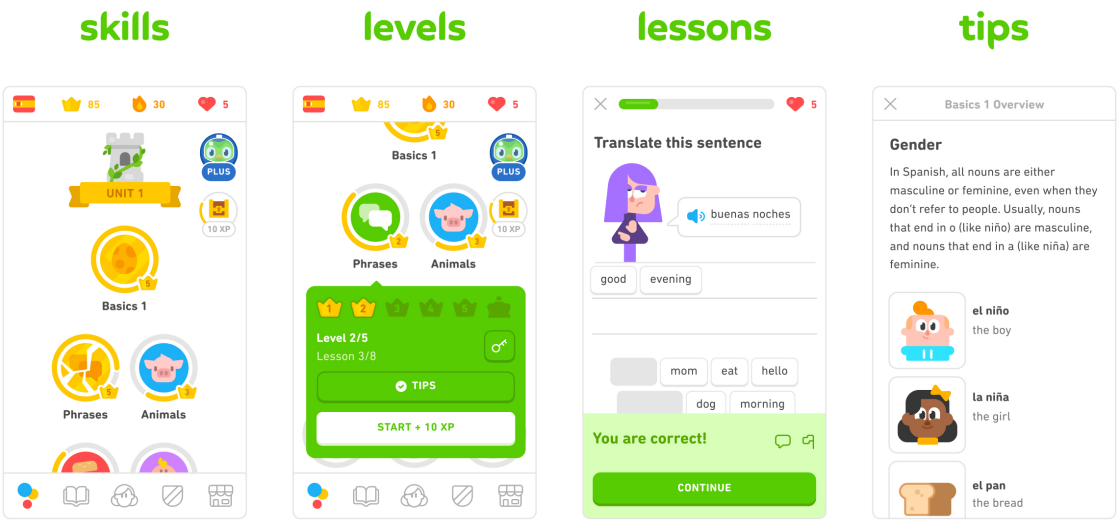
Product Features

As of June 2021, Duolingo offered 40 language courses. Each course is made up of a number of elements:

- ***Skills.*** Skills appear as colorful circles in the Duolingo home screen. Each Skill introduces new vocabulary, grammar concepts, and linguistic constructs. As learners progress, more advanced Skills unlock. Skills are grouped into sections called “Units,” with each Unit followed by a brief quiz that helps evaluate the efficacy of that Unit’s curriculum.
- ***Levels.*** Each Skill is divided into five Levels, and each Level provides learners practice on the same content, but with progressively more challenging exercises. The color of a Skill changes when a learner levels up, ultimately turning gold when reaching Level 5. Learners have to complete Level 1 of a Skill in order to unlock the next row of Skills.
- ***Lessons.*** Each Level consists of a number of engaging, bite-sized Lessons that implicitly teach the vocabulary and linguistic concepts associated with that Skill. Lessons include a variety of types of exercises that help learners practice different aspects of language. For example, we use

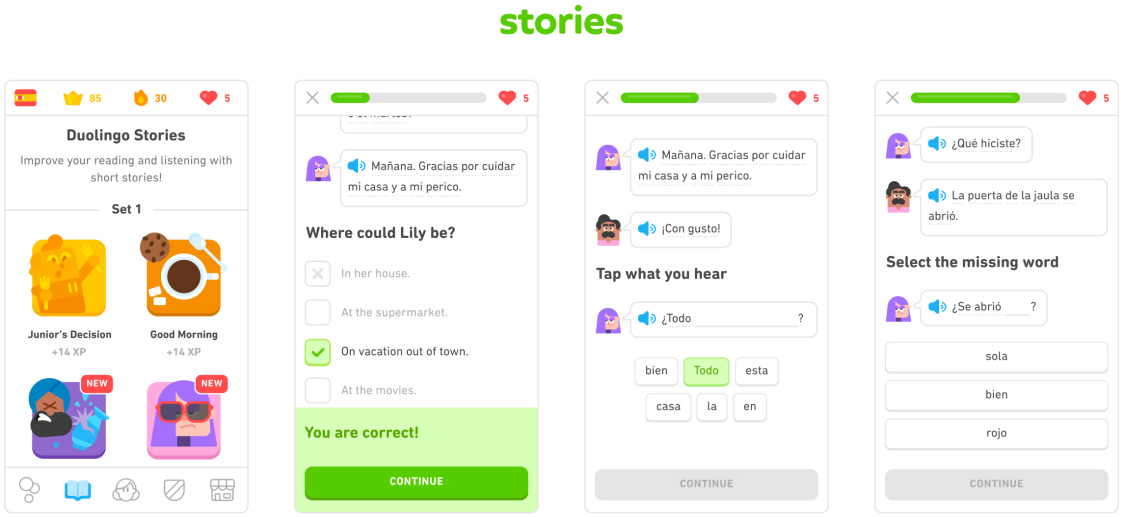
speech recognition for pronunciation practice, images for vocabulary practice, and synthesized voice for listening comprehension practice. Exercises for each Lesson are selected and sequenced in real time using AI-based algorithms that personalize each Lesson to each individual learner.

- ***Tips.*** Tips are short text explanations designed to explicitly teach the concepts that might be hard to grasp when introduced implicitly in Lessons. Tips illuminate concepts in grammar, phonetics, and orthography, and may include descriptions of language rules, example sentences, and audio-enhanced pronunciation guides.



Courses are supplemented by additional in-app features that help learners practice reading and listening comprehension. These include:

- ***Stories.*** Stories are short, engaging dialogues presented with both text and audio that expose learners to conversational language and support practice of both reading and listening comprehension. Stories usually depict entertaining situations featuring our iconic cast of characters, and are unlocked as learners progress through the course, ensuring that learners only access Stories appropriate for their proficiency level.

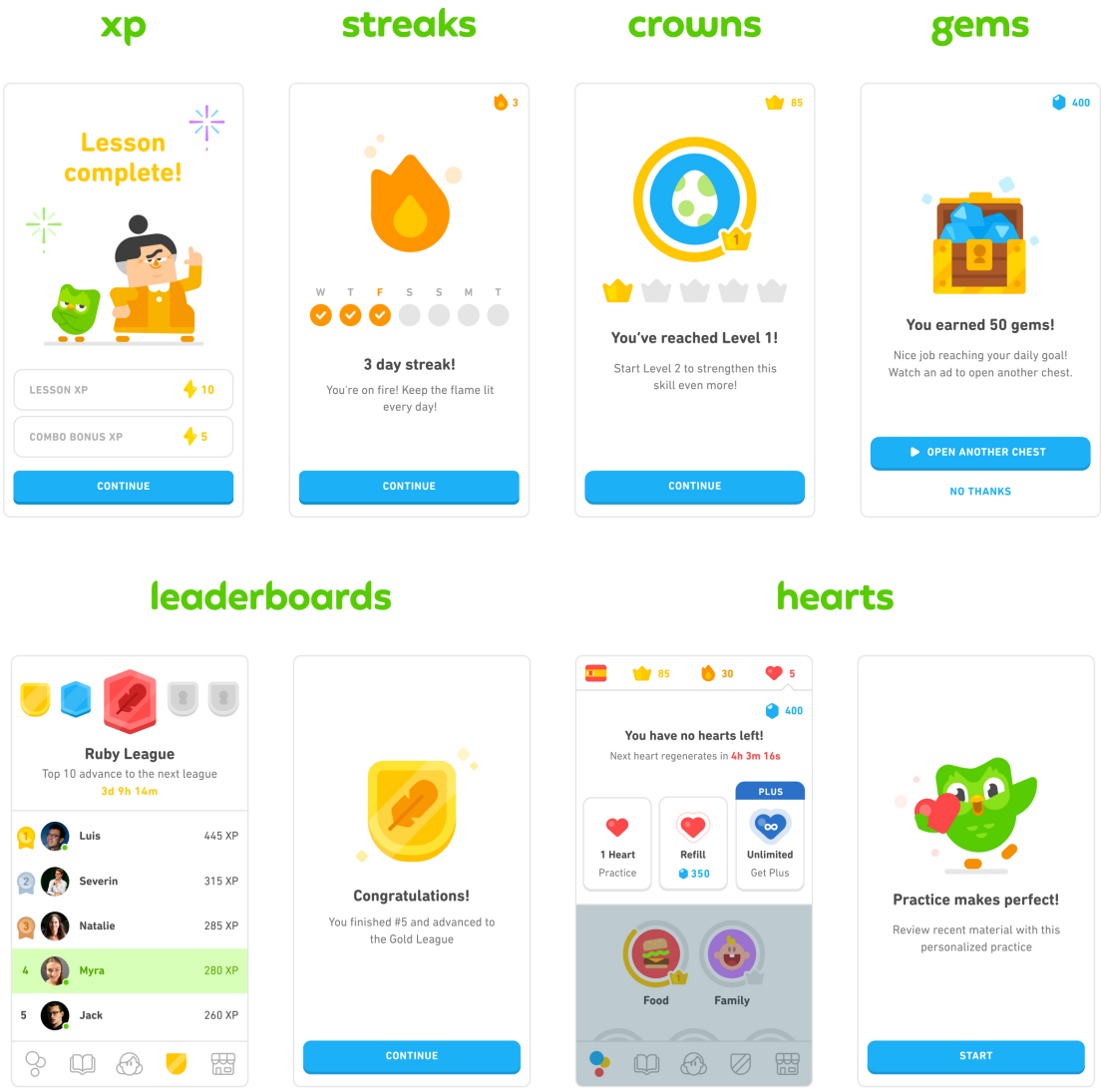


- ***Audio lessons.*** Audio-only lessons allow learners to spend focused time developing listening comprehension skills and practicing speaking. Audio lessons are centered around practical, real-world situations like ordering at a restaurant or asking for directions.

Our courses and learning features are integrated with our gamification mechanics, which keep learners engaged and motivate them to spend more time learning. These gamification mechanics include:

- ***XP.*** Learners earn Experience Points, or "XP," for completing learning activities in Duolingo. The longer or more challenging the activity, the more XP they gain. For example, a single Lesson usually earns learners 10 XP, whereas the completion of a Story usually earns 20 XP.
- ***Streaks.*** A streak represents the number of days in a row that a learner has used Duolingo, and appears as a flame icon in the app. Each day a learner gains XP, their streak gets one day longer. Streaks are a powerful motivator to keep learners coming back every day.
- ***Crowns.*** Learners collect crowns upon completion of a Level of a Skill. Accumulating a certain number of crowns unlocks additional features, such as Stories.
- ***Gems.*** Gems are the Duolingo virtual currency, which rewards learners for accomplishments like leveling up a Skill. This currency allows learners to buy virtual items from our "Shop," including a "Streak Freeze," which maintains a learner's streak even if they miss a day of practice.
- ***Leaderboards.*** Leaderboards are weekly cohorts of 30 learners who compete to earn the most XP. Leaderboards are organized into Leagues based on the volume of XP earned, starting with the Bronze league, and ending with the Diamond league for the highest XP earners. Each week, the top 10 learners in each Leaderboard advance to the next League. Learners can track their Leaderboard progress daily and are motivated to accumulate XP to earn a place in the top 10.
- ***Hearts.*** Hearts ensure that learners are mastering content as they progress through a course. Learners start each day with five Hearts, and then lose a heart for each exercise completed incorrectly. If a learner runs out of Hearts, they can earn them back by completing practice Lessons that review previously studied material. And if they run out of Hearts mid-Lesson, they can also use their hard-earned stockpile of Gems to replenish their supply.

Learners who use Duolingo for free see an ad at the end of each Lesson, whereas those who subscribe to Duolingo Plus enjoy an ad-free experience and access to additional features, such as unlimited Hearts and personalized practice sessions covering recent mistakes.



Our Product Philosophy

Each of our learning and gamification features is carefully crafted to contribute to a learner experience that is defined by several key principles:

Low friction. Beginning the learning journey on Duolingo is easy. Learners select the language they want to learn and are asked to indicate a daily learning goal, which can be as little as five or ten minutes a day. They can then choose to start learning a language from the basics or test their existing proficiency to skip ahead in the course. We ensure that our onboarding journey is as intuitive as possible by continually

reviewing the actions of new learners as they navigate our app for the first time. Duolingo is recognized as a gold standard for user experience design, with our onboarding flows used as examples of industry best practices. We also run hundreds of A/B tests to remove friction and make it easier for learners to subscribe to Duolingo Plus.

Motivating game mechanics. Because we believe that staying motivated is the hardest part of learning something new, we focus relentlessly on keeping learners engaged. Features like Streaks and Leaderboards motivate learners to come back to Duolingo every day, and to spend more time learning each time they do. Over 50% of our daily active users have a Streak longer than seven days. And approximately one million learners have an active Streak longer than 365 days, meaning they have used Duolingo daily for at least one year. Launching Leaderboards, which encourage both social connectivity and competition, increased the overall average time spent learning on Duolingo by almost 20%. Ultimately, the high engagement driven by gamification leads to consistent learning and demonstrable efficacy.

Beautiful design and engaging storytelling. We focus obsessively on every detail of design. From the precise shape and color of each button, to the mood of the celebratory animations that congratulate learners upon finishing each Lesson, our app is calibrated to maximize learners' delight. Over the years, our owl mascot, Duo, has become a popular brand icon and a marketing asset for our company. In 2019, we introduced an additional cast of characters to the app, each with their own personality and backstory. Our iconic characters now feature prominently in our Lessons and Stories, cheering learners on as they progress. Already, our characters are regularly the subject of "fan art" created by Duolingo learners and shared on social media. We believe that recognizable characters and character-driven storytelling increase learner engagement and stickiness. As our product offering grows to include additional types of learning, our characters will become a common asset unifying the different learning experiences, such as Duolingo ABC.

An iconic cast of characters

Over the years, our owl mascot, Duo, has become a popular brand icon and a marketing asset for our company. In 2019, we introduced an additional cast of characters, each with their own personality and backstory, that are now regularly the subject of "fan art" created by Duolingo learners and shared on social media.

Storytelling that boosts learning

The characters of the Duolingo World are fully integrated into the app experience, cheering learners on as they progress through Lessons and Stories. As our product offering grows to include additional types of learning, our characters will become a common asset unifying the different learning experiences, such as Duolingo ABC.

Character deep dive: Lily

A high school student whose native language is sarcasm, Lily prefers drawing and horror movies to parties and crowds. She's allergic to exclamation points but secretly loyal to the people she loves, like her best friend, Zari. It's hard to make Lily smile, but to her great annoyance, she's easy to love.

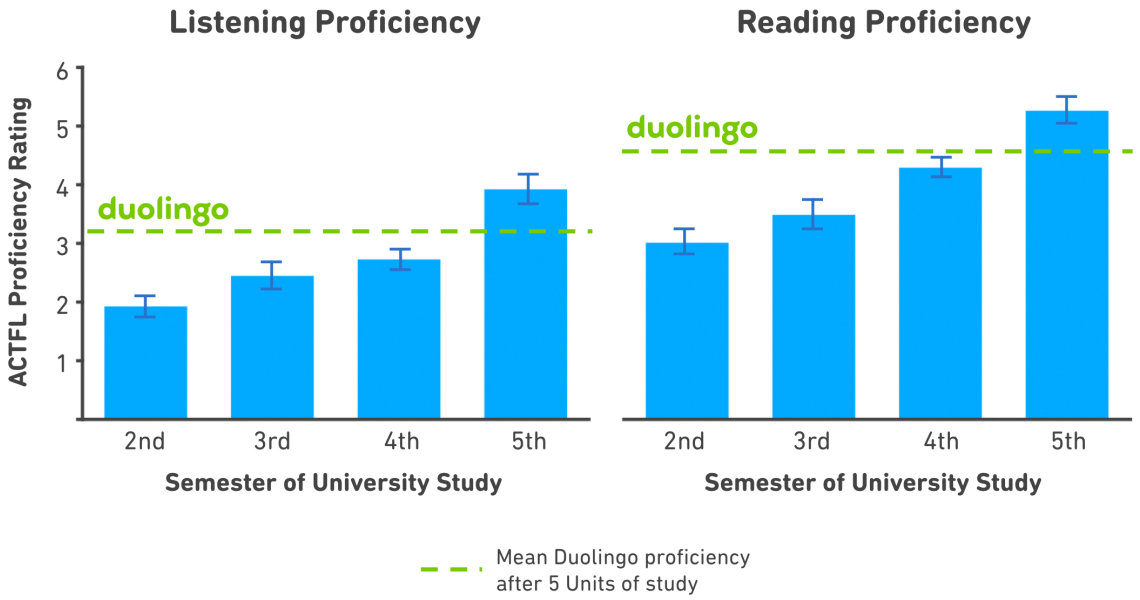
Diverse learning experiences informed by robust pedagogy. Our learning experiences are designed by an in-house team of experts in learning science and second language acquisition. Content in our largest courses is aligned to the Common European Framework of Reference (CEFR), an international standard for language proficiency, and the pedagogical structure of each course is unique. For example, Spanish-speakers learning English will encounter a different curriculum than Chinese-speakers learning English. Within each course, each Skill covers the vocabulary and grammar required to achieve a particular learning goal. We teach primarily implicitly: for example, instead of requiring learners to memorize verb conjugation tables, we teach grammar through illustrative examples. Implicit learning is ideal for developing a strong foundational knowledge of a language and its rules. For concepts that may be more challenging to grasp purely through implicit learning, we also provide explicit instruction in the Tips that accompany each Skill.

We also leverage our large scale of learner data to inform continuous improvement of our learning content. For example, each time a learner finishes a Unit, they complete a brief assessment before unlocking Skills in the next Unit. This “Checkpoint Quiz” provides us with a way to assess the efficacy of each course, and enables targeted improvements if we discover that learners are not achieving mastery over a specific concept or grammatical structure.

We also offer a diverse set of experiences to build language proficiency outside of the app, such as our podcasts, which provide a scaffolded listening comprehension experience for more advanced learners. The Duolingo Spanish podcast is consistently among the top five education podcasts in the US on the Apple Podcast platform.

Application of data analytics and artificial intelligence to optimize learning. We use data from over half a billion exercises completed daily to train sophisticated machine learning algorithms that we deploy to improve learning efficacy. One example of this is our personalization algorithm, called BirdBrain, which predicts the probability that a given learner will get an exercise right or wrong. We use BirdBrain to craft lessons that cater to a learner’s specific proficiency level by providing exercises of the appropriate difficulty. For instance, if a learner only has a 30% chance of getting an exercise right, this exercise is too difficult and would cause frustration. Conversely, if a learner has a 100% chance of getting an exercise right, then the exercise is not interesting to the learner and has little learning value. In our dynamic, real-time creation of a lesson for this particular learner, we would not include either these “too hard” or “too easy” exercises. Rather, we target exercises that are “just right” in difficulty, making lessons more engaging, while specifically targeting material that learners have not yet mastered. This personalization increases learner motivation and improves learning outcomes.

Measurable learning outcomes. All this adds up to a learning experience that helps learners achieve their goals. In 2020, we conducted a formal study to evaluate Duolingo’s effectiveness versus traditional university language courses. We measured Duolingo learners’ results on French and Spanish listening and reading proficiency tests from the American Council on the Teaching of Foreign Languages (ACTFL) against those of US university students who had completed four semesters of French or Spanish. To ensure a fair comparison, we included only US-based Duolingo learners who: (1) had no prior knowledge of Spanish or French before starting Duolingo, (2) had only completed the first five Units of their chosen Duolingo course, and (3) were not using any other materials to learn besides Duolingo. We found that the Duolingo learners earned proficiency scores comparable to those of the US university students at the end of their fourth semester of French or Spanish. Moreover, the Duolingo learners were able to attain this level of proficiency in about half the time as the university students.



Our Technology Platform

Technology is at the core of everything we do. We utilize the latest in machine learning and data analytics, along with a relentless focus on A/B testing, to fuel our differentiated learning experience.

We are proud to consider ourselves a technology and product-driven company—70% of our employees work directly on improving our products. We have an industry-leading team of approximately 280 software engineers, product designers and product managers. Approximately 20% of them are on functional engineering teams, building and maintaining foundational infrastructure, and approximately 80% are on product teams, iterating on features as well as researching and prototyping new product directions.

Highlights of our technology platform include:

Large data moat. With over half a billion exercises completed every day on our platform, we believe we have built the world's largest collection of language-learning data. We leverage this data by developing novel AI models at the intersection of machine learning, natural language processing, and cognitive science, which enable personalized instruction and power new product features that drive both engagement and efficacy. The majority of the data we collect for analytics purposes is in the form of tracking events, which are pieces of data associated with a specific learner action, such as opening the app or completing a Lesson. A tracking event tells us when a learner performed an action, as well as related details, such as the device they were using. The Duolingo app is instrumented on all platforms with code that generates tracking event data for all events of interest. We generate approximately 2.3 billion tracking events per day, broken down into about 1,500 unique event types.

Robust testing framework. The foundation of our product strategy is our relentless focus on improving learner engagement through A/B testing, and we run hundreds of A/B tests on new product features each quarter. Experiments can be as simple as changing the text or color of a button, or as complex as adding a major new feature like Leaderboards. The velocity of our A/B testing capabilities is a core competency that allows us to optimize the Duolingo learning experience at a rapid pace. Through A/B testing, we have increased the fraction of learners who came back one day after starting Duolingo from 12% when we first

launched in 2012, to over 40% today. A/B tests also provide us with the data to make decisions that positively impact paid subscriber conversion.

Advanced data analytics and machine learning capabilities. Our machine learning capabilities allow us to leverage our data to optimize the learning experience. One example of this is our "student model," called BirdBrain, which evaluates every learner's answer to every exercise every day and learns to predict the probability that any learner will answer any given exercise correctly. We use BirdBrain predictions to adaptively construct lessons where each exercise is "just right" in terms of difficulty for each learner. Another example is our "Smart Tips" system, which uses an AI model to classify common learner mistakes and then briefly interrupts lessons with a relevant "just in time" grammar explanation when needed. Instead of asking learners to repeatedly read through conjugation tables, we accurately classify their mistakes and surface a grammar rule when it is most useful and engaging—right after they make a mistake.

Shared infrastructure. Products across our platform, like our flagship Duolingo language learning app, Duolingo ABC, and the Duolingo English Test, share a singular technology infrastructure, which allows us to leverage operational efficiencies in implementing new features for each. With our shared infrastructure, we are able to innovate at a higher velocity.

Strict data protection and privacy standards. We are committed to abiding by the strictest privacy standards and do not sell personal data to outside parties.

Our Strengths

We believe the following strengths will drive our continued success in the global language learning market and beyond:

Product-obsessed culture focused on creating a fun, engaging experience. We use sophisticated gamification and beautiful design to make our products fun and engaging, inspiring learners to come back day after day to learn on our platform. Through animation, storytelling, and motivating features such as Streaks and Leaderboards, we provide our learners with an experience that both delights and drives quantifiable learning progression. We believe our high quality user experience and track record of product innovation are a testament to our product leadership and capabilities for future growth.

Leading consumer brand. Our free, fun, and effective learning experience has made us a category-leading brand in consumer education, which in turn drives organic traffic to our platform and minimizes our reliance on paid marketing. In 2020, approximately 90% of our growth came from organic sources such as word-of-mouth. Our iconic mascot, Duo the owl, is loved by our learning community, and our app has become a part of popular culture. We believe our brand provides us a significant competitive advantage, which we further cultivate via continuous investment in our delightful learner experience.

Deep data analytics capabilities. Data from over 2.3 billion tracking events generated every day by our learners informs the more than 500 A/B tests we run per quarter. These A/B tests enable us to rapidly launch product optimizations and new features that materially improve engagement, learning outcomes, and paid subscriber conversion.

Superior learning outcomes through personalized learning. We also leverage our massive collection of language-learning data to develop novel artificial intelligence models at the intersection of machine learning, natural language processing, and cognitive science. These in turn power our personalized instruction model, BirdBrain. Our A/B testing has demonstrated that BirdBrain-powered experiences drive superior learner engagement and stronger learner outcomes. And research validates the efficacy of our product: Duolingo learners who complete five Units of Duolingo French and Spanish courses earn reading

and listening proficiency scores comparable to those of US university students at the end of their fourth semester of language courses, and in about half the time.

Powerful flywheel effects powered by a strong business model. Our mutually reinforcing Learning and Investment flywheels drive efficient growth on our platform while widening our competitive moat. Our freemium business model allows free learners on Duolingo to develop a regular habit of using our product, ultimately leading to high quality paid conversion. It also enables the large audience and data scale that powers our data analytics and machine learning algorithms, resulting in high user engagement and strong learning outcomes. Demonstrated efficacy in turn strengthens our brand, enabling us to reach a broader audience via word-of-mouth. This gives us the ability to focus our capital investments on long-term product improvements rather than short-term direct-response marketing.

Highly scalable platform. We are a technology-driven company and have invested deeply in developing our scalable, mobile-first platform. Our in-house authoring tools enable efficient creation of standards-aligned learning content, and our assessment capabilities enable continuous improvement of each course. Our proprietary data and analytics infrastructure generates the insights that increase learner engagement and deliver superior learning outcomes. Our technology infrastructure and freemium subscription model are built to scale effectively as we continue to grow our learner base, and our platform is an asset that we believe can be applied to new learning categories.

Strong profitability and cash flow dynamics drive long-term value. Our business model, which is focused on organic growth and “free to paid” conversion, results in efficient and relatively low marketing expenses. We expect this efficiency, combined with our high gross margins and technology infrastructure, to provide significant operating leverage over the long term, resulting in margin expansion, while allowing us to continue to invest in our brand, product innovation, and technology platform.

Mission-driven, founder-led management team. Duolingo is led by passionate co-founders and a leadership team of seasoned executives with a proven track record of scaling consumer technology businesses. Our mission is integral to every decision we make, from the product features we launch, to new product extensions. We are aligned, inspired, and energized by the opportunity to continue building a next-generation consumer technology brand and preeminent global learning platform.

Our Growth Opportunities

We believe that we have a significant opportunity before us, both to further our mission and to strengthen our business and grow our revenue. Our growth opportunities include not only expanding our scale within the language learning market, but also leveraging the core competencies of our platform and brand to expand into new markets. We are focused on the following to drive our growth:

Continue expansion of learners on our platform. According to HolonIQ, there are approximately 1.8 billion people learning a language in the world, representing a $61 billion consumer market in 2019. The majority of spend today is still offline, but the market is rapidly shifting online, with online spend projected to reach $47 billion in 2025. As a category leader in digital language learning, we believe we are well positioned to continue to grow the number of learners who use our platform. Our audience is globally distributed. For example, as of March 2021, 54% of our MAUs were learning English, and 37% were learning other languages using our English UI; 9% were neither learning English nor using our English UI. We are in the early stages of penetrating key international markets, including Europe, Asia, and Latin America. In 2020, we established teams focused on international markets. These teams have driven growth by investing in product optimizations, localization improvements, and local marketing. In Asia, for example, our investments contributed to 136% growth in DAUs from 2019 to 2020.

Drive higher conversion to paid subscriptions. We have steadily increased Duolingo's paying subscriber conversion since launching our subscription in 2017. As of December 31, 2020, approximately 4% of our 37 million monthly active users pay for a subscription, up from less than 1% in 2017. We believe our ongoing investment in product improvements, as well as rollout of new premium features, will continue to increase the conversion of free users to paying subscribers. In addition, continued optimizations of purchase flows, subscription packaging, and pricing, will reduce the friction to subscribe. We believe we have the opportunity to increase monetization in markets across the globe, both in affluent English-speaking markets such as the United States and United Kingdom, and also among English learners worldwide.

Increase the lifetime value of our subscribers. As we continue to expand Duolingo's subscriber base, we are also focused on subscriber stickiness, which drives the lifetime value of our subscribers. The primary way we improve subscriber stickiness is through product improvements that increase engagement, like Leaderboards and Streaks. Increasing the proportion of our subscriber base that is on an annual plan also increases lifetime value. We have experimented with our pricing and packaging to encourage more subscribers to buy the annual plan, resulting in a 14 percentage point increase in annual subscribers, from approximately 57% of total paying subscribers as of December 31, 2019 to approximately 71% of total paying subscribers as of December 31, 2020. This shift also improved paying subscriber lifetime value overall.

Expand adoption of the Duolingo English Test. The Duolingo English Test experienced a transformational year in 2020, with the number of individual tests purchased increasing from approximately 17,000 in 2019 to approximately 344,000 in 2020. Physical testing centers for other English proficiency exams closed during COVID-19 lockdowns, which led more universities to accept the results of the Duolingo English Test as proof of English proficiency for international student admissions. Before COVID-19, approximately 600 higher education programs accepted the results of our assessment, and as of May 2021, the figure was over 3,000. We believe this represents a shift in our market position that will endure beyond the COVID-19 pandemic.

Millions of English proficiency tests are taken each year across the globe. We believe there is a significant opportunity to continue expanding adoption of the Duolingo English Test via three primary avenues: (1) continuing to expand acceptance by higher education programs for international student admissions; (2) accessing immigration and workforce markets in countries that require English proficiency assessment as a part of the visa approval or job recruiting and promotion processes; and (3) integrating with the Duolingo language learning app to provide our English learners with a more seamless experience between learning and assessment. Longer term, we plan to introduce a "Duolingo Proficiency Score" across more languages, which we hope will become a widely accepted indicator of language proficiency level and make Duolingo a global proficiency standard.

Extend our platform and brand beyond language learning. We believe that there is an opportunity to diversify the scope of our platform beyond language learning to a variety of subjects, using the same product-focused, mobile-first, gamified approach to education. For example, in 2020 we launched Duolingo ABC, an app for young children that teaches early literacy skills, which won the 2020 Time Magazine "Best New Product" award. New products such as Duolingo ABC will leverage our scalable technology platform and benefit from our core competencies in product development, gamification and use of advanced data-driven analytics to deliver quantifiable efficacy. We believe that expanding the scope of our platform to additional learning subjects will further expand our addressable market.

Our Solutions

The Duolingo Language Learning App

The Duolingo language learning app is the world's most popular way to learn languages. Accessible for free, as of June 2021 it offers courses in 40 languages to approximately 40 million monthly active users. It is also the top-grossing app globally in the Education category on both Google Play and the Apple App Store. Duolingo can also be accessed by desktop computers via a web browser at https://duolingo.com.

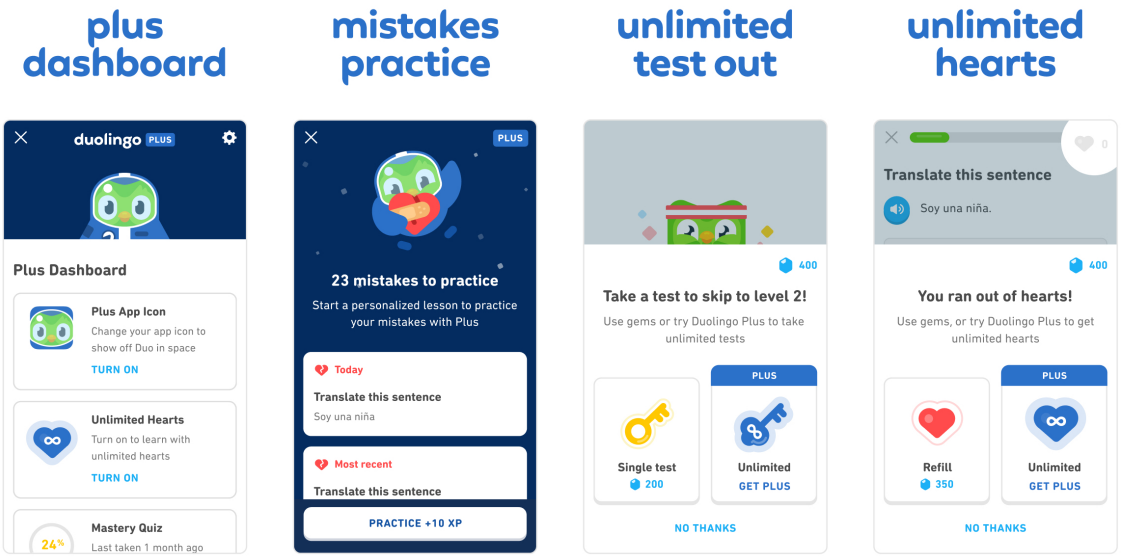
Designed by language experts, Duolingo courses are made up of Skills, each of which are divided into five Levels, with each Level made up of a series of Lessons. Each Lesson consists of short, bite-sized exercises that help learners practice reading, writing, speaking and listening skills. Courses are supplemented by additional in-app learning features such as Stories and Audio Lessons, which provide additional reading and listening comprehension practice. Duolingo's gamification features, including XP, Streaks, Crowns, Gems, Leaderboards and Hearts, provide learners an engaging and fun learning experience, and keep them motivated to continue learning.

As of June 2021 we offer language courses in English, Spanish, French, German, Japanese, Italian, Korean, Chinese, Portuguese, Russian, Dutch, Arabic, Swedish, Turkish, Hindi, Norwegian (Bokmål), Greek, Polish, Welsh, Irish, Latin, Danish, Hebrew, Finnish, Scottish Gaelic, Yiddish, Vietnamese, Indonesian, Czech, Esperanto, Catalan, Romanian, Hungarian, Swahili, Hawaiian, Ukrainian, Guarani, Navajo, and even Klingon and High Valyrian.

Duolingo Plus

While all course content on Duolingo can be accessed for free, our subscription offering, Duolingo Plus, offers learners additional features to enhance their learning experience. We launched Duolingo Plus in 2017 and as of December 31, 2020, we have approximately 1.6 million paying subscribers. This revenue stream makes up approximately 73% of our total revenue. As of June 2021, Duolingo Plus offers the following features:

- ***No ads.*** Duolingo Plus eliminates the ads that non-subscriber users see at the end of each Lesson, giving subscribers the benefit of uninterrupted learning.
- ***Unlimited Hearts.*** With no limits to the number of mistakes they can make, subscribers can choose to move through content at their own pace.
- ***Mistakes practice.*** Subscribers can sharpen their language skills with personalized practice Lessons featuring their recent mistakes.
- ***Unlimited test out.*** Subscribers can skip multiple Levels of a Skill to get to new material faster by completing skill tests and jumping to the next Level.
- ***Progress tracker.*** Subscribers can take Mastery Quizzes to measure how much they have learned over time.

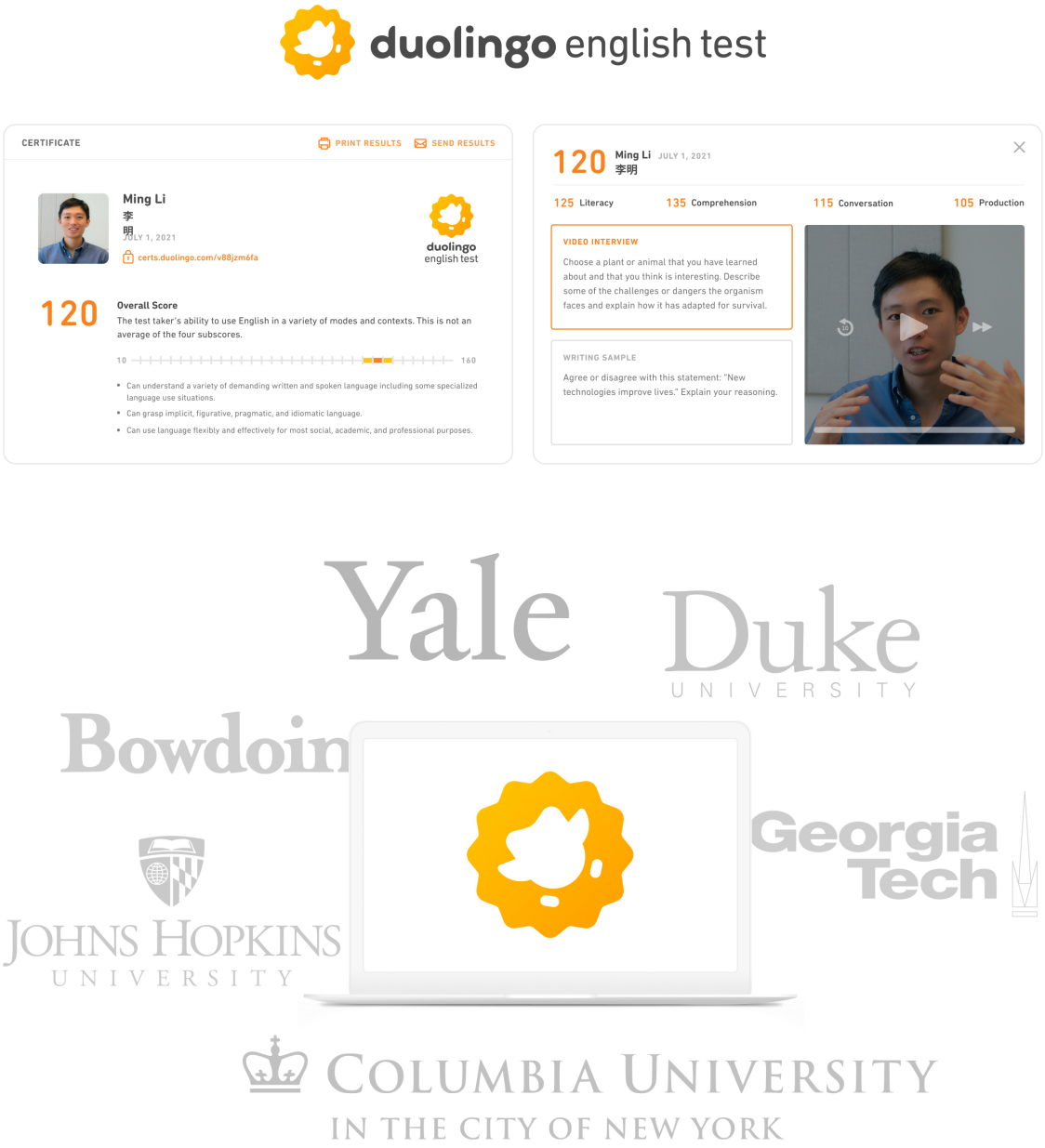


Duolingo English Test: AI-Driven Language Assessment

Launched in 2016, the Duolingo English Test is a pioneering online, on-demand, high-stakes English proficiency assessment. Anyone with a computer, webcam, and reliable internet connection can take the test from anywhere, at any time. The test is “computer adaptive,” meaning it gets harder or easier depending on the performance of the test taker, and can be completed in less than an hour. As of June 2021, it costs $49 per test.

We saw an opportunity to develop the Duolingo English Test in part because language testing has lacked innovation—the most popular English proficiency tests were developed decades ago. These tests must be taken in physical testing centers and usually cost hundreds of dollars per test, which is inconvenient for test-takers everywhere, and prohibitive for many, particularly in emerging economies.

The Duolingo English Test uses AI and machine learning for question generation, adaptive administration, and automated grading, as well as AI assistance for proctoring and security. For example, each exam dynamically administers questions from a database of tens of thousands of items based on the demonstrated proficiency of the test-taker, minimizing the exposure of test questions and ensuring that no two test takers receive the same exam. Our pioneering research allows us to offer the Duolingo English Test affordably and on-demand, while ensuring it is valid, reliable, and secure.



Duolingo Events

Our virtual Duolingo Events are online gatherings that bring together language learners from around the world for fun, casual conversation practice. Our volunteer Event hosts are passionate and enthusiastic Duolingo learners who are willing to share their language skills and connect with language learners around the world. Accessible via our website, Events are free to attend for our learners and provide them an opportunity to practice language skills with fellow learners.

Duolingo Podcast

Our Duolingo podcasts help develop listening comprehension skills by leading learners through fascinating, true-life stories from around the world. Available on Spotify, Apple Podcasts, YouTube, Google Podcasts, and on our website, our podcasts are targeted at intermediate language learners, with slowed-down storytelling and scaffolding in the learner's native language. Learners can also read along with transcripts online. We presently provide Spanish and French podcasts for English-speakers, and an English podcast for Spanish-speakers. The Duolingo Spanish podcast is consistently among the top five education podcasts in the United States on the Apple Podcast platform.

Duolingo For Schools

Duolingo for Schools is a free web-based tool that makes it easier for teachers to use our platform in a structured learning environment. With Duolingo for Schools, teachers can create a dashboard for a class, assign specific Duolingo content to students in the class, and track students' progress through the content. Based on a 2020 survey, we believe that almost 40% of foreign language teachers in US K-12 schools use Duolingo in their classrooms in some form.

Duolingo ABC

Introduced in 2020, Duolingo ABC is a free app that teaches children ages three to six early literacy skills. Developed by learning experts, the app includes over 300 fun, bite-sized lessons that guide children on a step-by-step path to reading. Duolingo ABC is aligned with the Common Core State Standards, and is designed based on recommendations by the National Reading Panel. In creating Duolingo ABC, we have taken our expertise in gamified learning and applied it to teaching the fundamentals of literacy. Lessons feel like games, while at the same time teaching young children fundamental skills including phonics, phonemic awareness, fluency, and comprehension. The app's design is intuitive and children can use it either with an adult or on their own, without supervision.

People and Culture

Attracting and retaining amazing talent is key to our success. As of June 30, 2021, we had over 400 employees. Most of our employees are located at our headquarters in Pittsburgh, Pennsylvania, and we also have offices in New York, Seattle, and Beijing. We believe that being located outside of Silicon Valley has helped us cultivate a unique company culture.

When Luis von Ahn and Severin Hacker started Duolingo, they thought deeply about the kind of culture and work environment that they wanted. Knowing that we spend most of our lives working, they wanted to create a workplace where everyone looked forward to coming to work every day. They also wanted a workplace with a diverse group of people who are smart, hard-working, and inspiring—but who also don’t take themselves too seriously.

Fundamental to Duolingo's culture is our mission orientation. Our mission tends to attract a certain kind of person. Our employees have a very strong sense of social responsibility and are interested in solving hard problems for the benefit of humanity. Over time, we have also developed nine “operating principles” that articulate our values as a company and help guide how we make decisions.

As a result of our mission, our culture, and the challenges we work on every day, we believe we have had great success in attracting the best talent. We have a very selective recruitment process: we hire one out of every 353 applicants. We recruit interns and new graduates from the top computer science, design, and business programs in the country. We also recruit experienced professionals from top technology companies—and many of them relocate from Silicon Valley to Pittsburgh. We have an offer-to-accept ratio of 85% for industry hires, which we believe is a direct reflection of the power of our mission.

Employees also stay at Duolingo for a long time. In 2020, our employee attrition was a record low: four employees, or under 2% of our workforce. In 2019, our yearly attrition was approximately 6%. We believe that the longevity of our employees provides us with a key advantage.

Diversity, Equity, Inclusion, and Belonging (DEIB) is also core to who we are. We are proud to say that Duolingo was founded by two immigrants and that our employees come from over 30 countries. More than half of our employees are women-identifying or people of color. A third of our C-suite executives are women-identifying, including our Senior Vice President of Engineering. Today, our engineering organization is almost 30% women-identifying. Our board of directors includes four women-identifying directors, including the chair of our audit, risk and compliance committee, one director who identifies as LGBTQ, and one Black director. While we are proud of the diversity we have achieved so far, we also know that we still have more we need to do.

To further advance our mission, we intend to use up to 1% of our equity to fund other organizations who are committed to helping people around the world access better educational opportunities. We have reserved 323,500 shares of our Class A common stock for potential future sale or donation to fund and support these social impact initiatives. We also donate money and discount access to our platform for non-profit organizations.

operating principles

Learners first

Our mission and reason for existing is to make sure everyone in the world has access to high-quality education.

Take the long view

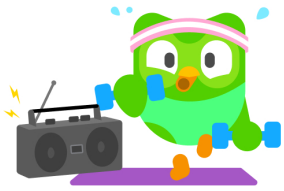
If it works in the short-term but hurts Duolingo in the long-term, it's not right. We make decisions that keep us moving toward our big goals.

Prioritize ruthlessly

We have millions of learners and only hundreds of employees, so our work must focus on initiatives that have high ROI. Make your time matter.

Strive for excellence

To change how the world learns, we must do world-class work. From the people we hire to the features we ship, we never settle for just okay.



We haven't won yet

Until every person who wants to learn is doing so with Duolingo, we need to keep innovating, pushing the envelope, and learning ways to get better.

Test everything

We measure and test everything so we can make informed decisions based on data.

Ship it

For a good idea to become reality, it needs a plan and a sense of urgency. So go go go!

All for one, one for all

We stay engaged and make choices that benefit the greater good—because Duolingo's success is our success.

Be candid and kind

We build things together with transparency and care for each other. We offer feedback compassionately but with excellence in mind, and receive it openly and as an opportunity to grow.

Sales & Marketing

For almost a decade, Duolingo's learner community has grown organically through word-of-mouth virality. In recent years, we have made investments in marketing to supplement our organic model and amplify the voices of our existing users. Key elements of our sales and marketing strategy include:

- **Brand campaigns.** Our brand marketing increases awareness of Duolingo through online and offline campaigns that drive press, social sharing, and more word-of-mouth virality. For example, in December 2020, we launched our New Year's 2021 campaign, our largest ad campaign to date, delivering a unified brand message across multiple international markets that resulted in an increase in aided brand awareness of 6% in the United States, 3% in the United Kingdom, and 3% in Mexico. Investments in our brand enable us to drive long-term growth by attracting new learners to our platform and keeping existing learners engaged.
- **Owned media marketing.** Our owned media marketing engages our learner community, creating millions of brand advocates who drive word-of-mouth virality by sharing their love of Duolingo within their networks. We send our learners personalized emails and push notifications that provide progress reports, lesson reminders, and sometimes a simple message of positivity to encourage them to remain engaged.
- **Paid acquisition.** We complement and accelerate our organic user acquisition with strategic and targeted paid marketing spend. Our paid acquisition strategy is focused on targeting high quality user segments that are more likely to subscribe and on investing in new markets to kickstart our organic growth.
- **Geographic expansion.** In markets where our organic awareness is relatively low and opportunity for growth is strong, we hire experienced local marketing managers and engage in localized social media and influencer-led campaigns, app store optimization, and paid advertising to generate interest in our products and drive new learner growth.

Competition

We believe that our relentless focus on building an engaging and effective language learning product, powered by our freemium model, has led to a leading market position, as measured by downloads, active users, and brand awareness. However, learners have a variety of options when choosing to learn a language. We compete for learners' time, attention, and share of wallet not only with other online and app-based language learning platforms but also with offline forms of language learning. Because of the extensibility of the Duolingo platform beyond language learning, we also compete with language learning assessment providers and literacy platforms.

We believe that our ability to compete successfully depends primarily on the following factors:

- Continued growth in internet access and mobile adoption around the world;
- Our ability to continue to increase our learner base through organic, word-of-mouth growth;
- Our ability to maintain the value and reputation of our brand;
- The scale, growth and engagement of our learners relative to those of our competitors;
- Our ability to introduce new, and improve on existing, features and products in response to competition, learner preferences, and market and industry trends; and
- Our ability to continue developing new monetization features and improving on existing features.

Intellectual Property

We own several trademarks that have been registered, or for which registration applications are pending, in the United States as well as in a number of foreign jurisdictions. These trademarks include, among others, the word marks "Duolingo" and Duolingo in Chinese, and certain logos used in connection with our business, including our mascot Duo. The registrations of these trademarks are effective for varying periods of time and may be renewed periodically provided we comply with all applicable renewal requirements, including, where necessary, the continued use of the trademarks in the applicable jurisdictions in connection with certain goods and services. We may consider pursuing trademark registrations for additional marks and for additional jurisdictions if and to the extent we believe such registrations would be beneficial to our business and cost-effective.

In addition to trademark protection, we have registered several domain names, including www.duolingo.com, and we own several registered copyrights covering logos and characters used in our business, including Duo. We also enter into, and rely on, confidentiality and proprietary rights agreements with our employees, consultants, contractors and business partners to protect our trade secrets, proprietary technology and other confidential information. We further protect the use of our proprietary technology and intellectual property through provisions in both our user terms of use on our website and in our agreements with service providers. For information regarding risks related to our intellectual property, please see “Risk Factors—Risks Related to Our Intellectual Property.”

Government Regulation

We are subject to many US federal and state and foreign laws and regulations, including those related to privacy, rights of publicity, data protection, payment processing, disability rights, digital accessibility standards, content regulation, intellectual property, health and safety, competition, protection of minors, consumer protection, and taxation. These laws and regulations are constantly evolving and may be interpreted, applied, created, or amended in a manner that could harm our business. In addition, the application and interpretation of these laws and regulations often are uncertain, particularly in new and rapidly evolving industries.

We collect and use personal information to create online accounts, process e-commerce transactions, provide customer service, support, and for other purposes. The regulatory framework for data protection, privacy and information security is evolving rapidly. The US Federal Trade Commission (FTC) and many state attorneys general are applying federal and state consumer protection laws to require that the online collection, use and dissemination of data, the presentation of website or other electronic content, and comply with certain standards for notice, choice, security and access. Courts may also adopt these developing standards. A number of states, including California and Virginia, have enacted laws or are considering the enactment of laws governing the personal information received from consumers, or imposing new requirements around the collection, use, sharing, and handling of data collected from or about consumers or their devices. In many cases, the specific limitations imposed by these standards are subject to interpretation by courts and other governmental authorities. For example, the California Consumer Privacy Act (CCPA) went into effect on January 1, 2020. The CCPA requires covered companies to, among other things, provide new disclosures to California consumers and afford such consumers new abilities to opt-out of certain sales of personal information. Additionally, the CPRA, a new privacy law that significantly modifies the CCPA, was passed by California voters in November 2020. Aspects of the CCPA, the CPRA and other laws and regulations relating to data protection, privacy, and information security, as well as their enforcement, remain unclear, and we may be required to modify our practices in an effort to comply with them. The CCPA and CPRA could mark the beginning of a trend toward more stringent privacy legislation in the United States. The CCPA has already prompted a number of proposals for federal and state privacy legislation that, if passed, could increase our potential liability,

add layers of complexity to compliance in the US market, increase our compliance costs and adversely affect our business.

The Children's Online Privacy Protection Act (COPPA) applies to operators of commercial websites and online services directed to US children under the age of 13 that collect personal information from children and operators of general audience sites with actual knowledge that they are collecting information from US children under the age of 13. Our services are not directed at children and we employ an age-gating procedure whereby anyone from the United States identifying themselves as being under the age of 13 during the registration process is directed to a separate ad-free portion of the service, with special enrollment procedures and restricted information practices. We also apply age-gating for non-US subscribers according to foreign laws.

A determination by a state, federal or local agency or court that any of our practices do not meet these legal requirements or standards could result in liability and adversely affect our business. New interpretations of these standards could also require us to incur additional costs and restrict our business operations.

We have many subscribers who access and pay our services from outside the United States. Foreign data protection, e-commerce, privacy, consumer protection, content regulation and other laws and regulations are often more restrictive or burdensome than those in the United States, and those governments may attempt to apply such laws extraterritorially or through treaties or other arrangements with US governmental entities. We might unintentionally violate such laws, such laws may be modified and new laws may be enacted in the future which may increase the chance that we violate them unintentionally. Any such developments, or developments stemming from enactment or modification of other laws, or the failure to accurately anticipate the application or interpretation of these laws could create liability to us, result in adverse publicity and negatively affect our business. For example, in the EEA we are subject to the GDPR and in the UK we are subject to the UK GDPR. The GDPR and the UK GDPR impose strict data protection compliance requirements including: providing detailed disclosures about how personal data is collected and processed (in a concise, intelligible and easily-accessible form); demonstrating that an appropriate legal basis is in place or otherwise exists to justify data processing activities; granting new rights for data subjects in regard to their personal data (including the right to be "forgotten" and the right to data portability), as well as enhancing data subject rights (e.g., data subject access requests); introducing the obligation to notify data protection regulators or supervisory authorities (and in certain cases, affected individuals) of significant data breaches; defining for the first time pseudonymized (i.e., key-coded) data; imposing limitations on retention of personal data; maintaining a record of processing activities; and complying with the principle of accountability and the obligation to demonstrate compliance through policies, procedures, training and audit. Non-compliance with the GDPR and the UK GDPR may attract substantial monetary penalties. In particular, fines for the most serious violations can amount up to the greater of €20 million/£17.5 million or, in the case of an undertaking, 4% of the total annual global turnover of the preceding financial year. Complying with the GDPR and the UK GDPR may cause us to incur substantial operational costs or require us to change certain business practices.

Our Facilities and Space

We lease approximately 47,000 square feet in multiple facilities in Pittsburgh, Pennsylvania where we operate our headquarters. Our headquarters currently accommodates our principal executive, development, engineering, product, marketing, business development, human resources, finance, legal, information technology and administrative activities.

Outside of Pittsburgh, we and our subsidiary in China use co-working space as needed for the business. As of March 31, 2021, we have membership agreements with WeWork for offices in or near New York, Seattle, Beijing, and Tokyo.

We believe that our existing facilities are sufficient for our current needs. We believe that suitable additional or substitute space will be available as needed to accommodate changes in our operations.

Legal Proceedings

We are currently involved in, and may in the future be involved in, legal proceedings, claims, and government investigations in the ordinary course of business. These include proceedings, claims, and investigations relating to, among other things, regulatory matters, commercial matters, intellectual property, competition, tax, employment, pricing, discrimination, and consumer rights.

Depending on the nature of the proceeding, claim, or investigation, we may be subject to monetary damage awards, fines, penalties, or injunctive orders. Furthermore, the outcome of these matters could materially adversely affect our business, results of operations, and financial condition. The outcomes of legal proceedings, claims, and government investigations are inherently unpredictable and subject to significant judgment to determine the likelihood and amount of loss related to such matters. While it is not possible to determine the outcomes, we believe based on our current knowledge that the resolution of all such pending matters will not, either individually or in the aggregate, have a material adverse effect on our business, results of operations, cash flows, or financial condition.

Management

Executive Officers and Directors

The following table provides information, as of June 30, 2021, regarding our executive officers and directors:

Name	Age	Position
Executive Officers:		
Luis von Ahn	42	President, Chief Executive Officer, Co-Founder, and Director
Severin Hacker	36	Chief Technology Officer, Co-Founder, and Director
Matthew Skaruppa	39	Chief Financial Officer
Robert Meese	44	Chief Business Officer
Natalie Glance	53	Senior Vice President, Engineering
Stephen Chen	47	General Counsel
Non-Employee Directors:		
Amy Bohutinsky(1)(3)	46	Director
Sara Clemens(2)(3)	49	Director
Bing Gordon(2)	71	Director
Gillian Munson(1)	51	Director
Jim Shelton(1)(3)	53	Director
Laela Sturdy(1)	43	Director

(1) Member of the audit, risk and compliance committee.

(2) Member of the compensation and leadership committee.

(3) Member of the nominating and corporate governance committee.

Executive Officers

Luis von Ahn, Ph.D. has served as a member of our board of directors and as our Chief Executive Officer since August 2011, when he co-founded Duolingo with Dr. Hacker. Prior to founding Duolingo, he served as the Chief Executive Officer of reCAPTCHA, Inc., a fraud detection technology company, from 2007 until its acquisition by Google in 2009. Dr. von Ahn has served on the board of directors of Root, Inc., a publicly-traded technology company focusing on personal insurance, since October 2020. Dr. von Ahn holds a B.S. in Mathematics from Duke University and a Ph.D. in Computer Science from Carnegie Mellon University. We believe Dr. von Ahn is qualified to serve as a member of our board of directors because of his perspective and experience building and leading our business as co-founder and Chief Executive Officer.

Severin Hacker, Ph.D. has served as a member of our board of directors and as our Chief Technology Officer since August 2011, when he co-founded Duolingo with Dr. von Ahn. Dr. Hacker holds a B.S. in Computer Science from Eidgenossische Technische Hochschule Zurich, Switzerland and a Ph.D. in Computer Science from Carnegie Mellon University. We believe Dr. Hacker is qualified to serve as a member of our board of directors because of his perspective and experience building and leading our business as co-founder and Chief Technology Officer.

Matthew Skaruppa has served as our Chief Financial Officer since February 2020. From January 2016 to February 2020, he served as Vice President of Goldman Sachs. Previously, Mr. Skaruppa served as Principal at KKR Capstone from 2010 to 2015 and as a consultant at Bain & Company from 2004 to 2008.

Mr. Skaruppa holds a B.S. in Chemical Engineering from Northwestern University and an M.B.A. from the Stanford Graduate School of Business.

Robert Meese has served as our Chief Business Officer since March 2021, after having served as our Chief Revenue Officer from December 2018 to March 2021 and our Vice President of Business from September 2016 to December 2018. From August 2008 to September 2016, he held various roles at Google, including most recently as Director, Global Head of Games Business Development, Google Play. Mr. Meese holds a B.S. in Economics and a B.S. in Computer Science from the University of Pennsylvania and an M.B.A. from the Massachusetts Institute of Technology.

Natalie Glance, Ph.D. has served as our Senior Vice President of Engineering since December 2019, after having served as our Vice President of Engineering from February 2017 to December 2019 and our Director of Engineering from March 2015 to February 2017. From 2007 to 2015, Dr. Glance served as an Engineering Manager at Google. Dr. Glance holds a B.A. in Physics from Princeton University and a Ph.D. in Physics from Stanford University.

Stephen Chen has served as our General Counsel since March 2020. From July 2014 to February 2020, he served as Associate General Counsel for Proofpoint, Inc., an enterprise security company. Mr. Chen previously served as Associate General Counsel of Marin Software, Director and Senior Counsel, Mergers and Acquisition at VMWare, Inc. and Legal Director of Yahoo!. Mr. Chen holds a B.A. in History and a J.D. from Harvard University.

Non-Employee Directors

Amy Bohutinsky has served as a member of our board of directors since June 2020. From 2005 to 2019, she held various leadership roles at Zillow Group, Inc., a publicly-traded online real estate marketplace company, including most recently as the Chief Operating Officer, from August 2015 to 2019, and as the Chief Marketing Officer, from March 2011 to August 2015. From 2001 to 2005, Ms. Bohutinsky served in various leadership positions at Hotwire, Inc., an online travel company, including Director of Corporate Communications. Ms. Bohutinsky has consulted as a venture partner at TCV, a private equity and venture capital firm, since 2019. Ms. Bohutinsky has served on the board of directors of Zillow Group since October 2018. Previously, she served on the board of directors of Gap, Inc., a publicly-traded clothing retailer, from 2018 to 2020. She also previously served on the boards of directors of HotelTonight, LLC, a privately held mobile-based hotel booking service (acquired by Airbnb, Inc. in 2019) and Avvo, Inc., a privately held online legal marketplace (acquired by Internet Brands in 2018). Ms. Bohutinsky holds a B.A. in Journalism and Mass Communications from Washington & Lee University. We believe Ms. Bohutinsky is qualified to serve as a member of our board of directors due to her valuable strategic and operational expertise and experience as director and senior leader of other large consumer-facing companies.

Sara Clemens has served as a member of our board of directors since June 2020. Ms. Clemens has served as the Chief Operating Officer at Twitch since January 2018. From 2014 to 2017, she served as the Chief Operating Officer at Pandora Media and, from 2012 to 2013, she served as the Vice President of Corporate Development at LinkedIn. Ms. Clemens currently serves as on the board of directors of Khosla Ventures Acquisition Co. III. Ms. Clemens holds a B.A. in English and an M.A. (Hons) from the University of Canterbury, New Zealand. We believe Ms. Clemens is qualified to serve as a member of our board of directors due to her extensive strategic and operational expertise and experience in senior leadership roles at other technology companies.

Bing Gordon has served as a member of our board of directors since February 2020. Since June 2008, Mr. Gordon has served as a partner at Kleiner Perkins Caufield & Byers, a venture capital firm. From 1998 to 2009, he served as the Executive Vice President and Chief Creative officer of Electronic Acts, a

gaming company he co-founded. Mr. Gordon has served on the board of directors of Zynga Inc., a publicly-traded video game developer, since July 2008. Mr. Gordon is a special advisor to the board of directors of Amazon, and was previously a member of its board from 2003 to 2018. Mr. Gordon holds a B.A. in English from Yale and an M.B.A. from the Stanford Graduate School of Business. We believe Mr. Gordon is qualified to serve as a member of our board of directors due to his investment, strategic and operational expertise and his experience in senior leadership roles at other technology companies.

Gillian Munson has served as a member of our board of directors since September 2019. Ms. Munson has served as the Chief Financial Officer of Iora Health, Inc., a healthcare company, since January 2021 and as a Venture Partner at Union Square Ventures since April 2019. From 2013 to 2019, she served as Chief Financial Officer of XO Group Inc., the parent company of The Knot Inc., a media and technology company. Ms. Munson's previous positions include Managing Director at Allen & Company LLC, Vice President, Business Development at Symbol Technologies, LLC, and both Executive Director and Senior Equity Analyst at Morgan Stanley. Ms. Munson has served on the board of directors of Phreesia, Inc., a publicly-traded software company, since May 2019, and previously served on the board of directors of Monster Worldwide, Inc. from 2015 to 2016. Ms. Munson holds a B.A. in Political Science and Economics from the Colorado College in Colorado Springs. We believe Ms. Munson is qualified to serve as a member of our board of directors due to her experiences in senior leadership roles at consumer-facing companies and her background in investment and research.

Jim Shelton has served as a member of our board of directors since October 2020. Mr. Shelton has served as the Chief Investment and Impact Officer at the Blue Meridian Partners, a nonprofit funding collaborative, since January 2020, and a Partner of Amandla Enterprises, an impact investment and advisory firm, since July 2018. From July 2016 to July 2018, he served as the President of Education for the Chan Zuckerberg Initiative. From June 2015 to July 2016, Mr. Shelton previously served as the President and Chief Impact Officer of 2U, Inc., an educational technology company. From 2009 to 2015, he held various roles at the US Department of Education, most recently as Deputy Secretary and Chief Operating Officer. Mr. Shelton holds a B.A. in Computer Science from Morehouse College and an M.S. in Education and an M.B.A. from the Stanford Graduate School of Business. We believe Mr. Shelton is qualified to serve as a member of our board of directors due to his extensive experience in senior leadership roles at public companies and in the government, along with his commitment to education.

Laela Sturdy has served as a member of our board of directors since March 2020. Ms. Sturdy has served as a General Partner at CapitalG, the growth investment fund financed by Alphabet Inc., since October 2013. Previously, Ms. Sturdy held several roles at Google, including Managing Director, Emerging Businesses. Since March 2021, Ms. Sturdy has served on the board of directors of UiPath, Inc., a publicly-traded process automation software company, and previously served on the board of directors of Care.com from July 2016 to May 2019. Ms. Sturdy holds an A.B. in Biochemistry from Harvard College, an M.Sc. in Multimedia Systems from Trinity College Dublin and an M.B.A. from the Stanford Graduate School of Business. We believe Ms. Sturdy is qualified to serve as a member of our board of directors due to her experience in investing in, and facilitating the growth of, technology companies.

Family Relationships

There are no family relationships among any of our directors or executive officers.

Board of Directors

Our business and affairs are managed under the direction of our board of directors. The number of directors will be fixed by our board of directors, subject to the terms of our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective immediately

prior to the completion of this offering. Our board of directors currently consists of nine directors, seven of whom will qualify as “independent” under the Nasdaq Listing Rules.

Director Independence

Our board of directors has undertaken a review of the independence of each director. Based on information provided by each director concerning his or her background, employment, and affiliations, our board of directors has determined that Mmes. Bohutinsky, Clemens, Munson, and Sturdy and Messrs. Gordon and Shelton qualify as independent directors in accordance with the Nasdaq Listing Rules. Under the Nasdaq Listing Rules, the definition of independence includes a series of objective tests, such as that the director is not, and has not been for at least three years, one of our employees and that neither the director nor any of his or her family members has engaged in various types of business dealings with us. Our board of directors has made a subjective determination as to each independent director that no relationships exists that, in the opinion of our board of directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Drs. von Ahn and Hacker are not considered independent by virtue of their positions as our Chief Executive Officer and Chief Technology Officer, respectively. In making these determinations, our board of directors reviewed and discussed information provided by the directors and us with regard to each director’s relationships as they may relate to us and our management, including the beneficial ownership of our capital stock by each director, and the transactions involving them described in the section titled “Certain Relationships and Related Party Transactions.”

Classified Board of Directors

In accordance with our amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering, our board of directors will be divided into three classes with staggered three-year terms. At each annual general meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes as follows:

- the Class I directors will be Bing Gordon and Laela Sturdy, and their terms will expire at the annual meeting of stockholders to be held in 2022;
- the Class II directors will be Amy Bohutinsky, Gillian Munson, and Jim Shelton, and their terms will expire at the annual meeting of stockholders to be held in 2023; and
- the Class III directors will be Luis von Ahn, Sara Clemens, and Severin Hacker, and their terms will expire at the annual meeting of stockholders to be held in 2024.

We expect that any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control.

Role of the Board of Directors in Risk Oversight Process

Risk assessment and oversight are an integral part of our governance and management processes. Our board of directors encourages management to promote a culture that incorporates risk management into our corporate strategy and day-to-day business operations. Management discusses strategic and operational risks at regular management meetings and conducts specific strategic planning and review sessions during the year that include a focused discussion and analysis of the risks facing us. Throughout the year, senior management reviews these risks with the board of directors at regular board meetings as

part of management presentations that focus on particular business functions, operations, or strategies, and presents the steps taken by management to mitigate or eliminate such risks.

Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through our board of directors as a whole, as well as through various standing committees of our board of directors that address risks inherent in their respective areas of oversight. While our board of directors is responsible for monitoring and assessing strategic risk exposure, our audit, risk and compliance committee is responsible for overseeing our major financial risk exposures and the steps our management has taken to monitor and control these exposures. The audit, risk and compliance committee also approves or disapproves any related party transactions. Our nominating and corporate governance committee monitors the effectiveness of our corporate governance guidelines. Our compensation and leadership committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking.

Committees of the Board of Directors

Our board of directors has established an audit, risk and compliance committee, a compensation and leadership committee, and a nominating and corporate governance committee. Our board of directors may establish other committees to facilitate the management of our business. The composition and functions of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors. Each committee intends to adopt a written charter that satisfies the applicable rules and regulations of the SEC and Nasdaq Listing Rules, which we will post on our website at www.duolingo.com. Information contained on, or that can be accessed through, our website does not constitute part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only. Investors should not rely on any such information in deciding whether to purchase our Class A common stock.

Audit, Risk, and Compliance Committee

Our audit, risk, and compliance committee oversees our corporate accounting and financial reporting process. Among other matters, the audit, risk, and compliance committee:

- appoints our independent registered public accounting firm;
- evaluates the independent registered public accounting firm’s qualifications, independence, and performance;
- determines the engagement of the independent registered public accounting firm;
- reviews and approves the scope of the annual audit and pre-approves the audit and non-audit fees and services;
- reviews and approves all related party transactions on an ongoing basis;
- establishes procedures for the receipt, retention, and treatment of any complaints received by us regarding accounting, internal accounting controls, or auditing matters;
- discusses with management and the independent registered public accounting firm the results of the annual audit and the review of our quarterly financial statements;
- approves the retention of the independent registered public accounting firm to perform any proposed permissible non-audit services;
- discusses with management on a periodic basis, or as appropriate, policies, and procedures with respect to risk assessment and risk management;

- consults with management to establish procedures and internal controls relating to cybersecurity;
- is responsible for reviewing our financial statements and our management's discussion and analysis of financial condition and results of operations to be included in our annual and quarterly reports to be filed with the SEC;
- investigates any reports received through the ethics helpline and reports to the board of directors periodically with respect to any information received through the ethics helpline and any related investigations; and
- reviews the audit, risk and compliance committee charter and the audit, risk and compliance committee's performance on an annual basis.

Our audit, risk and compliance committee consists of Gillian Munson, Amy Bohutinsky, Jim Shelton, and Laela Sturdy. Our board of directors has determined that all members are independent under the Nasdaq Listing Rules and Rule 10A-3(b)(1) of the Exchange Act. The chair of our audit, risk and compliance committee is Ms. Munson. Our board of directors has determined that Ms. Munson is an audit committee financial expert as such term is currently defined in Item 407(d)(5) of Regulation S-K. Our board of directors has also determined that each member of our audit, risk and compliance committee can read and understand fundamental consolidated financial statements, in accordance with applicable requirements.

Compensation and Leadership Committee

Our compensation and leadership committee oversees policies relating to the compensation and benefits of our officers and employees. Among other matters, the compensation and leadership committee:

- reviews and approves corporate goals and objectives relevant to compensation of our executive officers other than our Chief Executive Officer and any executive officer who is then-serving as a member of our board of directors;
- evaluates the performance of our executive officers other than our Chief Executive Officer and any executive officer who is then-serving as a member of our board of directors in light of those goals and objectives and approves the compensation of these officers based on such evaluations;
- reviews and approves or makes recommendations to our board of directors regarding our incentive compensation plans and arrangements, retirement plans, and special or supplemental compensation and benefits;
- reviews the performance of any executive officer who is then-serving as a member of our board of directors and makes recommendations with respect to such executive officer's compensation to our board of directors, which retains the authority to make compensation decisions relative to such executive officers; and
- reviews and makes recommendations to our board of directors regarding director compensation;
- reviews the compensation and leadership committee charter and the compensation and leadership committee's performance on an annual basis.

Our compensation and leadership committee consists of Bing Gordon and Sara Clemens. Our board of directors has determined that all members of our compensation and leadership committee are independent under the Nasdaq Listing Rules and are "non-employee directors" as defined in Rule 16b-3 promulgated under the Exchange Act. The chair of our compensation and leadership committee is Mr. Gordon.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee is responsible for making recommendations to our board of directors regarding candidates for directorships and composition of our board of directors. In addition, the nominating and corporate governance committee is responsible for overseeing our corporate governance policies and making recommendations to our board of directors concerning governance matters.

Our nominating and corporate governance committee consists of Sara Clemens, Amy Bohutinsky, and Jim Shelton. Our board of directors has determined that all members of the nominating and corporate governance committee are independent under the Nasdaq Listing Rules. The chair of our nominating and corporate governance committee is Ms. Clemens.

Compensation and Leadership Committee Interlocks and Insider Participation

None of the members of the compensation and leadership committee is currently, or has been at any time, one of our executive officers or employees. None of our executive officers currently serves, or has served during the last year, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or on our compensation and leadership committee.

Duolingo Code of Ethics

We have adopted a written code of business conduct and ethics that applies to all of our directors, officers, and employees, including those officers responsible for financial reporting. The full text of our code of business conduct and ethics will be posted on the investor relations section of our website at www.duolingo.com. Any substantive amendment to, or waiver of, a provision of the code of business conduct and ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions will be disclosed on our website. Information contained on, or that can be accessed through, our website does not constitute part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only. Investors should not rely on any such information in deciding whether to purchase our Class A common stock.

Limitation on Liability and Indemnification Matters

Our amended and restated certificate of incorporation and our amended and restated bylaws, both of which will become effective immediately prior to the completion of this offering, among other things, limit our directors' liability, and provide that we may indemnify our directors and officers to the fullest extent permitted under the Delaware General Corporation Law. As authorized by the Delaware General Corporation Law, our amended and restated certificate of incorporation provides that to the fullest extent permitted by Delaware law, our directors will not be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as directors, except for liability for any:

- transaction from which the director derives an improper personal benefit;
- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or unlawful redemption or repurchase of shares in violation of Delaware law; or
- breach of the director's duty of loyalty to the corporation or its stockholders.

These limitations of liability do not apply to liabilities arising under federal securities laws and do not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated bylaws provide that we will, in certain situations, indemnify our directors and officers and may indemnify other employees and other agents, to the fullest extent permitted by law. Any indemnified person is also entitled, subject to certain limitations, to advancement, direct payment, or reimbursement of reasonable expenses (including attorneys' fees and disbursements) in advance of the final disposition of the proceeding.

The Delaware General Corporation Law provides that to the extent a present or former director or officer of the corporation has been successful on the merits or otherwise in defense of any generally indemnifiable action, suit, or proceeding, that such person shall be indemnified by the corporation against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with such action, suit, or proceeding. For any acts or omissions occurring after December 31, 2020, the officers referenced in the immediately preceding sentence could be more limited as a matter of Delaware law.

In addition, we have entered, and intend to continue to enter, into separate indemnification agreements with our directors and officers. Subject to certain exceptions, these indemnification agreements, among other things, require us to indemnify such directors and officers to the fullest extent permitted by Delaware law for certain expenses and against certain liabilities, including, among other things, attorneys' fees, judgments, fines, and settlement amounts actually and reasonably paid or incurred by such director or officer in any action, suit, or proceeding arising out of their services as a director or officer, or any other company or enterprise to which the person provides services at our request. Subject to certain exceptions, these indemnification agreements will also require us to advance certain expenses (including attorneys' fees and disbursements) actually and reasonably paid or incurred by such director and officer in advance of the final disposition of the action, suit or proceeding.

We also maintain a directors' and officers' insurance policy pursuant to which our directors and officers are insured against liability for actions taken in their capacities as directors and officers.

We believe that these provisions in our amended and restated certificate of incorporation and amended and restated bylaws and these indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers, or control persons, in the opinion of the SEC, such indemnification is against public policy, as expressed in the Securities Act and is therefore unenforceable.

Director Compensation

Director Compensation Table for Fiscal Year 2020

The following table sets forth information for 2020 regarding the compensation awarded to, earned by or paid to the non-employee directors who served on our board of directors during fiscal year 2020.

Name	Fees Earned or Paid in Cash ($)	Stock Awards ($)	Option Awards ($)(1)	Non-Equity Incentive Plan Compensation ($)	Change in Pension Value and Nonqualified Deferred Compensation Earnings ($)	All Other Compensation ($)	Total ($)
Amy Bohutinsky	—	—	303,200	—	—	—	$ 303,200
Sara Clemens	—	—	303,200	—	—	—	$ 303,200
Brad Burnham	—	—	—	—	—	—	$ —
Bing Gordon	—	—	—	—	—	—	$ —
Gillian Munson	—	—	—	—	—	—	$ —
Jim Shelton	—	—	427,600	—	—	—	$ 427,600
Laela Sturdy	—	—	—	—	—	—	$ —

(1) Amounts shown represent the grant date fair value of option awards granted during fiscal year 2020 as calculated in accordance with ASC Topic 718. See Note 9 of the audited consolidated financial statements included in this registration statement for the assumptions used in calculating this amount.

The table below shows the aggregate number of option awards (exercisable and unexercisable) held as of December 31, 2020 by each non-employee director who was serving as of December 31, 2020.

Name	Shares Underlying Options Outstanding at Fiscal Year End
Amy Bohutinsky	40,000
Sara Clemens	40,000
Brad Burnham	—
Bing Gordon	50,000
Gillian Munson	25,000
Jim Shelton	40,000
Laela Sturdy	—

None of our non-employee directors held a stock award as of December 31, 2020.

Narrative Disclosure to Director Compensation Table

Historically, we have not had a formalized non-employee director compensation program; however, with the exception of Mr. Burnham, we have granted each of our non-employee directors options to purchase shares of our common stock in connection with their commencement of service with us. All options granted to our non-employee directors are granted pursuant to our 2011 Plan. Ms. Munson's option grant vests in equal installments annually over two years, while the other non-employee directors' options vest in equal installments annually over four years, in each case subject to the director's continued service. In March 2021, we granted Ms. Sturdy an option to purchase 40,000 shares of our common stock, subject to the same four year vesting terms described above.

We have approved a compensation policy for our non-employee directors, or the Director Compensation Program, to be effective in connection with the consummation of this offering. Pursuant to the Director Compensation Program, our non-employee directors will receive cash compensation as follows:

- Each non-employee director will receive an annual cash retainer in the amount of $30,000 per year.
- Any non-executive chairperson will receive an additional annual cash retainer in the amount of $25,000 per year.
- The chairperson of the audit, risk and compliance committee will receive an additional annual cash retainer in the amount of $20,000 per year for such chairperson's service on the audit, risk and compliance committee. Each non-chairperson member of the audit, risk and compliance committee will receive an additional annual cash retainer in the amount of $10,000 per year for such member's service on the audit, risk and compliance committee.
- The chairperson of the compensation and leadership committee will receive an additional annual cash retainer in the amount of $12,000 per year for such chairperson's service on the compensation and leadership committee. Each non-chairperson member of the compensation and leadership committee will receive an additional annual cash retainer in the amount of $6,000 per year for such member's service on the compensation and leadership committee.
- The chairperson of the nominating and governance committee will receive additional an annual cash retainer in the amount of $8,000 per year for such chairperson's service on the nominating and governance committee. Each non-chairperson member of the nominating and governance committee will receive an additional annual cash retainer in the amount of $4,000 per year for such member's service on the nominating and governance committee.

Under the Director Compensation Program, each non-employee director will automatically be granted (i) restricted stock units covering a number of shares of our common stock calculated by dividing (a) $300,000 by (b) the closing trading price of our common stock as of the date of grant (or if the date of grant is not a trading day, the immediately preceding trading day) and using assumptions published in our most recent periodic report as of the date of grant, rounded down to the nearest whole share, upon the director's initial appointment or election to our board of directors, referred to as the Initial Grant, and (ii) for each non-employee director who has served for at least six months as of the date of each annual stockholders' meeting, restricted stock units covering a number of shares of our common stock calculated by dividing (a) $160,000 by (b) the closing trading price of our common stock as of the date of grant (or if the date of grant is not a trading day, the immediately preceding trading day) and using assumptions published in our most recent periodic report as of the date of grant, rounded down to the nearest whole share, automatically on the date of each annual stockholders' meeting thereafter, referred to as the Annual Grant. The Initial Grant will vest over three years, subject to continued service through each applicable vesting date. The Annual Grant will vest on the first anniversary of the date of grant, provided, that if our annual stockholders' meeting immediately following the date of grant takes place prior to the first anniversary of the date of grant, the Annual Grant will vest immediately prior to our annual stockholders' meeting following the date of grant, subject to continued service through each applicable vesting date.

In the event of a change in control (as defined in the Director Compensation Program), each Initial Grant and Annual Grant, along with any stock options or other equity-based awards held by any non-employee director, will vest and, to the extent applicable, become exercisable immediately prior to such change in control.

Executive Compensation

This section discusses the material components of the executive compensation program for our executive officers who are named in the "2020 Summary Compensation Table" below. For the year ended December 31, 2020, our chief executive officer and the next two most highly-compensated executive officers, or our named executive officers (NEOs), and their positions were as follows:

- Luis von Ahn, our Chief Executive Officer;
- Severin Hacker, our Chief Technology Officer; and
- Matthew Skaruppa, our Chief Financial Officer.

The following is a discussion and analysis of compensation arrangements of our NEOs. This discussion contains forward looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. Actual compensation programs that we adopt may differ materially from currently planned programs as summarized in this discussion. As an "emerging growth company" as defined in the JOBS Act, we are not required to include a Compensation Discussion and Analysis section and have elected to comply with the scaled disclosure requirements applicable to emerging growth companies.

2020 Summary Compensation Table

The following table sets forth total compensation paid to our named executive officers for the fiscal year ending on December 31, 2020.

Name and Principal Position	Year	Salary ($)	Bonus ($) (1)	Option Awards ($) (2)	All Other Compensation ($) (3)	Total ($)
Luis von Ahn Chief Executive Officer	2020	330,000	1,250	3,094,000	16,840	3,442,090
Severin Hacker Chief Technology Officer	2020	322,350	—	3,094,000	16,840	3,433,190
Matthew Skaruppa (4) Chief Financial Officer	2020	322,537	150,000	1,931,889	5,840	2,410,266

(1) Amount reported for Dr. von Ahn reflects bonuses awarded to him under our language challenge program pursuant to which employees may earn bonuses by completing language challenges. Amount for Mr. Skaruppa reflects a signing bonus we paid in connection with his commencement of employment with us. For additional details about the bonuses paid by us in 2020, see the section below titled "Narrative Disclosure to Summary Compensation Table – 2020 Bonuses."

(2) Amounts reflect the aggregate grant date fair value of option awards granted during fiscal year 2020 as calculated in accordance with ASC Topic 718. See Note 9 of the audited consolidated financial statements included in this registration statement for the assumptions used in calculating these amounts.

(3) Amount reported includes $5,700 paid to all employees as a work from home stipend and $140 as the value of a gift provided to all employees. Amount reported for Drs. von Ahn and Hacker also includes $11,000 in matching contributions under our 401(k) plan.

(4) Mr. Skaruppa commenced employment with us in February 2020.

Narrative to Summary Compensation Table

2020 Salaries

Our NEOs each receive a base salary to compensate them for services rendered to our company. The base salary payable to each named executive officer is intended to provide a fixed component of compensation reflecting the executive's skill set, experience, role, and responsibilities.

For fiscal year 2020, Drs. von Ahn and Hacker and Mr. Skaruppa had an annual base salary of $330,000, $322,350 and $375,000, respectively.

Our board of directors and compensation and leadership committee may adjust base salaries from time to time in their discretion.

2020 Bonuses

During the fiscal year 2020, we did not maintain a formal performance bonus program, and we have not adopted a formal performance bonus program for 2021.

In connection with Mr. Skaruppa's commencement of employment in March 2020, we paid him a one-time signing bonus in the amount of $150,000. Mr. Skaruppa has agreed to repay $75,000 of the signing bonus in the event of certain terminations of his employment within his first year of employment, as described below under "Employment Compensation Arrangements."

Dr. von Ahn received bonuses totaling $1,250 under our language challenge program in which all of our employees are eligible to participate.

Our board of directors or compensation and leadership committee may award discretionary bonuses or adopt a performance program following the completion of this offering.

Fiscal 2020 Equity-Based Compensation

Pursuant to our Amended and Restated 2011 Equity Incentive Plan (2011 Plan), we have granted stock options and restricted stock units to our employees, including our named executive officers, in order to attract and retain them, as well as to align their interests with the interests of our stockholders. In order to provide a long-term incentive, our stock options generally vest over four years subject to continued service to us.

In March 2020, in connection with his commencement of employment, we granted Mr. Skaruppa an option to purchase 306,163 shares of our common stock. Mr. Skaruppa's option grant vests as to 25% of the shares underlying the option on the first anniversary of the date he commenced employment with us and as to 1/48th of the shares on each monthly anniversary thereafter, in each case, subject to continued service through the applicable vesting date. Mr. Skaruppa's option was granted at an exercise price of $14.42, which our board of directors determined was equal to the fair market value of a share of our common stock on the date of grant.

In December 2020, we granted each of Drs. von Ahn and Hacker an option to purchase 175,000 shares of our common stock. Drs. von Ahn's and Hacker's option grants vest in 48 monthly installments following the vesting commencement date, in each case, subject to continued service through the applicable vesting date. Drs. von Ahn's and Hacker's options were granted at an exercise price of $38.08 per share, which our board of directors determined was equal to the fair market value of a share of our common stock on the date of grant.

All of Drs. von Ahn's and Hacker's outstanding options are subject to accelerated vesting upon the completion of this offering in respect of the lesser of (A) 60% of total number of shares subject to the option, or (B) the number of then unvested shares subject to the option, subject to continued service through the completion of this offering. Additionally, if within twelve months immediately following a Change in Control (as defined in the 2011 Plan), Drs. von Ahn's or Hacker's service is terminated by us without Cause or by the executive for Good Reason (as such terms are defined in the 2011 Plan), then 100% of the shares subject to each option held by him will vest and be exercisable, subject to the delivery of a release of claims in favor of us.

On April 7, 2021, pursuant to the 2011 Plan, we granted Mr. Skaruppa 25,000 restricted stock units, or RSUs, which require the satisfaction of both a liquidity event condition and a service-based condition in order to vest. The liquidity event condition will be satisfied on the six-month anniversary of, or, if earlier, March 15 of the year following, the completion of this offering or, if earlier, the consummation of a Change in Control. The service-based requirement will be satisfied as to 25% of the RSUs on May 15, 2022 and as to 6.25% of the RSUs on each quarterly anniversary thereafter, subject to continued service through the applicable date. Each RSU vests on the first date both the liquidity event condition and the service-based condition has been satisfied in respect of that particular RSU. Each RSU entitles the holder to a share of our common stock upon vesting.

If Mr. Skaruppa's employment with us is terminated by us without Cause or by Mr. Skaruppa for Good Reason (in each case as defined in his offer letter with us) within the period commencing three months prior to a Change in Control and ending twelve months after the Change in Control, then the vesting and exercisability of his outstanding equity awards will accelerate in respect of 100% of the shares subject to the awards.

Fiscal 2021 Equity-Based Compensation

Special Multi-Year Performance-Based Founder Awards

In connection with this offering, our board of directors worked closely with its compensation consultant, Compensia, to design a one-time equity incentive for Drs. von Ahn and Hacker that significantly aligns their compensation with the long-term interests of our stockholders by requiring the achievement of sustained stock price targets. In designing the equity incentive for Drs. von Ahn and Hacker, our board of directors considered Dr. von Ahn's and Dr. Hacker's significant stockholdings, long-term leadership and the comparatively modest level of cash compensation they have received from us. The equity incentive is comprised of 1,200,000 and 600,000 performance-based restricted stock units (PSUs), respectively. The PSUs vest upon the satisfaction of both a service-based condition and a performance-based condition and generally are settled one year after vesting. The service-based condition is satisfied as to 25% of the PSUs on each anniversary of the completion of this offering, subject to Dr. von Ahn and Dr. Hacker continuing to serve as our Chief Executive Officer and Chief Technology Officer, respectively, through the applicable date. The performance-based condition will be satisfied in the event Dr. von Ahn and Dr. Hacker continue to serve as our Chief Executive Officer and Chief Technology Officer, respectively, through the date the 60-day trailing volume weighted average closing price of our Class A common stock reaches certain stock price hurdles, which are set at multiples of the price to the public for this offering, over a period of ten years, as set forth in the table below.

Tranche	Multiple of IPO Price	Number of PSUs for Dr. von Ahn	Number of PSUs for Dr. Hacker
1	1.25x	60,000	30,000
2	1.5x	60,000	30,000
3	1.75x	60,000	30,000
4	2.0x	120,000	60,000
5	2.5x	120,000	60,000
6	3.0x	120,000	60,000
7	3.5x	120,000	60,000
8	4.0x	120,000	60,000
9	6.0x	180,000	90,000
10	8.0x	240,000	120,000

Each stock price hurdle will be equitably adjusted to reflect any stock splits, stock dividends or other restructurings impacting our Class A common stock. The size of the award was determined after consideration of similar equity awards to founders of privately held and publicly traded technology companies that are serving in executive positions. The number of PSUs for which the performance-based condition may be satisfied is heavily weighted towards the higher stock price hurdles, which our board of directors believes that, when combined with the service-based condition requiring a minimum of four years of service, comprises a structure designed to achieve its incentive and alignment goals with respect to this award.

Any PSUs that have not satisfied the performance-based condition as of the tenth anniversary of the grant date will be forfeited. Our board of directors intends for the PSUs to be the exclusive equity award that Drs. von Ahn and Hacker will receive through the tenth anniversary of the date of grant.

In the event of Dr. von Ahn or Dr. Hacker ceases to serve as our Chief Executive Officer or Chief Technology Officer, respectively, as a result of death or disability, the service-based condition will be deemed satisfied, any vested PSUs will generally be settled, any unvested PSUs will remain outstanding and eligible to vest based on achievement of the stock price hurdles set forth above for two years, and any PSUs for which the stock price hurdle has not been met at that time will be forfeited. Unless mutually agreed otherwise, in the event Dr. von Ahn or Dr. Hacker ceases to serve as our Chief Executive Officer or Chief Technology Officer, respectively, for any reason other than death or disability, any vested PSUs will generally be settled and any unvested PSUs will be forfeited. Further, if such cessation of service is effected by us for cause, or Dr. von Ahn or Dr. Hacker engages in fraud or material misconduct, vested PSUs which have not yet been settled may be clawed back to the extent determined appropriate by our board of directors.

In the event of a change in control, no accelerated vesting for any tranches will occur solely as a result of the change in control. Upon such event, the service-based condition will be deemed satisfied, achievement of stock price hurdles for purposes of the PSUs will be measured based on the price per share to be received by stockholders in connection with the change in control, and any PSUs for which the stock price hurdle has not been met will be forfeited. To the extent the price per share received by the stockholders in connection with the change in control falls between two stock price hurdles, the number of PSUs deemed earned based on satisfaction of the performance condition will be determined using linear interpolation between the two stock price hurdles.

Other 2021 Equity Awards

On April 7, 2021, we granted Mr. Skaruppa 25,000 RSUs under our 2011 Plan. The RSUs vest based on the satisfaction of a service-based requirement and a liquidity event requirement within the term of the RSUs. Subject to Mr. Skaruppa's continued service to us, the service-based requirement will be satisfied as to 25% of the RSUs on May 15, 2022 and as to 6.25% of the RSUs each quarter thereafter. The liquidity event requirement will be satisfied on a change in control or, generally, six months after our securities become publicly traded, including the completion of this offering.

New 2021 Incentive Award Plan

In connection with this offering, we intend to adopt a 2021 Incentive Award Plan, referred to below as the 2021 Plan, in order to facilitate the grant of cash and equity incentives to directors, employees (including our named executive officers) and consultants of our company and certain of its affiliates and to enable us to obtain and retain services of these individuals, which is essential to our long-term success. We expect that the 2021 Plan will be effective on the day prior to the first public trading date of our common stock, subject to approval of such plan by our stockholders. For additional information about the 2021 Plan, please see the section titled "Equity Compensation Plans" below

Other Elements of Compensation

Retirement Savings and Health and Welfare Benefits

We currently maintain a 401(k) retirement savings plan for our employees, including our named executive officers, who satisfy certain eligibility requirements. Our named executive officers are eligible to participate in the 401(k) plan on the same terms as other full-time employees. The Internal Revenue Code allows eligible employees to defer a portion of their compensation, within prescribed limits, on a pre-tax basis through contributions to the 401(k) plan. Currently, we match contributions made by employees who have been employed by us for at least one year and who participate in the 401(k) plan up to a specified percentage of the employee contributions, and these matching contributions are fully vested as of the date on which the contribution is made. We believe that providing a vehicle for tax-deferred retirement savings though our 401(k) plan, and making matching contributions, adds to the overall desirability of our executive compensation package and further incentivizes our employees, including our named executive officers, in accordance with our compensation policies.

All of our full-time employees, including our named executive officers, are eligible to participate in our health and welfare plans, including medical, dental and vision benefits; medical and dependent care flexible spending accounts; short-term and long-term disability insurance; and life and AD&D insurance.

Perquisites and Other Personal Benefits

We do not provide our named executive officers with any perquisites beyond those made generally available to our other employees. In 2020, we provided each of our employees, including our named executive officers, with a stipend of $5,700 to assist with costs related to working remotely. We also provided each employee, including our named executive officers, with a gift valued at $140.

In the future, our board of directors or compensation and leadership committee may provide perquisites to our named executive officers in the event it determines that it is necessary or appropriate to incentivize or fairly compensate them.

No Tax Gross-Ups

We do not make gross-up payments to cover our named executive officers' personal income taxes that may pertain to any of the compensation or perquisites paid or provided by our company.

Outstanding Equity Awards at 2020 Fiscal Year End

The following table lists all outstanding equity awards held by our NEOs as of December 31, 2020.

		Option Awards (1)				
Name	Vesting Commencement Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price ($)	Option Expiration Date
Luis von Ahn	1/1/2019 (1)	83,854	91,146		7.48	2/14/2029
	1/1/2020 (1)	40,104	134,896		14.42	12/12/2029
	1/1/2021 (1)	—	175,000		38.08	12/2/2030
Severin Hacker	1/1/2019 (1)	69,854	91,146		7.48	2/14/2029
	1/1/2020 (1)	38,604	134,896		14.42	12/12/2029
	1/1/2021 (1)	—	175,000		38.08	12/2/2030
Matthew Skaruppa	2/24/2020 (2)	—	306,163		14.42	3/10/2030

(1) Each option held by Drs. von Ahn and Hacker vests and becomes exercisable in 48 monthly installments following the vesting commencement date, subject to the named executive officer's continuing to provide services to us through the applicable vesting date. Each option is subject to accelerated vesting upon the completion of this offering in respect of the lesser of (A) 60% of total number of shares subject to the option, or (B) the number of then unvested shares subject to the option, subject to continued service through the completion of this offering. Additionally, if within twelve months immediately following a Change in Control, Drs. von Ahn's or Hacker's service is terminated by us without Cause or by the NEO for Good Reason, then 100% of the shares subject to each option held by him will vest and be exercisable, subject to the delivery of a release of claims in favor of us.

(2) Mr. Skaruppa's option grant vests as to 25% of the shares underlying the option on the first anniversary of the vesting commencement date and as to 1/48th of the shares underlying the option each month thereafter, subject to Mr. Skaruppa continuing to provide services to us through the applicable vesting date. If Mr. Skaruppa's employment with us is terminated by us without Cause or by Mr. Skaruppa for Good Reason within the period commencing three months prior to a Change in Control and ending twelve months after the Change in Control, then the vesting and exercisability of the option will accelerate in respect of 100% of the shares subject to the option.

Executive Compensation Arrangements

Offer Letters

We have entered into offer letters with each of our named executed officers. Each offer letter sets forth the title, base salary, and initial equity award for the executive and summarizes the other terms and conditions applicable to the executive's employment with us. Additionally, each of our named executive officers has entered into a proprietary information and invention assignment agreement with us.

In accordance with Mr. Skaruppa's offer letter, we paid him a signing bonus in the amount of $150,000. If, within the first year of Mr. Skaruppa's employment, we terminate his employment for Cause or he resigns without Good Reason (as defined below), then Mr. Skaruppa has agreed to repay $75,000 of the signing bonus.

Mr. Skaruppa's offer letter also provides that if his employment is terminated by us without Cause or by him for Good Reason, then, subject to his timely delivery of an effective release of claims, he will be entitled to receive six months continued payment of his base salary, up to six months continued healthcare coverage at our expense and, solely if such termination occurs within the period commencing three months prior to a Change in Control and ending twelve months after a Change in Control, vesting acceleration of 100% of the shares underlying his outstanding stock options and other equity awards.

For the purposes of Mr. Skaruppa's offer letter, "Cause" means Mr. Skaruppa's: (1) material breach of any of his obligations contained in his offer letter, including his willful failure or refusal to perform the job duties and responsibilities assigned to him by us, subject to our provision of notice within 60 days of such failure and his failure to cure within 30 days after such notice; (2) commission of any felony or crime involving moral turpitude; (3) participation in a fraud, act of material dishonesty or misappropriation or similar conduct against us; (4) conduct that is materially injurious to us or our affiliates or subsidiaries, monetarily or otherwise; (5) improper disclosure of our confidential or proprietary information except as required by law; or (6) obtaining a direct or indirect personal benefit from the transfer or use of our trade secrets or intellectual property other than on our behalf or as required by law.

For the purposes of Mr. Skaruppa's offer letter, "Good Reason" means any of the following events without his written consent: (1) any material breach of the terms of his offer letter by us; (2) a material reduction or diminution in his title, duties, role, reporting line, and/or responsibilities; (3) any material change in the principal location of his employment that increases his one-way commute by more than ten miles; or (4) any reduction by us of his base salary of ten percent or more (other than as part of a company-wide reduction). In order to perfect Good Reason, Mr. Skaruppa must provide advance written notice of such resignation to us within sixty days of the initial occurrence of the event or action giving rise to Good Reason, such written notice must specify that his resignation is effective not less than thirty days, nor more than sixty days, after the date of the written notice, and we must have failed to remedy the basis for Good Reason prior to the date of resignation specified in the written notice.

Severance Agreements

In connection with this offering, our board of directors has approved entering into change in control and severance agreements with each of our named executive officers that provide for severance benefits in connection with certain qualifying terminations.

In the event Drs. von Ahn or Hacker resigns for good reason or we terminate Drs. von Ahn's or Hacker's employment without cause (in each case to be defined in the applicable agreement), in addition to any accrued obligations, he is entitled to continued payment of his base salary for 12 months as well as continued healthcare coverage under our medical plan paid or reimbursed by us for up to 12 months. In the event we terminate Mr. Skaruppa's employment without cause, in addition to any accrued obligations, he is entitled to continued payment of his base salary for six months as well as continued healthcare coverage under our medical plan paid or reimbursed by us for up to six months. Payment of severance is contingent on the executive timely providing us with a general release of claims.

In the event Drs. von Ahn or Hacker resigns for good reason or we terminate Drs. von Ahn's or Hacker's employment without cause, in each case, within the three month period prior to, or twelve month period following, a change in control (to be defined in the applicable agreement) (the Change in Control Protection Period), in addition to any accrued obligations and in lieu of the severance benefits described above, he is entitled to the following benefits: (i) payment of an amount equal to 1.5 times his then-current annual base salary, payable over an 18-month period, (ii) payment of a pro-rated annual bonus assuming target performance and paid in a single lump sum, (iii) continued health coverage under our medical plan paid or reimbursed by us for up to 18 months, and (iv) accelerated vesting of all outstanding equity awards subject to time-based vesting provisions. In the event Mr. Skaruppa resigns for good reason or we terminate Mr. Skaruppa's employment without cause, in each case, within the Change in Control Protection Period, in addition to any accrued obligations and in lieu of the severance benefits described above, he is entitled to the following benefits: (i) payment of an amount equal to his then-current annual base salary, payable over a 12-month period, (ii) payment of a pro-rated annual bonus assuming target performance and paid in a single lump sum, (iii) continued health coverage under our medical plan paid or reimbursed by us for up to 12 months, and (iv) accelerated vesting of all outstanding equity awards

subject to time-based vesting provisions. Payment of severance is contingent on the executive timely providing us with a general release of claims.

Equity Compensation Plans

The following summarizes the material terms of the long-term incentive compensation plan in which our named executive officers will be eligible to participate following the consummation of this offering and our existing equity plans, under which we have previously made periodic grants of equity and equity-based awards to our named executive officers and other key employees.

2021 Incentive Award Plan

We intend to adopt the 2021 Plan, which will be effective on the day prior to the first public trading date of our common stock. The principal purpose of the 2021 Plan is to attract, retain and motivate selected employees, consultants and directors through the granting of stock-based compensation awards and cash-based performance bonus awards. The material terms of the 2021 Plan, as it is currently contemplated, are summarized below.

Share Reserve. Under the 2021 Plan, 7,832,000 shares of our Class A common stock (the "shares") will be initially reserved for issuance pursuant to a variety of stock-based compensation awards, including stock options, stock appreciation rights (SARs), restricted stock awards, restricted stock unit awards and other stock-based awards. The number of shares initially reserved for issuance or transfer pursuant to awards under the 2021 Plan will be increased by (1) the number of shares represented by awards outstanding under our existing equity plans, or Prior Plan Awards, that become available for issuance under the counting provisions described below following the effective date and (2) an annual increase on the first day of each fiscal year beginning in 2022 and ending in 2031, equal to the lesser of (A) 5% of the shares of our common stock outstanding (on an as converted basis) on the last day of the immediately preceding fiscal year and (B) such smaller number of shares of stock as determined by our board of directors; provided, however, that no more than 44,749,446 shares of Class A common stock may be issued upon the exercise of incentive stock options.

The following counting provisions will be in effect for the share reserve under the 2021 Plan:

- to the extent that an award (including a Prior Plan Award) terminates, expires or lapses for any reason or an award is settled in cash without the delivery of shares, any shares of Class A common stock or Class B common stock subject to the award at such time will be available for future grants under the 2021 Plan;
- to the extent shares of Class A common stock or Class B common stock are tendered or withheld to satisfy the grant, exercise price or tax withholding obligation with respect to any award under the 2021 Plan or Prior Plan Award, such tendered or withheld shares will be available for future grants under the 2021 Plan;
- to the extent shares subject to stock appreciation rights are not issued in connection with the stock settlement of stock appreciation rights on exercise thereof, such shares will be available for future grants under the 2021 Plan;
- to the extent that shares of our common stock are repurchased by us prior to vesting so that shares are returned to us, such shares will be available for future grants under the 2021 Plan;
- the payment of dividend equivalents in cash in conjunction with any outstanding awards or Prior Plan Awards will not be counted against the shares available for issuance under the 2021 Plan; and

- to the extent permitted by applicable law or any exchange rule, shares issued in assumption of, or in substitution for, any outstanding awards of any entity acquired in any form of combination by us or any of our subsidiaries will not be counted against the shares available for issuance under the 2021 Plan.

In addition, the sum of the grant date fair value of all equity-based awards and the maximum that may become payable pursuant to all cash-based awards to any individual for services as a non-employee director during any calendar year may not exceed $1,000,000 for such individual's first year of service and $750,000 for each year thereafter.

Administration. The compensation and leadership committee of our board of directors is expected to administer the 2021 Plan unless our board of directors assumes authority for administration. The compensation and leadership committee must consist of at least three members of our board of directors, each of whom is intended to qualify as a "non-employee director" for purposes of Rule 16b-3 under the Exchange Act and an "independent director" within the meaning of the rules of the applicable stock exchange, or other principal securities market on which shares of our common stock are traded. The 2021 Plan provides that the board or compensation and leadership committee may delegate its authority to grant awards to employees other than executive officers and certain senior executives of the company to a committee consisting of one or more members of our board of directors or one or more of our officers, other than awards made to our non-employee directors, which must be approved by our full board of directors.

Subject to the terms and conditions of the 2021 Plan, the administrator has the authority to select the persons to whom awards are to be made, to determine the number of shares to be subject to awards and the terms and conditions of awards, and to make all other determinations and to take all other actions necessary or advisable for the administration of the 2021 Plan. The administrator is also authorized to adopt, amend or rescind rules relating to administration of the 2021 Plan. Our board of directors may at any time remove the compensation and leadership committee as the administrator and revest in itself the authority to administer the 2021 Plan. The full board of directors will administer the 2021 Plan with respect to awards to non-employee directors.

Eligibility. Options, SARs, restricted stock and all other stock-based and cash-based awards under the 2021 Plan may be granted to individuals who are then our officers, employees or consultants or are the officers, employees or consultants of certain of our subsidiaries. Such awards also may be granted to our directors. Only employees of our company or certain of our subsidiaries may be granted incentive stock options (ISOs).

Awards. The 2021 Plan provides that the administrator may grant or issue stock options (SARs) restricted stock, restricted stock units, other stock- or cash-based awards and dividend equivalents, or any combination thereof. Each award will be set forth in a separate agreement with the person receiving the award and will indicate the type, terms and conditions of the award.

- *Nonstatutory Stock Options (*NSOs) will provide for the right to purchase shares of our common stock at a specified price which may not be less than fair market value on the date of grant, and usually will become exercisable (at the discretion of the administrator) in one or more installments after the grant date, subject to the participant's continued employment or service with us and/or subject to the satisfaction of corporate performance targets and individual performance targets established by the administrator. NSOs may be granted for any term specified by the administrator that does not exceed ten years.
- *Incentive Stock Options* will be designed in a manner intended to comply with the provisions of Section 422 of the Internal Revenue Code of 1986, as amended (the Code), and will be subject to specified restrictions contained in the Code. Among such restrictions, ISOs must have an

exercise price of not less than the fair market value of a share of common stock on the date of grant, may only be granted to employees, and must not be exercisable after a period of ten years measured from the date of grant. In the case of an ISO granted to an individual who owns (or is deemed to own) at least 10% of the total combined voting power of all classes of our capital stock, the 2021 Plan provides that the exercise price must be at least 110% of the fair market value of a share of common stock on the date of grant and the ISO must not be exercisable after a period of five years measured from the date of grant.

- *Restricted Stock* may be granted to any eligible individual and made subject to such restrictions as may be determined by the administrator. Restricted stock, typically, may be forfeited for no consideration or repurchased by us at the original purchase price if the conditions or restrictions on vesting are not met. In general, restricted stock may not be sold or otherwise transferred until restrictions are removed or expire. Purchasers of restricted stock, unlike recipients of options, will have voting rights and will have the right to receive dividends, if any, prior to the time when the restrictions lapse, however, extraordinary dividends will generally be placed in escrow, and will not be released until restrictions are removed or expire.

- *Restricted Stock Units* may be awarded to any eligible individual, typically without payment of consideration, but subject to vesting conditions based on continued employment or service or on performance criteria established by the administrator. Like restricted stock, restricted stock units may not be sold, or otherwise transferred or hypothecated, until vesting conditions are removed or expire. Unlike restricted stock, stock underlying restricted stock units will not be issued until the restricted stock units have vested, and recipients of restricted stock units generally will have no voting or dividend rights prior to the time when vesting conditions are satisfied.

- *Stock Appreciation Rights* may be granted in connection with stock options or other awards, or separately. SARs granted in connection with stock options or other awards typically will provide for payments to the holder based upon increases in the price of our common stock over a set exercise price. The exercise price of any SAR granted under the 2021 Plan must be at least 100% of the fair market value of a share of our common stock on the date of grant. SARs under the 2021 Plan will be settled in cash or shares of our common stock, or in a combination of both, at the election of the administrator.

- *Other Stock or Cash Based Awards* are awards of cash, fully vested shares of our common stock and other awards valued wholly or partially by referring to, or otherwise based on, shares of our common stock. Other stock or cash based awards may be granted to participants and may also be available as a payment form in the settlement of other awards, as standalone payments and as payment in lieu of base salary, bonus, fees or other cash compensation otherwise payable to any individual who is eligible to receive awards. The plan administrator will determine the terms and conditions of other stock or cash based awards, which may include vesting conditions based on continued service, performance and/or other conditions.

- *Dividend Equivalents* represent the right to receive the equivalent value of dividends paid on shares of our common stock and may be granted alone or in tandem with awards other than stock options or SARs. Dividend equivalents are credited as of dividend payments dates during the period between a specified date and the date such award terminates or expires, as determined by the plan administrator. In addition, dividend equivalents with respect to shares covered by a performance award will only be paid to the participant at the same time or times and to the same extent that the vesting conditions, if any, are subsequently satisfied and the performance award vests with respect to such shares.

Any award may be granted as a performance award, meaning that the award will be subject to vesting and/or payment based on the attainment of specified performance goals.

Change in Control. In the event of a change in control, unless the plan administrator elects to terminate an award in exchange for cash, rights or other property, or cause an award to accelerate in full prior to the change in control, such award will continue in effect or be assumed or substituted by the acquirer, provided that any performance-based portion of the award will be subject to the terms and conditions of the applicable award agreement. In the event the acquirer refuses to assume or replace awards granted, prior to the consummation of such transaction, awards issued under the 2021 Plan will be subject to accelerated vesting such that 100% of such awards will become vested and exercisable or payable, as applicable. The administrator may also make appropriate adjustments to awards under the 2021 Plan and is authorized to provide for the acceleration, cash-out, termination, assumption, substitution or conversion of such awards in the event of a change in control or certain other unusual or nonrecurring events or transactions.

Adjustments of Awards. In the event of any stock dividend or other distribution, stock split, reverse stock split, reorganization, combination or exchange of shares, merger, consolidation, split-up, spin-off, recapitalization, repurchase or any other corporate event affecting the number of outstanding shares of our common stock or the share price of our common stock that would require adjustments to the 2021 Plan or any awards under the 2021 Plan in order to prevent the dilution or enlargement of the potential benefits intended to be made available thereunder, the administrator will make appropriate, proportionate adjustments to: (i) the aggregate number and type of shares subject to the 2021 Plan; (ii) the number and kind of shares subject to outstanding awards and terms and conditions of outstanding awards (including, without limitation, any applicable performance targets or criteria with respect to such awards); and (iii) the grant or exercise price per share of any outstanding awards under the 2021 Plan.

Amendment and Termination. The administrator may terminate, amend or modify the 2021 Plan at any time and from time to time. However, we must generally obtain stockholder approval to the extent required by applicable law, rule or regulation (including any applicable stock exchange rule). Notwithstanding the foregoing, an option may be amended to reduce the per share exercise price below the per share exercise price of such option on the grant date and options may be granted in exchange for, or in connection with, the cancellation or surrender of options having a higher per share exercise price without receiving additional stockholder approval.

No incentive stock options may be granted pursuant to the 2021 Plan after the tenth anniversary of the effective date of the 2021 Plan, and no additional annual share increases to the 2021 Plan's aggregate share limit will occur from and after such anniversary. Any award that is outstanding on the termination date of the 2021 Plan will remain in force according to the terms of the 2021 Plan and the applicable award agreement.

Amended and Restated 2011 Equity Incentive Plan

We currently maintain the 2011 Plan, which became effective on October 18, 2011 upon its adoption by our board of directors. Following this offering and in connection with the effectiveness of our 2021 Plan, the 2011 Plan will terminate and no further awards will be granted under the 2011 Plan. However, all outstanding awards will continue to be governed by their existing terms.

Administration. Our board of directors, the compensation and leadership committee or another committee thereof appointed by our board of directors, has the authority to administer the 2011 Plan and the awards granted under it. The administrator has the authority to select the service providers to whom awards will be granted under the 2011 Plan, the number of shares to be subject to those awards under the 2011 Plan, and the terms and conditions of the awards granted. In addition, the administrator has the authority to construe and interpret the 2011 Plan and to adopt rules for the relating to the 2011 Plan, and exercise such other powers that it deems necessary and desirable to promote the bests interests of the company and that are consistent with the terms of the 2011 Plan.

Share Reserve. As of March 31, 2021, we had reserved an aggregate of 10,113,254 shares of our common stock for issuance under the 2011 Plan. As of March 31, 2021, options to purchase a total of 7,770,502 shares of our common stock and 41,917 RSUs were outstanding and 715,321 shares remained available for future grants.

Awards. The 2011 Plan provides that the administrator may grant or issue options, including ISOs and NSOs, and stock purchase rights to employees, consultants and directors; provided that only employees may be granted ISOs.

- *Stock Options*. The 2011 Plan provides for the grant of ISOs or NSOs. ISOs may be granted only to employees. NSOs may be granted to employees, directors or consultants. The exercise price of ISOs granted to employees who at the time of grant own stock representing more than 10% of the voting power of all classes of our common stock may not be less than 110% of the fair market value per share of our common stock on the date of grant, and the exercise price of ISOs granted to any other employees may not be less than 100% of the fair market value per share of our common stock on the date of grant. The exercise price of NSOs to employees, directors or consultants may not be less than 100% of the fair market value per share of our common stock on the date of grant.
- *Stock Purchase Rights*. The 2011 Plan provides for the grant of stock purchase rights. Each stock purchase right that is accepted will be governed by a restricted stock purchase agreement, which will detail the restrictions on transferability, risk of forfeiture and other restrictions the administrator approves. In general, restricted stock acquired upon exercise of a stock purchase right may not be sold, transferred, pledged, hypothecated, margined or otherwise encumbered until restrictions are removed or expire. Holders of restricted stock, unlike recipients of stock options, will have voting rights and will have the right to receive dividends, if any, prior to the time when the restrictions lapse.
- *Restricted Stock Units*. The 2011 Plan provides for the grant of restricted stock units. Each restricted stock unit represents the unfunded, unsecured right to receive a share of our common stock or an amount of cash or other consideration equal to the fair market value of a share of our common stock. The terms of each award of restricted stock units are set forth in a restricted stock unit agreement.

Adjustments of Awards. In the event of any dividend or other distribution, reorganization, merger, consolidation, combination, repurchase, liquidation, dissolution, or sale, transfer, exchange or other disposition of substantially all of our assets, or exchange of shares or other similar corporate transaction or event, other than with respect to an equity restructuring (such as a stock split, stock dividend, spin-off or recapitalization), the administrator will make adjustments to the number and class of shares available for issuance under the 2011 Plan and the number, class and price of shares subject to outstanding awards, in order to prevent dilution or enlargement of benefits. In the event of an equity restructuring of the company, the number, class and price of shares subject to outstanding options and stock purchase rights, and the number and class of shares available for issuance under the 2011 Plan will be proportionately adjusted by the administrator.

Change in Control. In the event of a change in control, any outstanding awards granted prior to September 12, 2012 may be assumed or substituted and where the acquirer does not assume or replace such awards, prior to the consummation of such transaction, such outstanding awards will accelerate in full. Otherwise, in the event of a merger or change in control, the administrator has broad discretion to determine the treatment of each outstanding award, including providing for awards to terminate or accelerate in full immediately prior to the change in control or for awards to terminate in exchange for cash or other property .

Amendment and Termination. Our board of directors may amend or terminate the 2011 Plan or any portion thereof at any time. However, no amendment may impair the rights of a holder of an outstanding award without the holder's consent, and any action by our board of directors to increase the number of shares subject to the plan or extend the term of the plan is subject to the approval of our stockholders. Additionally, an amendment of the plan shall be subject to the approval of our stockholders, where such approval by our stockholders of an amendment is required by applicable law. Following this offering and in connection with the effectiveness of our 2021 Plan, the 2011 Plan will terminate and no further awards will be granted under the 2011 Plan.

2021 Employee Stock Purchase Plan

We intend to adopt and ask our stockholders to approve the 2021 Employee Stock Purchase Plan, which we refer to as our ESPP, which will be effective upon the day prior to the effectiveness of the registration statement to which this prospectus relates. The ESPP is designed to allow our eligible employees to purchase shares of our common stock, at semi-annual intervals, with their accumulated payroll deductions. The ESPP is intended to qualify under Section 423 of the Code. The material terms of the ESPP, as it is currently contemplated, are summarized below.

Administration. Subject to the terms and conditions of the ESPP, our compensation and leadership committee will administer the ESPP. Our compensation and leadership committee can delegate administrative tasks under the ESPP to the services of an agent and/or employees to assist in the administration of the ESPP. The administrator will have the discretionary authority to administer and interpret the ESPP. Interpretations and constructions of the administrator of any provision of the ESPP or of any rights thereunder will be conclusive and binding on all persons. We will bear all expenses and liabilities incurred by the ESPP administrator.

Share Reserve. The maximum number of shares of our common stock which will be authorized for sale under the ESPP is equal to the sum of (a) 1,119,000 shares of common stock and (b) an annual increase on the first day of each fiscal year beginning in 2022 and ending in 2031, equal to the lesser of (i) 1% of the shares of our common stock outstanding (on an as converted basis) on the last day of the immediately preceding fiscal year and (ii) such number of shares of common stock as determined by our board of directors; provided, however, no more than 8,390,521 shares of our common stock may be issued under the ESPP. The shares reserved for issuance under the ESPP may be authorized but unissued shares or reacquired shares.

Eligibility. Employees eligible to participate in the ESPP for a given offering period generally include employees who are employed by us or one of our subsidiaries on the first day of the offering period, or the enrollment date. Our employees (and, if applicable, any employees of our subsidiaries) who customarily work less than five months in a calendar year or are customarily scheduled to work less than 20 hours per week will not be eligible to participate in the ESPP. Finally, an employee who owns (or is deemed to own through attribution) 5% or more of the combined voting power or value of all our classes of stock or of one of our subsidiaries will not be allowed to participate in the ESPP.

Participation. Employees will enroll under the ESPP by completing a payroll deduction form permitting the deduction from their compensation of at least 1% of their compensation but not more than the lesser of 15% of their compensation or such other limit as determined by the company. Such payroll deductions may be expressed as either a whole number percentage or a fixed dollar amount, and the accumulated deductions will be applied to the purchase of shares on each purchase date. However, a participant may not purchase more than 100,000 shares in each offering period. The ESPP administrator has the authority to change these limitations for any subsequent offering period.

Offering. Under the ESPP, participants are offered the option to purchase shares of our common stock at a discount during a series of successive offering periods, the duration and timing of which will be determined by the ESPP administrator. However, in no event may an offering period be longer than 27 months in length.

The option purchase price will be the lower of 85% of the closing trading price per share of our common stock on the first trading date of an offering period in which a participant is enrolled or 85% of the closing trading price per share on the purchase date, which will occur on the last trading day of each offering period.

Unless a participant has previously canceled his or her participation in the ESPP before the purchase date, the participant will be deemed to have exercised his or her option in full as of each purchase date. Upon exercise, the participant will purchase the number of whole shares that his or her accumulated payroll deductions will buy at the option purchase price, subject to the participation limitations listed above.

A participant may cancel his or her payroll deduction authorization at any time prior to the end of the offering period. Upon cancellation, the participant will have the option to either (i) receive a refund of the participant's account balance in cash without interest or (ii) exercise the participant's option for the current offering period for the maximum number of shares of common stock on the applicable purchase date, with the remaining account balance refunded in cash without interest. Following at least one payroll deduction, a participant may also decrease (but not increase) his or her payroll deduction authorization once during any offering period. If a participant wants to increase or decrease the rate of payroll withholding, he or she may do so effective for the next offering period by submitting a new form before the offering period for which such change is to be effective.

A participant may not assign, transfer, pledge or otherwise dispose of (other than by will or the laws of descent and distribution) payroll deductions credited to a participant's account or any rights to exercise an option or to receive shares of our common stock under the ESPP, and during a participant's lifetime, options in the ESPP shall be exercisable only by such participant. Any such attempt at assignment, transfer, pledge or other disposition will not be given effect.

Adjustments upon Changes in Recapitalization, Dissolution, Liquidation, Merger or Asset Sale. In the event of any increase or decrease in the number of issued shares of our common stock resulting from a stock split, reverse stock split, stock dividend, combination or reclassification of the common stock, or any other increase or decrease in the number of shares of common stock effected without receipt of consideration by us, we will proportionately adjust the aggregate number of shares of our common stock offered under the ESPP, the number and price of shares which any participant has elected to purchase under the ESPP and the maximum number of shares which a participant may elect to purchase in any single offering period. If there is a proposal to dissolve or liquidate us, then the ESPP will terminate immediately prior to the consummation of such proposed dissolution or liquidation, and any offering period then in progress will be shortened by setting a new purchase date to take place before the date of our dissolution or liquidation. We will notify each participant of such change in writing at least ten business days prior to the new exercise date. If we undergo a merger with or into another corporation or sell all or substantially all of our assets, each outstanding option will be assumed or an equivalent option substituted by the successor corporation or the parent or subsidiary of the successor corporation. If the successor corporation refuses to assume the outstanding options or substitute equivalent options, then any offering period then in progress will be shortened by setting a new purchase date to take place before the date of our proposed sale or merger. We will notify each participant of such change in writing at least ten business days prior to the new exercise date.

Amendment and Termination. Our board of directors may amend, suspend or terminate the ESPP at any time. However, the board of directors may not amend the ESPP without obtaining stockholder approval within 12 months before or after such amendment to the extent required by applicable laws.

Certain Relationships and Related Party Transactions

The following includes a summary of transactions since January 1, 2018 and any currently proposed transactions to which we were or are expected to be a participant in which (1) the amount involved exceeded or will exceed $120,000, and (2) any of our directors, executive officers, or holders of more than 5% of our capital stock, or any affiliate or member of the immediate family of the foregoing persons, had or will have a direct or indirect material interest, other than compensation and other arrangements that are described under the sections titled “Executive Compensation” and “Management—Director Compensation” and the registration rights described in the section titled “Description of Capital Stock—Registration Rights.”

2020 Secondary Sales

In November 2020, we entered into an agreement with certain holders of our capital stock pursuant to which we agreed to waive certain transfer restrictions in connection with, and assist in the administration of a secondary offering of our capital stock, or the secondary offering. The secondary offering involved the following transactions in which any of our directors, executive officers and holders of more than 5% of our capital stock, or any affiliate or member of the immediate family of the foregoing persons, had a direct or indirect material interest:

- Luis von Ahn, our President, Chief Executive Officer, member of our board of directors, and holder of more than 5% of our capital stock sold 158,942 shares of our capital stock to a third party at a purchase price per share of $59.77 for an aggregate purchase price of approximately $9.5 million.
- Severin Hacker, our Chief Technology Officer, member of our board of directors, and holder of more than 5% of our capital stock sold 158,942 shares of our capital stock to a third party at a purchase price per share of $59.77 for an aggregate purchase price of approximately $9.5 million.

Series H Convertible Preferred Stock Financing and Secondary Sales

In November 2020, we issued an aggregate of 334,642 shares of our Series H convertible preferred stock to General Atlantic (DU), L.P. (General Atlantic) at a price per share of $59.7653 for proceeds to us of approximately $20.0 million. General Atlantic also purchased, at a price per share of $59.7653, an aggregate of 246,000 shares of our Series B, C and D convertible preferred stock from entities affiliated with Union Square Ventures, a holder of more than 5% of our capital stock and where Brad Burnham, who was then a member of our board of directors, serves as a general partner. Upon the consummation of the foregoing transactions, General Atlantic became the holder of more than 5% of our capital stock.

Series F Convertible Preferred Stock Financing

In November 2019, we issued an aggregate of 758,146 shares of our Series F convertible preferred stock to CapitalG II LP (CapitalG), a holder of more than 5% of our capital stock, at a price per share of $39.5702 for proceeds to us of approximately $30.0 million.

Investors’ Rights Agreement

We are party to an Amended and Restated Investors’ Rights Agreement, dated as of November 6, 2020 (Investors’ Rights Agreement), with certain holders of our capital stock, including the following holders of more than 5% of our capital stock: entities affiliated with Union Square Ventures, Kleiner Perkins Caufield & Byers, CapitalG, NewView Capital Fund I, L.P. (NewView), and General Atlantic. This agreement provides, among other things, that certain holders of our capital stock have the right to request that we file a registration statement, and/or request that their shares be covered by a registration statement that we

are otherwise filing, subject to certain exceptions. See the section titled “Description of Capital Stock—Registration Rights” for additional information regarding these registration rights.

Voting Agreement

We are party to an Amended and Restated Voting Agreement, dated as of November 6, 2020 (Voting Agreement), under which certain holders of our capital stock, including Drs. von Ahn and Hacker, and entities affiliated with Union Square Ventures, Kleiner Perkins Caufield & Byers, CapitalG, NewView and General Atlantic, have agreed to vote their shares on certain matters, including with respect to the election of directors. In connection with this offering, the Voting Agreement will terminate and none of our stockholders will have any special rights regarding the election or designation of members of our board of directors, the voting of our capital stock, or the restrictions on transfer pursuant to the agreement.

Right of First Refusal and Co-Sale Agreement

We are party to an Amended and Restated Right of First Refusal and Co-Sale Agreement, dated as of November 6, 2020 (Right of First Refusal and Co-Sale Agreement), with certain holders of our capital stock, including Drs. von Ahn and Hacker, and entities affiliated with Union Square Ventures, Kleiner Perkins Caufield & Byers, CapitalG, NewView and General Atlantic. This agreement provides for rights of first refusal and co-sale relating to the shares of our common stock held by certain parties to the agreement. In connection with this offering, the Right of First Refusal and Co-Sale Agreement will terminate.

Founder Exchange Agreement

In order to effect the Common Stock Reclassification and Exchange, we intend to enter into an exchange agreement with our Founders, Luis von Ahn and Severin Hacker, pursuant to which an aggregate of 6,930,334 shares of Class A common stock held by our Founders will be exchanged into an equivalent number of shares of Class B common stock prior to the completion of this offering. In addition, prior to the completion of this offering, each stock option and award of RSUs held by Drs. von Ahn and Hacker will be amended to provide that such option or award will be exercised into or settle in shares of Class B common stock.

Indemnification Agreements

We have entered into indemnification agreements with each of our current directors, and intend to enter into new indemnification agreements with each of our current directors and officers. Our amended and restated certificate of incorporation and our amended and restated bylaws provide that we will indemnify our directors and officers to the fullest extent permitted by applicable law. See the section titled “Management—Limitation on Liability and Indemnification Matters.”

Policies and Procedures for Related Party Transactions

Our board of directors intends to adopt a written related party transaction policy, to be effective upon the completion of this offering, setting forth the policies and procedures for the review and approval or ratification of related party transactions. This policy will cover, with certain exceptions set forth in Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement, or relationship, or any series of similar transactions, arrangements, or relationships in which we were or are to be a participant, where the amount involved exceeds $120,000 and a related party had or will have a direct or indirect material interest, including without limitation purchases of goods or services by or from the related party or entities in which the related party has a material interest, indebtedness, guarantees of indebtedness, and employment by us of a related party. In reviewing and approving any such transactions, our audit, risk and compliance committee is tasked to consider all relevant facts and circumstances, including but not limited

to whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction with an unrelated third party and the extent of the related party's interest in the transaction. All of the transactions described in this section occurred prior to the adoption of this policy.

Principal and Selling Stockholders

The following table sets forth certain information with respect to the beneficial ownership of our common stock as of June 30, 2021, and as adjusted to reflect our sale of our Class A common stock in this offering, for:

- each of our named executive officers;
- each of our current directors;
- all of our executive officers and current directors as a group;
- each person known by us to be the beneficial owner of more than 5% of any class of our voting securities; and
- each of the selling stockholders.

We have determined beneficial ownership in accordance with the rules of the SEC, and thus it represents sole or shared voting or investment power with respect to our securities. Unless otherwise indicated below, to our knowledge, the persons and entities named in the table have sole voting and sole investment power with respect to all shares that they beneficially owned as of June 30, 2021, subject to community property laws where applicable. We have deemed shares of our common stock subject to stock options that are currently exercisable or will be exercisable within 60 days of June 30, 2021, to be outstanding and to be beneficially owned by the person holding the stock option for the purpose of computing the percentage ownership of that person. However, we did not deem these shares subject to stock options outstanding for the purpose of computing the percentage ownership of any other person or entity.

We have based percentage ownership of our common stock before this offering on 6,340,772 shares of our Class A common stock and 26,004,310 shares of our Class B common stock outstanding as of June 30, 2021, in each case, after giving effect to the Transactions, as if the Transactions had occurred as of June 30, 2021. The percentage ownership of our common stock after this offering also assumes the foregoing and the issuance and sale of 3,700,000 shares by us in this offering, and does not include the exercise of the underwriters' option to purchase 765,916 additional shares from us.

In connection with this offering, our board of directors approved the reclassification of all outstanding shares of common stock and all shares of common stock underlying outstanding equity awards under our 2011 Plan into shares of Class A common stock, and all holders of such outstanding shares or equity awards hold a one-time right to exchange such shares of Class A common stock or the shares of Class A common stock issuable upon vesting or exercise of such equity awards, as applicable, for an equal number of shares of Class B common stock, which, in the case of equity awards, may be exercised prior to, at or following the vesting or exercise of the equity award. We have assumed for purposes of the table set forth below that solely our Founders have exercised this right. Class A common stock subject to stock options exercisable or RSUs subject to vesting within 60 days of June 30, 2021 are shown in the table below as Class A common stock or, in the case of our Founders, as Class B common stock, in "Shares Beneficially Owned Prior to this Offering" and "Shares Beneficially Owned After this Offering." See the section titled "Description of Capital Stock" for additional information.

Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o Duolingo, Inc., 5900 Penn Avenue, Pittsburgh, Pennsylvania 15206.

Name of Beneficial Owner	Shares Beneficially Owned Prior to this Offering				% of Voting Power Before this Offering	Number of Shares Being Offered	Shares Beneficially Owned After this Offering				% of Voting Power After this Offering
	Class A		Class B				Class A		Class B		
	Shares	%	Shares	%			Shares	%	Shares	%	
5% Stockholders:											
NewView Capital Fund I, L.P.(1)	—	*	5,239,835	20.1	19.9	—	—	*	5,239,835	21.3	20.8
Entities affiliated with Union Square Ventures(2)	—	*	3,697,944	14.2	14.0	741,438	—	*	2,956,506	12.0	11.7
Entities affiliated with CapitalG(3)	—	*	3,561,523	13.7	13.5	356,152	—	*	3,205,371	13.0	12.7
KPCB Holdings, Inc., as nominee(4)	—	*	2,723,033	10.5	10.3	136,152	—	*	2,586,881	10.5	10.3
General Atlantic (DU), L.P.(5)	—	*	1,849,286	7.1	7.0	—	—	*	1,849,286	7.5	7.3
Executive Officers and Directors:											
Luis von Ahn(6)	—	*	3,937,207	14.9	14.7	—	—	*	3,937,207	15.7	15.3
Severin Hacker(7)	—	*	3,937,207	14.9	14.7	50,000	—	*	3,887,207	15.5	15.2
Matt Skaruppa(8)	114,811	1.8	—	*	*	—	114,811	1.0	—	*	*
Amy Bohutinsky(9)	10,000	*	—	*	*	—	10,000	*	—	*	*
Sara Clemens(10)	10,000	*	—	*	*	—	10,000	*	—	*	*
Bing Gordon(11)	12,500	*	—	*	*	—	12,500	*	—	*	*
Gillian Munson(11)	12,500	*	—	*	*	—	12,500	*	—	*	*
Jim Shelton	—	*	—	*	*	—	—	*	—	*	*
Laela Sturdy (12)	10,000	*	—	*	*	—	10,000	*	—	*	*
All current executive officers and directors as a group (12 persons)	734,903	10.8	7,874,414	29.2	29.0		734,903	6.2	7,824,414	30.6	30.1
Other selling stockholders:											
Entities affiliated with Drive Capital(13)			1,223,708	4.7	4.6	122,371	—	*	1,101,337	4.5	4.4

* Represents less than 1%

(1) Consists of 4,916,730 shares of our Class B common stock issuable upon conversion of our Series B preferred stock, 147,894 shares of our Class B common stock issuable upon conversion of our Series C preferred stock and 175,211 shares of our Class B common stock issuable upon conversion of our Series D preferred stock held directly by NewView Capital Fund I, L.P. (NewView Fund I). NewView Capital Partners I, LLC is the general partner of NewView Fund I. Ravi Viswanathan is the managing member of NewView Capital Partners I, LLC and therefore may be deemed to hold voting and dispositive power over the shares held by NewView Fund I. The business address of each of the persons and entities identified in this footnote is c/o NewView Capital, 1201 Howard Avenue, Suite 101, Burlingame, CA 94010.

(2) Consists of (i) 2,394,100 shares of our Class B common stock issuable upon conversion of our Series A preferred stock and 1,166,113 shares of our Class B common stock issuable upon conversion of our Series B preferred stock held directly by Union Square Ventures 2012 Fund, L.P. (USV 2012 Fund), and (ii) 92,618 shares of our Class B common stock issuable upon

conversion of our Series A preferred stock and 45,113 shares of our Class B common stock issuable upon conversion of our Series B preferred stock held directly by USV Investors 2012 Fund, L.P. (USV Investors 2012 Fund). Union Square 2012 GP, L.L.C. (Union Square 2012) is the general partner of USV 2012 Fund and USV Investors 2012 Fund, and has sole voting and investment power with regard to the shares held by USV 2012 Fund and USV Investors 2012 Fund. We refer to Union Square 2012 and affiliated entities as Union Square Ventures. Fred Wilson, Brad Burnham, Albert Wenger, John Buttrick, and Andy Weissman are partners at Union Square Ventures and, therefore, may be deemed to have shared voting and investment power with regard to the shares held directly by Union Square Ventures. The address for each of these entities is 920 Broadway, 2nd Floor New York, NY 10010.

(3) Consists of (i) 1,690,436 shares of our Class B common stock issuable upon conversion of our Series D preferred stock held directly by CapitalG 2014 LP, (ii) 1,112,941 shares of our Class B common stock issuable upon conversion of our Series D preferred stock held directly by CapitalG 2015 LP, and (iii) 758,146 shares of our Class B common stock issuable upon conversion of our Series F preferred stock held directly by CapitalG II LP. CapitalG 2014 GP LLC, the general partner of CapitalG 2014 LP, Alphabet Holdings LLC, the managing member of CapitalG 2014 GP LLC, XXVI Holdings Inc., the managing member of Alphabet Holdings LLC, and Alphabet Inc., the controlling stockholder of XXVI Holdings Inc., may each be deemed to have sole voting and dispositive power with respect to the shares held directly by CapitalG 2014 LP. CapitalG 2015 GP LLC, the general partner of CapitalG 2015 LP, Alphabet Holdings LLC, the managing member of CapitalG 2015 GP LLC, XXVI Holdings Inc., the managing member of Alphabet Holdings LLC, and Alphabet Inc., the controlling stockholder of XXVI Holdings Inc., may each be deemed to have sole voting and dispositive power with respect to the shares held directly by CapitalG 2015 LP. CapitalG II GP LLC, the general partner of CapitalG II LP, Alphabet Holdings LLC, the managing member of CapitalG II GP LLC, XXVI Holdings Inc., the managing member of Alphabet Holdings LLC, and Alphabet Inc., the controlling stockholder of XXVI Holdings Inc., may each be deemed to have sole voting and dispositive power with respect to the shares held directly by CapitalG II LP. Each of CapitalG 2014 GP LLC, CapitalG 2015 GP LLC, CapitalG II GP LLC, Alphabet Holdings LLC, XXVI Holdings Inc., and Alphabet Inc. disclaims beneficial ownership of these shares, except to the extent of any pecuniary interest therein. The principal business address for these entities is 1600 Amphitheatre Parkway, Mountain View, California, 94043.

(4) Consists of (i) 2,500,670 shares of our Class B common stock issuable upon the conversion of our Series C preferred stock held by KPCB Digital Growth Fund, LLC (KPCB DGF) and 152,279 shares of our Class B common stock issuable upon the conversion of our Series C preferred stock held by KPCB Digital Growth Founders Fund, LLC (KPCB DGF FF), and (ii) 66,061 shares of our Class B common stock issuable upon the conversion of our Series D preferred stock held by KPCB DGF and 4,023 shares of our Class B common stock issuable upon the conversion of our Series D preferred stock held by KPCB DGF FF. All shares are held for convenience in the name of "KPCB Holdings, Inc., as nominee" for the accounts of such entities. The managing member of KPCB DGF and KPCB DGF FF is KPCB DGF Associates, LLC (KPCB DGF Associates). L. John Doerr, Brook Byers, Mary Meeker, William “Bing” Gordon, a member of our board of directors, and Theodore E. Schlein, the managing members of KPCB DGF Associates, exercise shared voting and dispositive control over the shares held by KPCB DGF and KPCB DGF FF. Such managing members disclaim beneficial ownership of all shares held by KPCB DGF and KPCB DGF FF except to the extent of their pecuniary interest therein. The principal business address for all entities and individuals affiliated with Kleiner Perkins Caufield & Byers is c/o Kleiner Perkins Caufield & Byers, LLC, 2750 Sand Hill Road, Menlo Park, CA 94025.

(5) Consists of 1,026,986 shares of our Class B common stock issuable upon conversion of our Series A preferred stock, 94,798 shares of our Class B common stock issuable upon conversion of our Series B preferred stock, 88,126 shares of our Class B common stock issuable upon conversion of our Series C preferred stock, 63,076 shares of our Class B common stock issuable upon conversion of our Series D preferred stock, 241,658 shares of our Class B common stock issuable upon conversion of our Series G preferred stock and 334,642 shares of our Class B common stock issuable upon conversion of our Series H preferred stock held directly by General Atlantic (DU), L.P. The limited partners that share beneficial ownership of the shares held by General Atlantic (DU), L.P. (GA DU) are the following General Atlantic investment funds (the GA Funds): General Atlantic Partners 100, L.P. (GAP 100), General Atlantic Partners (Bermuda) EU, L.P. (GAP Bermuda EU), General Atlantic Partners (Lux) SCSp (GAP Lux), GAP Coinvestments III, LLC (GAPCO III), GAP Coinvestments IV, LLC (GAPCO IV), GAP Coinvestments V, LLC (GAPCO V) and GAP Coinvestments CDA, L.P. (GAPCO CDA). The general partner of GA DU is General Atlantic (SPV) GP, LLC (GA SPV). The general partner of GAP Lux is General Atlantic GenPar (Lux) SCSp (GA GenPar Lux) and the general partner of GA GenPar Lux is General Atlantic (Lux) S.à r.l. (GA Lux). The general partner of GAP Bermuda EU and the sole shareholder of GA Lux is General Atlantic GenPar (Bermuda), L.P. (GenPar Bermuda). GAP (Bermuda) Limited (GAP (Bermuda) Limited) is the general partner of GenPar Bermuda. The general partner of GAP 100 is General Atlantic GenPar, L.P. (GA GenPar) and the general partner of GA GenPar is General Atlantic LLC (GA LLC). GA LLC is the managing member of GAPCO III, GAPCO IV and GAPCO V, the general partner of GAPCO CDA and is the sole member of GA SPV. There are nine members of the management committee of GA LLC (the GA Management Committee). The GA Management Committee includes William E. Ford, Gabriel Caillaux, Andrew Crawford, Martín Escobari, Anton Levy, Sandeep Naik, E. Graves Tompkins, N. Robbert Vorhoff and Chi Eric Zhang. The members of the GA Management Committee are also the members of the management committee of GAP (Bermuda) Limited. GA DU, GA SPV, GA GenPar Lux, GA Lux, GenPar Bermuda, GAP (Bermuda) Limited, GA GenPar, GA LLC and the GA Funds (collectively, the GA Group) are a “group” within the meaning of Rule 13d-5 of the Securities Exchange Act of 1934, as amended. The mailing address of the foregoing General Atlantic entities (other than GAP Bermuda EU, GenPar Bermuda, GAP (Bermuda) Limited, GAP Lux, GA GenPar Lux and GA Lux) is c/o General Atlantic Service Company, L.P., 55 East 52nd Street, 33rd Floor, New York, NY 10055. The mailing address of GAP Bermuda EU, GenPar Bermuda, and GAP (Bermuda) Limited is Clarendon House, 2 Church Street, Hamilton HM 11, Bermuda. The mailing address of GAP Lux, GA GenPar Lux and GA Lux is Luxembourg is 412F, Route d’Esch, L-2086

Luxembourg. Each of the members of the GA Management Committee disclaims ownership of the shares except to the extent that he has a pecuniary interest therein.

(6) Consists of (i) 3,457,417 shares of our Class B common stock held directly by Dr. von Ahn, and (ii) 479,790 shares of our Class B common stock that may be acquired pursuant to the exercise of stock options within 60 days of June 30, 2021, including as a result of accelerated vesting in connection with this offering as described in the section titled “Executive Compensation-—Narrative to Summary Compensation Table-—Equity-Based Compensation.”.

(7) Consists of (i) 3,457,417 shares of our Class B common stock held directly by a family trust of which Dr. Hacker is a trustee, (ii) 15,500 shares of our Class B common stock held directly by Dr. Hacker, and (iii) 464,290 shares of our Class B common stock that may be acquired pursuant to the exercise of stock options within 60 days of June 30, 2021, including as a result of accelerated vesting in connection with this offering as described in the section titled “Executive Compensation–Narrative to Summary Compensation Table—Equity-Based Compensation.”

(8) Consists of 114,811 shares of our Class A common stock that may be acquired pursuant to the exercise of stock options within 60 days of June 30, 2021.

(9) Consists of 10,000 shares of our Class A common stock that may be acquired pursuant to the exercise of stock options within 60 days of June 30, 2021.

(10) Consists of 10,000 shares of our Class A common stock held directly by Ms. Clemens.

(11) Consists of 12,500 shares of our Class A common stock that may be acquired pursuant to the exercise of stock options within 60 days of June 30, 2021.

(12) Consists of 10,000 shares of our Class A common stock that may be acquired pursuant to the exercise of stock options within 60 days of June 30, 2021.

(13) Consists of (i) 646.636 shares of our Class B common stock issuable upon conversion of our Series E preferred stock held by Drive Capital Fund II, L.P., or DC Fund II, (ii) 557,399 shares of our Class B common stock issuable upon conversion of our Series E preferred stock held by Drive Capital Fund II (TE), L.P., or DC Fund II (TE), and (iii) 19,946 shares of our Class B common stock issuable upon conversion of our Series E preferred stock held by Drive Capital Ignition Fund II, L.P., or DC Ignition Fund II, or collectively, Fund II. Drive Capital Fund II (GP), LLC, or GP II LLC, serves as the general partner of Fund II. An investment committee of GP II LLC comprised of Christopher Olsen and Mark D. Kvamme controls all voting and investment decisions with respect to Fund II, including with respect to the shares held by Fund II. Christopher Olsen and Mark D. Kvamme control other voting matters related to GP II LLC through control of its manager, Drive Capital, LLC. The address of each of these entities is 629 N. High St 6th Fl, Columbus, Ohio 43215.

Description of Capital Stock

The following summary describes our capital stock and the material provisions of our amended and restated certificate of incorporation and our amended and restated bylaws, each of which will become effective immediately prior to the completion of this offering, the amended and restated investors' rights agreement to which we and certain of our stockholders are parties, and of the Delaware General Corporation Law. Because the following is only a summary, it does not contain all of the information that may be important to you. For a complete description, you should refer to our amended and restated certificate of incorporation, amended and restated bylaws, and amended and restated investors' rights agreement, copies of which have been filed as exhibits to the registration statement of which this prospectus is part.

General

Upon the completion of this offering and the filing of our amended and restated certificate of incorporation, our authorized capital stock will consist of:

- 2,000,000,000 shares of Class A common stock, $0.0001 par value per share;
- 30,000,000 shares of Class B common stock, $0.0001 par value per share; and
- 20,000,000 shares of preferred stock, $0.0001 par value per share.

Prior to the completion of this offering, we intend to (i) reclassify all outstanding shares of our common stock into an equal number of shares of our Class A common stock and all shares of common stock underlying outstanding equity awards under our 2011 Plan, other than those held by Luis von Ahn and Severin Hacker (our Founders), into shares of Class A common stock, (ii) amend the terms of our outstanding convertible preferred stock to provide that such shares are initially convertible into shares of Class B common stock, and (iii) amend the terms of outstanding equity awards held by our Founders to provide that such awards are exercisable for or settle into shares of Class B common stock. In addition, pursuant to an exchange agreement to be entered into with our Founders, our Founders will exchange all shares of Class A common stock held by them into an aggregate of 6,930,334 shares of Class B common stock (collectively, the Transactions).

After giving effect to the Transactions, as if such Transactions had occurred on March 31, 2021, there were 6,187,542 shares of Class A common stock and 26,004,610 shares of Class B common stock outstanding, held of record by 442 stockholders, and no shares of our convertible preferred stock outstanding. Our board of directors is authorized, without stockholder approval except as required by the Listing Rules of Nasdaq, to issue additional shares of our capital stock.

Class A and Class B Common Stock

We have two classes of authorized common stock: Class A and Class B common stock. All outstanding shares of our convertible preferred stock will be converted into shares of our Class B common stock immediately prior to the completion of this offering.

Voting Rights

Each holder of our Class A common stock is entitled to one vote per share, and each holder of our Class B common stock is entitled to 20 votes per share, on all matters submitted to a vote of the stockholders. The holders of our Class A and Class B common stock will generally vote together as a single class on all matters submitted to a vote of our stockholders, unless otherwise required by Delaware law or our amended and restated certificate of incorporation. Delaware law could require either holders of

our Class A common stock or Class B common stock to vote separately as a single class in the following circumstances:

- if we were to seek to amend our amended and restated certificate of incorporation to increase or decrease the par value of a class of our capital stock, then that class would be required to vote separately to approve the proposed amendment; and
- if we were to seek to amend our amended and restated certificate of incorporation in a manner that alters or changes the powers, preferences, or special rights of a class of our capital stock in a manner that affected its holders adversely, then that class would be required to vote separately to approve the proposed amendment.

Our amended and restated certificate of incorporation will not provide for cumulative voting for the election of directors.

Dividend Rights

The holders of our Class A and Class B common stock are entitled to receive dividends as may be declared from time to time by our board of directors out of legally available funds. See the section titled “Dividend Policy” for additional information.

Conversion

Each outstanding share of Class B common stock is convertible at any time at the option of the holder into one share of Class A common stock. In addition, each share of Class B common stock will convert automatically into one share of Class A common stock upon any transfer, whether or not for value, which occurs after the completion of this offering, except for certain permitted transfers further described in our amended and restated certificate of incorporation, including estate planning or charitable transfers where exclusive voting control with respect to the shares of Class B common stock is retained by the transferring holder, transfers from one Founder to the other Founder, and transfers to affiliates or certain other related entities of the transferring holder.

All outstanding shares of our Class B common stock will convert automatically into shares of our Class A common stock at 5:00 p.m. New York City time on a date fixed by our board of directors that is not less than 60 days nor more than 180 days following the date the aggregate number of shares of our Class B common stock then outstanding ceases to represent at least 5% of the aggregate number of all shares of our common stock then outstanding. In addition, each share of Class B common stock held by our Founders (or any of such Founders’ permitted transferees, other than the other Founder) will automatically convert into one share of Class A common stock at 5:00 p.m. New York City time on a date fixed by our board of directors that is not less than 60 nor more than 180 days following the death or disability of such Founder.

Once converted into Class A common stock, the Class B common stock may not be reissued.

Liquidation

In the event of our liquidation, dissolution, or winding up, holders of our Class A and Class B common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities.

Rights and Preferences

Holders of our Class A and Class B common stock have no preemptive, conversion (except as noted above), or subscription rights, and there are no redemption or sinking fund provisions applicable to our Class A common stock or Class B common stock.

Fully Paid and Non-Assessable

All of the outstanding shares of our Class A and Class B common stock are fully paid and non-assessable.

Preferred Stock

Immediately prior to the completion of this offering, all of our currently outstanding shares of redeemable convertible preferred stock will convert into Class B common stock, and we will not have any shares of redeemable convertible preferred stock outstanding, whereupon our restated certificate of incorporation will be amended and restated to delete all references to such shares of redeemable convertible preferred stock. From and after the completion of this offering, our board of directors will have the authority, without further action by our stockholders, to issue up to 20,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges, and restrictions thereof. These rights, preferences, and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms, and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of our common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring, or preventing a change in control of our company or other corporate action. Immediately after the completion of this offering, no shares of preferred stock will be outstanding, and we have no present plan to issue any shares of preferred stock.

Equity Plan Amendment

In connection with this offering, our board of directors amended our 2011 Plan to provide for outstanding equity awards granted thereunder to be exercisable for or settle in shares of Class A common stock, or, if provided by the administrator, shares of Class B common stock.

Stock Options

As of March 31, 2021, and after giving effect to the Transactions, we had outstanding options to purchase an aggregate of 6,736,002 shares of our Class A common stock, with a weighted-average exercise price of $9.64 per share, and 1,034,500 shares of our Class B common stock, with a weighted-average exercise price of $20.17 per share, in each case pursuant to our 2011 Plan. After March 31, 2021, we issued options to purchase an addition 71,700 shares of our Class A common stock pursuant to our 2011 Plan, at an exercise price of $52.80 per share.

Restricted Stock Units

As of March 31, 2021, and after giving effect to the Transactions, we had outstanding RSUs representing the right to receive upon vesting 41,917 shares of our Class A common stock. After March 31, 2021, we issued additional RSUs pursuant to our 2011 Plan representing the right to receive upon vesting 552,788 shares of our Class A common stock.

Registration Rights

Upon the completion of this offering, certain holders of our Class B common stock and Class A common stock will be entitled to rights with respect to the registration of their shares under the Securities Act. These registration rights are contained in the Investors' Rights Agreement. We and certain holders of our Class A common stock and convertible preferred stock are parties to the Investors' Rights Agreement. The registration rights set forth in the Investors' Rights Agreement terminate upon the earlier to occur of (1) three years following the completion of this offering, and (2) with respect to any particular stockholder, such earlier time after the completion of this offering, at which (x) such stockholder can sell all of its Registrable Securities, as defined in the Investors' Rights Agreement, in compliance with Rule 144(b)(1), or (y) such stockholder holds 1% or less of our outstanding common stock and such stockholder is able to sell all of its Registrable Securities, without restriction pursuant to Rule 144 during any three-month period. We will pay the registration expenses (other than any underwriting discounts and selling commissions) of the holders of the shares registered for sale pursuant to the registrations described below, including the reasonable fees of one counsel for the selling holders not to exceed $25,000. However, we will not be required to bear the expenses in connection with the exercise of the demand registration rights of a registration if the request is subsequently withdrawn at the request of the selling stockholders holding a majority of securities to be registered, subject to specified exceptions. In an underwritten public offering, the underwriters have the right, subject to specified conditions, to limit the number of shares such holders may include.

Demand Registration Rights

Upon the completion of this offering, the holders of up to approximately 19,074,276 shares of our Class B common stock will be entitled to certain demand registration rights. At any time beginning six months after the completion of this offering, the holders of at least 55% of these shares then outstanding can request that we register the offer and sale of their shares on a registration statement on Form S-1 if we are eligible to file a registration statement on Form S-1 so long as the request covers at least that number of shares with an anticipated offering price, net of underwriting discounts and commissions, of at least $15.0 million. We are obligated to effect only two such registrations. If we determine that it would materially impede, delay or interfere with any material pending or proposed transaction or require disclosure of material non-public information that that, if disclosed, would be materially harmful to the company and its stockholders, we have the right to defer such registration, not more than once in any 12-month period, for a period of up to 90 days.

S-3 Registration Rights

Upon the completion of this offering, the holders of up to approximately 19,074,276 shares of our Class B common stock will be entitled to certain Form S-3 registration rights. The holders of Registrable Securities may make a written request that we register the offer and sale of their shares on a registration statement on Form S-3 if we are eligible to file a registration statement on Form S-3 so long as the request covers at least that number of shares with an anticipated offering price (net of underwriting discounts and commissions) of at least $5.0 million. These stockholders may make an unlimited number of requests for registration on Form S-3; however, we will not be required to effect a registration on Form S-3 if we have effected two such registrations within the 12-month period preceding the date of the request. In addition, if we determine that it would be materially detrimental to us and our stockholders to effect such a registration, we have the right to defer such registration, not more than once in any 12-month period, for a period of up to 90 days. Lastly, we will not be required to effect a demand registration on Form S-3 if we give notice to such stockholders of our bona fide intention to file a registration statement within 120 days of receipt of a request for registration by such stockholders.

Piggyback Registration Rights

If we propose to register the offer and sale of our common stock under the Securities Act, in connection with the public offering of such common stock, the holders of up to approximately 19,074,276 shares of our Class B common stock will be entitled to certain "piggyback" registration rights allowing the holders to include their shares in such registration, subject to certain marketing and other limitations, which, in the case of an underwritten offering, will be in the sole discretion of the underwriters. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to (1) a demand registration described above, (2) a registration related solely to a company stock plan, (3) a registration relating to a corporate reorganization or transaction under Rule 145 of the Securities Act, (4) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the public offering of our common stock, or (5) a registration in which the only common stock being registered is common stock issuable upon the conversion of debt securities that are also being registered, the holders of these shares are entitled to notice of the registration and have the right, subject to certain limitations, to include their shares in the registration.

Anti-Takeover Provisions

The provisions of the Delaware General Corporation Law, our amended and restated certificate of incorporation, and our amended and restated bylaws, which are summarized below, may have the effect of delaying, deferring, or discouraging another person from acquiring control of our company. They are also designed, in part, to encourage persons seeking to acquire control of us to negotiate first with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

Delaware Law

We are governed by the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes mergers, asset sales, or other transactions resulting in a financial benefit to the stockholder. An "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years did own, 15% or more of the corporation's outstanding voting stock. These provisions may have the effect of delaying, deferring, or preventing a change in our control.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaw Provisions

Our amended and restated certificate of incorporation and our amended and restated bylaws, each of which will become effective immediately prior to the completion of this offering, contain provisions that could make the following actions and transactions, among others, more difficult: acquisition of us by means of a tender offer; acquisition of us by means of a proxy contest or otherwise; or removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions that might result in a premium over the market price for our shares.

These provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased

protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Dual Class Stock

As described above in the subsection titled "—Class A and Class B Common Stock—Voting Rights," our amended and restated certificate of incorporation will continue to provide for a dual class common stock structure, which will provide our Founders and current investors with significant influence over all matters requiring stockholder approval, including the election of directors and significant corporate transactions, such as a merger or other sale of our company or its assets.

Undesignated Preferred Stock

The ability to authorize undesignated preferred stock will make it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to effect a change in control of our company. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control or management of our company.

Special Stockholder Meetings

Our amended and restated bylaws will provide that a special meeting of stockholders may only be called by an officer of our company pursuant to a resolution adopted by a majority of our board of directors then in office or the chairperson of our board of directors.

Stockholder Action by Written Consent

Our amended and restated certificate of incorporation will provide that from and after the date holders of our Class B common stock hold less than 50% of the voting power of our capital stock, no action may be taken by our stockholders by written consent.

Requirements for Advance Notification of Stockholder Proposals and Nominations

Our amended and restated bylaws will establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

Classified Board; Election and Removal of Directors; Filling Vacancies

Effective upon the completion of this offering, our board of directors will be divided into three classes, divided as nearly as equal in number as possible. The directors in each class will serve for a three-year term, one class being elected each year by our stockholders, with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the voting power of the then outstanding capital stock will be able to elect all of our directors. Our amended and certificate of incorporation will provide for the removal of any of our directors only for cause and require a stockholder vote by the holders of a majority of the voting power of the then outstanding capital stock. For more information on the classified board, see the section titled "Management—Classified Board of Directors." Furthermore, our board of directors has the exclusive right to set the size of the board of directors, and any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of the board, may only be filled by a resolution of the board of directors unless the board of directors determines that such vacancies will be filled by the stockholders. This system of electing and removing directors and

filling vacancies may discourage a third party from making a tender offer or otherwise attempting to obtain control of us because it generally makes it more difficult for stockholders to replace a majority of the directors.

Forum Selection

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: any derivative action or proceeding brought on our behalf; any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or stockholders to us or to our stockholders; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws (as either may be amended from time to time); or any action asserting a claim against us that is governed by the internal affairs doctrine. As a result, any action brought by any of our stockholders with regard to any of these matters will need to be filed in the Court of Chancery of the State of Delaware and cannot be filed in any other jurisdiction; provided that, the exclusive forum provision will not apply to suits brought to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction; and provided further that, if and only if the Court of Chancery of the State of Delaware dismisses any such action for lack of subject matter jurisdiction, such action may be brought in another state or federal court sitting in the State of Delaware. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide that the federal district courts of the United States of America will be the exclusive forum for the resolution of any complaint asserting a cause of action against us or any of our directors, officers, employees, or agents and arising under the Securities Act. Nothing in our amended and restated certificate of incorporation and amended and restated bylaws preclude stockholders that assert claims under the Exchange Act from bringing such claims in state or federal court, subject to applicable law.

If any action the subject matter of which is within the scope described above is filed in a court other than a court located within the State of Delaware (a Foreign Action), in the name of any stockholder, such stockholder shall be deemed to have consented to the personal jurisdiction of the state and federal courts located within the State of Delaware in connection with any action brought in any such court to enforce the applicable provisions of our amended and restated certificate of incorporation and amended and restated bylaws and having service of process made upon such stockholder in any such action by service upon such stockholder’s counsel in the Foreign Action as agent for such stockholder. Although our amended and restated certificate of incorporation and amended and restated bylaws will contain the choice of forum provision described above, it is possible that a court could find that such a provision is inapplicable for a particular claim or action or that such provision is unenforceable.

This choice of forum provision may limit a stockholder’s ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, other employees, or stockholders, which may discourage lawsuits with respect to such claims, although our stockholders will not be deemed to have waived our compliance with federal securities laws and the rules and regulations thereunder.

Amendment of Charter Provisions

Any amendment of the above provisions in our amended and restated certificate of incorporation would require approval by holders of at least 66 2/3% of the voting power of all of the then outstanding capital stock entitled to vote generally in the election of directors, voting together as a single class. In addition, the affirmative vote of holders of at least 80% of the shares of Class B common stock outstanding at the time of such vote, voting as a separate series, is required to amend or repeal, or adopt any provision of

our amended and restated certificate of incorporation relating to the rights and preferences of our common stock.

Limitation on Liability and Indemnification

For a discussion of limitation on liability and indemnification, see the section titled “Management—Limitation on Liability and Indemnification Matters.”

Transfer Agent and Registrar

Upon the completion of this offering, the transfer agent and registrar for our Class A and Class B common stock will be American Stock Transfer & Trust Company, LLC. The transfer agent’s address is 6201 15th Avenue, Brooklyn, New York 11219.

Listing

We have applied to list our Class A common stock on the Nasdaq Global Select Market under the symbol “DUOL.”

Shares Eligible for Future Sale

Prior to this offering, there has been no public market for our Class A common stock, and a liquid trading market for our Class A common stock may not develop or be sustained after this offering. Sales of substantial amounts of our Class A common stock in the public market after this offering, or the perception that such sales could occur, could adversely affect the trading price of our Class A common stock and may make it more difficult for you to sell your Class A common stock at a time and price that you deem appropriate.

Upon the completion of this offering, based on the number of shares of our common stock outstanding as of March 31, 2021, we will have a total of 11,293,655 shares of our Class A common stock and 24,598,497 shares of our Class B common stock outstanding, assuming the occurrence of the Transactions as if such Transactions had occurred as of March 31, 2021. Of these shares, all of the Class A common stock sold in this offering by us, plus any shares sold by us upon exercise, if any, of the underwriters' option to purchase shares of Class A common stock, will be freely tradable in the public market without restriction or further registration under the Securities Act, unless these shares are purchased by one of our "affiliates," as that term is defined in Rule 144.

The remaining shares of Class A and Class B common stock will be, and shares of Class A and Class B common stock underlying outstanding RSUs, or subject to stock options will be on issuance, deemed "restricted securities," as defined in Rule 144. Restricted securities may be sold in the public market only if they are registered or if they qualify for an exemption from registration under Rule 144 or Rule 701 under the Securities Act (Rule 701), which rules are summarized below.

Lock-Up Agreements

We and our officers and directors and the holders of substantially all of our shares of capital stock, including the selling stockholders, have agreed with the underwriters, subject to certain exceptions, not to dispose of or hedge any of their Class A common stock or securities convertible into or exchangeable for shares of Class A common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus (the "lock-up period"), except with the prior written consent of Goldman Sachs & Co. LLC.

Notwithstanding the foregoing, certain shares may automatically be released pursuant to the following conditions:

- If the holder is a current employee, contractor or consultant of the company (excluding any of our officers or directors), then up to 25% of such holder's shares of Class A common stock and securities convertible into or exchangeable for shares of Class A common stock held as of the date of this prospectus (including any vested and exercisable stock options as of such date (Vested Securities) but excluding any unvested convertible securities, stock options, restricted stock units or other equity awards issued by us (Unvested Securities)) may be sold in the public market for a 7-consecutive trading day period beginning at the commencement of trading on the first day on which shares of our Class A common stock trade on Nasdaq (up to approximately 1.6 million shares of our Class A common stock held by such employees, contractors or consultants will be released pursuant to this provision);
- If the holder is a current or former employee, contractor or consultant of the company (excluding any of our officers or directors), the lock-up period shall terminate immediately prior to the commencement of trading on the third trading day after we publish our second quarterly financial results following this offering (the Second Quarterly Earnings Date);
- If the holder is an officer or director of the company, 30% of such holder's shares of Class A common stock and securities convertible into or exchangeable for shares of Class A common

stock (including Vested Securities but excluding Unvested Securities) shall be released from the lock-up period immediately prior to the commencement of trading on the third trading day (any such date, the Price-Based Early Release Date) immediately following the date the following conditions are met (such date, the Measurement Date): (1) the close of trading on the Second Quarterly Earnings Date and (2) the last reported closing price of our Class A common stock is greater than the final offering price per share set forth on the cover page of this prospectus for any 10 trading days (including the Measurement Date) out of any 15-consecutive trading day period (the Measurement Period), provided that the holder will not be entitled to any incremental release of securities pursuant to the conditions described below;

- If the holder elects to sell shares in this offering and does so sell at least 10% but no less than 20% of the aggregate number of their shares of Class A common stock and securities convertible into or exchangeable for shares of Class A common stock (including Vested Securities but excluding Unvested Securities) held as of the date set forth on the cover page of this prospectus, the lock-up period shall terminate as to 20% of such holder's shares (measured as of the date of this prospectus and including Vested Securities but excluding Unvested Securities); and

- If the holder elects to sell shares in this offering and does so sell at least 20% of number of the aggregate number of their shares of Class A common stock and securities convertible into or exchangeable for shares of Class A common stock (including Vested Securities but excluding Unvested Securities) held as of the date set forth on the cover page of this prospectus, the lock-up period shall terminate as to 30% of such holder's shares (measured as of the date of this prospectus and including Vested Securities but excluding Unvested Securities).

For the avoidance of doubt, the Measurement Period may begin prior to the Second Quarterly Earnings Date. In addition, we may, in our discretion, extend the date of the Price-Based Early Release Date as reasonably needed for administrative processing or to the extent such release date would occur during one of our blackout periods, in which case we will publicly announce the date of the Price-Based Early Release Date following the close of trading on the day that is at least two trading days prior to such date.

The restrictions on our officers, directors, and other holders, including the selling stockholders, set forth above are subject to certain exceptions, including with respect to: (i) transfers as a bona fide gift or gifts or charitable contribution, or for bona fide estate planning purposes; (ii) transfers to any immediate family member, to any trust for the direct or indirect benefit of the holder or the immediate family thereof, or to a trustor, trustee or beneficiary of the trust or to the estate of a beneficiary of such trust; (iii) transfers upon death or by will, testamentary document or intestate succession; (iv) transfers of securities acquired in this offering or in open market transactions after the closing date of this offering; (v) transfers to another corporation, partnership, limited liability company, or other business entity that is an affiliate, or to any investment fund or other entity controlled or managed by the holder or affiliates of the holder, or as part of a distribution by the holder to its stockholders, controlled by, managing or managed by or under common control with the holder or an affiliate, or as part of a distribution, transfer, or disposition to partners, members, stockholders or other equity holders or to the estate thereof; (vi) transfers to us in connection with the vesting or settlement of restricted stock units or the "net" or "cashless" exercise of options, warrants or other rights to purchase shares of our Class A common stock pursuant to equity awards granted under an equity incentive plan, stock purchase plan or other equity award plan, provided that any shares of Class A common stock received by the holder upon such vesting, settlement or exercise shall otherwise remain subject to the lock-up period; (vii) transfers to us in connection with the repurchase of shares of our Class A common stock issued pursuant to equity awards granted under an equity incentive plan, stock purchase plan or other equity award plan provided that such repurchase is in connection with the termination of the holder's relationship with us; (viii) transfers pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction made to all holders of shares of Class A common stock involving a change of control that is approved by our board of directors or the majority of

voting power of our outstanding capital stock, provided that, in the event that such tender offer, merger, consolidation or other similar transaction is not completed, the holder's shares shall remain subject to the lock-up period; (ix) transfers in connection with the conversion or reclassification of our outstanding preferred stock or other capital stock, provided that any such shares of Class A Common Stock or securities convertible into or exchangeable for shares of Class A common stock received upon such conversion or reclassification shall remain subject to the lock-up period; (x) transfers by operation of law, such as pursuant to a qualified domestic order, divorce settlement, divorce settlement or other related court order and (xi) transfers to the underwriters pursuant to the terms of the underwriting agreement. Notwithstanding anything to the contrary above, in the case of clauses (i) through (iii) and (v) above, any such transfer shall not involve a disposition for value and the transferee shall agree to be subject to the lock-up period; in the case of (i) through (v) above, no filing under the Exchange Act or other public filing, report or announcement reporting a reduction in beneficial ownership of shares of Class A common stock shall be required or voluntarily made during the lock-up period; in the case of any transfers pursuant to clauses (vi), (vii), and (x) above, no filing under the Exchange Act or other public filing, report or announcement reporting a reduction in beneficial ownership of shares of Class A common stock shall be voluntarily made during the lock-up period and any filing that is required under the Exchange Act to be made during the lock-up period shall include a statement in such report to the effect that such transfer relates to the circumstances described in such clauses.

The restrictions set forth above applicable to us are subject to certain exceptions, including with respect to: (i) the shares to be sold in this offering; (ii) any shares of Class A or Class B common stock issued upon the reclassification and exchange of common stock in connection with this offering outstanding on the date set forth on the cover page of this prospectus and as described in this prospectus; (iii) any shares of Class A or Class B common stock or any securities or other awards convertible into, exercisable for, or that represent the right to receive Class A or Class B common stock pursuant to our equity incentive plans or employee stock purchase plans that are described in this prospectus (the Company's Plans) or otherwise in equity compensation arrangements described in this prospectus or any shares of Class A or Class B common stock issuable upon the conversion, exercise or settlement of such awards; (iv) any shares of Class A common stock issuable upon the conversion or exchange of convertible or exchangeable securities or the exercise of warrants or options (including net exercise, conversion or settlement and in respect of tax withholding payments due upon the exercise of options or the vesting of equity-based awards) or the settlement of RSUs or other equity awards (including net settlement and in respect of tax withholding payments), in each case outstanding on or prior to the date set forth on the cover page of this prospectus or as otherwise contemplated by any lock-up letter entered into in connection with this offering by our securityholders; (v) facilitating the establishment of a trading plan on behalf of a securityholder, officer or director of ours pursuant to Rule 10b5-1 under the Exchange Act; (vi) the entry into an agreement providing for the issuance by us of shares of Class A or Class B common stock or any security convertible into or exercisable for shares of Class A or Class B common stock in connection with the acquisition by us or any of our subsidiaries of the securities, business, technology, property or other assets of another person or entity or pursuant to an employee benefit plan assumed by us in connection with such acquisition, and the issuance of any such securities pursuant to any such agreement; (vii) the entry into any agreement providing for the issuance of shares of Class A or Class B common stock or any security convertible into or exercisable for shares of Class A or Class B common stock in connection with joint ventures, commercial relationships or other strategic transactions, and the issuance of any such securities pursuant to any such agreement; and (viii) the filing of any registration statement on Form S-8 or a successor form thereto relating to the resale of securities as contemplated by any lock-up letter signed in connection with this offering or the Company's Plans or any assumed employee benefit plan contemplated by clause (vi); provided that in the case of clauses (vi) and (vii), the aggregate number of shares of Class A and Class B common stock that we may sell or issue or agree to sell or issue pursuant to clauses (vi) and (vii) shall not exceed 10% of the total number of shares of Class

A and Class B common stock issued and outstanding immediately following the completion of this offering; and provided further that, in the case of clauses (iii), (iv), (vi) and (vii), the recipient of such securities shall have executed a lock-up letter on or prior to the date of issuance of such securities.

Rule 144

Under Rule 144, as currently in effect, once we have been subject to the public company reporting requirements of the Exchange Act for at least 90 days, and we are current in our Exchange Act reporting at the time of sale, a person (or persons whose shares are required to be aggregated) who is not deemed to have been one of our "affiliates" for purposes of Rule 144 at any time during the 90 days preceding a sale and who has beneficially owned restricted securities within the meaning of Rule 144 for at least six months, including the holding period of any prior owner other than one of our "affiliates," is entitled to sell those shares in the public market without complying with the manner of sale, volume limitations, or notice provisions of Rule 144, but subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than one of our "affiliates," then such person is entitled to sell such shares in the public market without complying with any of the requirements of Rule 144.

In general, under Rule 144, as currently in effect, once we have been subject to the public company reporting requirements of the Exchange Act for at least 90 days, our "affiliates," as defined in Rule 144, who have beneficially owned the shares proposed to be sold for at least six months, are entitled to sell in the public market, within any three-month period, a number of those shares that does not exceed the greater of:

- 1% of the number of shares of our Class A common stock then outstanding; or
- the average weekly trading volume of our Class A common stock on the Nasdaq Global Select Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Such sales under Rule 144 by our "affiliates" or persons selling shares on behalf of our "affiliates" are also subject to certain manner of sale provisions, notice requirements, and requirements related to the availability of current public information about us.

Rule 701

In general, under Rule 701 as currently in effect, any of our employees, directors, officers, consultants, or advisors who acquired common stock from us in connection with a written compensatory stock or option plan or other written agreement in compliance with Rule 701 before the effective date of the registration statement of which this prospectus is a part and who are not our "affiliates" as defined in Rule 144 during the immediately preceding 90 days, is entitled to rely on Rule 701 to resell such shares beginning 90 days after the date of this prospectus in reliance on Rule 144, but without complying with the manner of sale, notice requirements, requirements related to the availability of current public information, or volume limitation provisions of Rule 144. The SEC has indicated that Rule 701 applies to typical stock options granted by an issuer before it becomes subject to the reporting requirements of the Exchange Act, and will apply to shares acquired upon exercise of such stock options, including exercises after the date of this prospectus. Persons who are our "affiliates" may resell those shares beginning 90 days after the date of this prospectus without compliance with minimum holding period requirements under Rule 144.

Registration Rights

Pursuant to our amended and restated investors' rights agreement, the holders of up to 17,668,163 shares of our Class B common stock or their respective transferees will be entitled to

certain rights with respect to the registration of the offer and sale of those shares under the Securities Act. See the section titled “Description of Capital Stock—Registration Rights” for a description of these registration rights. If the offer and sale of these shares is registered, the shares will be freely tradable without restriction under the Securities Act, and a large number of shares may be sold into the public market.

Equity Incentive Plans

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all of the shares of our Class A and Class B common stock issuable or reserved for issuance under our 2011 Plan, 2021 Plan, and ESPP. Shares covered by such registration statement will be eligible for sale in the public market, subject to the Rule 144 limitations and vesting restrictions.

Material US Federal Income Tax Consequences To Non-US Holders

The following discussion is a summary of the material US federal income tax consequences to Non-US Holders (as defined below) of the purchase, ownership, and disposition of our Class A common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other US federal tax laws, such as estate and gift tax laws, and any applicable state, local, or non-US tax laws are not discussed. This discussion is based on the US Internal Revenue Code of 1986, as amended (the Code), Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the US Internal Revenue Service (the IRS), in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-US Holder. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the purchase, ownership, and disposition of our Class A common stock.

This discussion is limited to Non-US Holders that hold our Class A common stock as a “capital asset” within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all US federal income tax consequences relevant to a Non-US Holder’s particular circumstances, including the impact of the Medicare contribution tax on net investment income and the alternative minimum tax. In addition, it does not address consequences relevant to Non-US Holders subject to special rules, including, without limitation:

- US expatriates and former citizens or long-term residents of the United States;
- persons holding our Class A common stock as part of a hedge, straddle, or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies, and other financial institutions;
- brokers, dealers, or traders in securities;
- “controlled foreign corporations,” “passive foreign investment companies,” and corporations that accumulate earnings to avoid US federal income tax;
- partnerships or other entities or arrangements treated as partnerships for US federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our Class A common stock under the constructive sale provisions of the Code;
- persons who hold or receive our Class A common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- tax-qualified retirement plans; and
- “qualified foreign pension funds” as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds.

If an entity treated as a partnership for US federal income tax purposes holds our Class A common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership, and certain determinations made at the partner level. Accordingly, partnerships holding

our Class A common stock and the partners in such partnerships should consult their tax advisors regarding the US federal income tax consequences to them.

THIS DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE US FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP, AND DISPOSITION OF OUR CLASS A COMMON STOCK ARISING UNDER THE US FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL, OR NON-US TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a Non-US Holder

For purposes of this discussion, a "Non-US Holder" is any beneficial owner of our Class A common stock that is neither a "US person" nor an entity treated as a partnership for US federal income tax purposes. A US person is any person that, for US federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to US federal income tax regardless of its source; or
- a trust that (1) is subject to the primary supervision of a US court and the control of one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code), or (2) has a valid election in effect to be treated as a United States person for US federal income tax purposes.

Distributions

As described in the section entitled "Dividend Policy," we do not anticipate declaring or paying dividends to holders of our Class A common stock in the foreseeable future. However, if we do make distributions of cash or property on our Class A common stock, such distributions will constitute dividends for US federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under US federal income tax principles. Amounts not treated as dividends for US federal income tax purposes will constitute a return of capital and first be applied against and reduce a Non-US Holder's adjusted tax basis in its Class A common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under "—Sale or Other Taxable Disposition."

Subject to the discussion below on effectively connected income, dividends paid to a Non-US Holder will be subject to US federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided the Non-US Holder furnishes a valid IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate). A Non-US Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-US Holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

If dividends paid to a Non-US Holder are effectively connected with the Non-US Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-US Holder maintains a permanent establishment in the United States to which such dividends are attributable), the Non-US Holder will be exempt from the US federal withholding tax described above. To claim the exemption, the Non-US Holder must furnish to the applicable withholding agent a valid IRS

Form W-8ECI, certifying that the dividends are effectively connected with the Non-US Holder's conduct of a trade or business within the United States.

Any such effectively connected dividends will be subject to US federal income tax on a net income basis at the regular rates. A Non-US Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected dividends, as adjusted for certain items. Non-US Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or Other Taxable Disposition

A Non-US Holder will not be subject to US federal income tax on any gain realized upon the sale or other taxable disposition of our Class A common stock unless:

- the gain is effectively connected with the Non-US Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-US Holder maintains a permanent establishment in the United States to which such gain is attributable);
- the Non-US Holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our Class A common stock constitutes a US real property interest (USRPI) by reason of our status as a US real property holding corporation (USRPHC) for US federal income tax purposes.

Gain described in the first bullet point above generally will be subject to US federal income tax on a net income basis at the regular rates. A Non-US Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected gain, as adjusted for certain items.

A Non-US Holder described in the second bullet point above will be subject to US federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on gain realized upon the sale or other taxable disposition of our Class A common stock, which may be offset by US source capital losses of the Non-US Holder (even though the individual is not considered a resident of the United States), provided the Non-US Holder has timely filed US federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-US real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition of our Class A common stock by a Non-US Holder will not be subject to US federal income tax if our Class A common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market and such Non-US Holder owned, actually and constructively, 5% or less of our Class A common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the Non-US Holder's holding period.

Non-US Holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Payments of dividends on our Class A common stock will not be subject to backup withholding, provided the applicable withholding agent does not have actual knowledge or reason to know the holder is a United

States person and the holder either certifies its non-US status, such as by furnishing a valid IRS Form W-8BEN, W-8BEN-E, or W-8ECI, or otherwise establishes an exemption. However, information returns are required to be filed with the IRS in connection with any distributions on our Class A common stock paid to the Non-US Holder, regardless of whether such distributions constitute dividends or whether any tax was actually withheld. In addition, proceeds of the sale or other taxable disposition of our Class A common stock within the United States or conducted through certain US-related brokers generally will not be subject to backup withholding or information reporting if the applicable withholding agent receives the certification described above and does not have actual knowledge or reason to know that such holder is a United States person or the holder otherwise establishes an exemption. Proceeds of a disposition of our Class A common stock conducted through a non-US office of a non-US broker generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-US Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-US Holder's US federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such Sections commonly referred to as the Foreign Account Tax Compliance Act (FATCA)) on certain types of payments made to non-US financial institutions and certain other non-US entities. Specifically, a 30% withholding tax may be imposed on dividends on, or (subject to the proposed Treasury Regulations discussed below) gross proceeds from the sale or other disposition of, our Class A common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the US Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our Class A common stock. While withholding under FATCA would have applied also to payments of gross proceeds from the sale or other disposition of stock on or after January 1, 2019, proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our Class A common stock.

Underwriting

We, the selling stockholders and the underwriters named below have entered into an underwriting agreement with respect to the shares of our Class A common stock being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the number of shares of our Class A common stock indicated in the following table. Goldman Sachs & Co. LLC is acting as representative of the underwriters.

Underwriters	Number of Shares
Goldman Sachs & Co. LLC	
Allen & Company LLC	
BofA Securities, Inc.	
Barclays Capital Inc.	
Evercore Group L.L.C.	
William Blair & Company, L.L.C.	
KeyBanc Capital Markets Inc.	
JMP Securities LLC	
Piper Sandler & Co.	
Raymond James & Associates, Inc.	
Total	5,106,113

The underwriters are committed to take and pay for all of the shares of our Class A common stock being offered, if any are taken, other than the shares covered by the option described below unless and until this option is exercised.

The underwriters have an option to buy up to an additional 765,916 shares of our Class A common stock from us to cover sales by the underwriters of a greater number of shares than the total number set forth in the table above. They may exercise that option for 30 days. If any shares are purchased pursuant to this option, the underwriters will severally purchase shares in approximately the same proportion as set forth in the table above.

The following tables show the per share and total underwriting discounts and commissions to be paid to the underwriters by the company and the selling stockholders. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase 765,916 additional shares.

Paid by Us

	No Exercise	Full Exercise
Per Share	$	$
Total	$	$

Paid by the Selling Stockholders

	No Exercise	Full Exercise
Per Share	$	$
Total	$	$

Shares sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $ per share from the initial public offering price. After the initial offering of

the shares, the representative may change the offering price and the other selling terms. The offering of the shares by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part.

We currently anticipate that up to 1% of the shares of Class A common stock offered hereby will, at our request, be offered to retail investors through Robinhood Financial, LLC, as a selling group member, via its online brokerage platform. Robinhood Financial is not affiliated with the company. Purchases through the Robinhood platform will be subject to the terms, conditions and requirements set by Robinhood. Any purchase of our Class A common stock in this offering through the Robinhood platform will be at the same initial public offering price, and at the same time, as any other purchases in this offering, including purchases by institutions and other large investors. The Robinhood platform and information on the Robinhood application do not form a part of this prospectus.

We and our officers and directors and the holders of substantially all of our shares of capital stock, including the selling stockholders, have agreed with the underwriters, subject to certain exceptions, not to dispose of or hedge any of their Class A common stock or securities convertible into or exchangeable for shares of Class A common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of Goldman Sachs & Co. LLC. See "Shares Eligible for Future Sale" for a discussion of certain early release and other exceptions and transfer restrictions.

Prior to the offering, there has been no public market for shares of our Class A common stock. The initial public offering price has been negotiated among the company and the representative. Among the factors to be considered in determining the initial public offering price of the shares, in addition to prevailing market conditions, will be the company's historical performance, estimates of the business potential and earnings prospects of the company, an assessment of the company's management and the consideration of the above factors in relation to market valuation of companies in related businesses.

We have applied to list the shares of our Class A common stock on the Nasdaq Global Select Market under the symbol "DUOL."

In connection with the offering, the underwriters may purchase and sell shares of our Class A common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering, and a short position represents the amount of such sales that have not been covered by subsequent purchases. A "covered short position" is a short position that is not greater than the amount of additional shares for which the underwriters' option described above may be exercised. The underwriters may cover any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to cover the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase additional shares pursuant to the option described above. "Naked" short sales are any short sales that create a short position greater than the amount of additional shares for which the option described above may be exercised. The underwriters must cover any such naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the Class A common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of Class A common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representative has

repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of shares of our Class A common stock, and together with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of the shares. As a result, the price of the shares may be higher than the price that otherwise might exist in the open market. The underwriters are not required to engage in these activities and may end any of these activities at any time. These transactions may be effected on the Nasdaq Global Select Market, in the over-the-counter market or otherwise.

We estimate that our share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately $4.0 million. We will reimburse the underwriters for their expenses related to the review of this offering by the Financial Industry Regulatory Authority, Inc. (FINRA) in an amount up to $40,000. In accordance with FINRA Rule 5110, this reimbursed fee is deemed underwriting compensation for this offering. In addition, the underwriters are expected to reimburse us for up to approximately $1.1 million (or $1.3 million if the underwriters exercise their option to purchase additional shares of Class A common stock in full) of our expenses in connection with this offering.

We and the selling stockholders have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act of 1933.

One of the underwriters and its employees will have an indirect economic interest in approximately 3,438 shares of our Class B common stock received upon the automatic conversion of shares of our preferred stock originally acquired in a private placement. The difference between the price paid for such shares in the private placement and the public offering price in this offering will be deemed to be underwriting compensation in connection with this offering.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Certain of the underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to the issuer and to persons and entities with relationships with the issuer, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the issuer (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the issuer. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

European Economic Area

In relation to each EEA Member State (each a Relevant Member State), no shares of our Class A common stock have been offered or will be offered pursuant to the offering to the public in that Relevant Member State prior to the publication of a prospectus in relation to the shares which has been approved

by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Regulation, except that the shares may be offered to the public in that Relevant Member State at any time:

a) to any legal entity which is a qualified investor as defined under Article 2 of the Prospectus Regulation;

b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the Prospectus Regulation) subject to obtaining the prior consent of the representative for any such offer; or

c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of the shares shall require the company and/or selling stockholders or any underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an ‘offer to the public’ in relation to the shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase any shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

Each person in a Relevant Member State who receives any communication in respect of, or who acquires any shares under, the offering contemplated hereby will be deemed to have represented, warranted and agreed to and with each of the underwriters and their affiliates and the company that:

a) it is a qualified investor within the meaning of the Prospectus Regulation; and

b) in the case of any shares acquired by it as a financial intermediary, as that term is used in Article 5 of the Prospectus Regulation, (i) the shares acquired by it in the offering have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in any Relevant Member State other than qualified investors, as that term is defined in the Prospectus Regulation, or have been acquired in other circumstances falling within the points (a) to (d) of Article 1(4) of the Prospectus Regulation and the prior consent of the representative has been given to the offer or resale; or (ii) where the shares have been acquired by it on behalf of persons in any Relevant Member State other than qualified investors, the offer of those shares to it is not treated under the Prospectus Regulation as having been made to such persons.

The company, the underwriters and their affiliates, and others will rely upon the truth and accuracy of the foregoing representation, acknowledgement and agreement. Notwithstanding the above, a person who is not a qualified investor and who has notified the representative of such fact in writing may, with the prior consent of the representative, be permitted to acquire shares in the offering.

United Kingdom

This prospectus and any other material in relation to the shares described herein is only being distributed to, and is only directed at, and any investment or investment activity to which this prospectus relates is available only to, and will be engaged in only with persons who are (i) persons having professional experience in matters relating to investments who fall within the definition of investment professionals in Article 19(5) of the FPO; or (ii) high net worth entities falling within Article 49(2)(a) to (d) of the FPO; (iii) outside the UK; or (iv) persons to whom an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) in connection with the issue or sale of any shares may otherwise lawfully be communicated or caused to be communicated, (all such persons together being

referred to as Relevant Persons). The shares are only available in the UK to, and any invitation, offer or agreement to purchase or otherwise acquire the shares will be engaged in only with, the Relevant Persons. This prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other person in the UK. Any person in the UK that is not a Relevant Person should not act or rely on this prospectus or any of its contents.

No shares have been offered or will be offered pursuant to the offering to the public in the United Kingdom prior to the publication of a prospectus in relation to the Shares which has been approved by the Financial Conduct Authority, except that the shares may be offered to the public in the United Kingdom at any time:

a) to any legal entity which is a qualified investor as defined under Article 2 of the UK Prospectus Regulation;

b) to fewer than 150 natural or legal persons (other than qualified investors as defined under Article 2 of the UK Prospectus Regulation), subject to obtaining the prior consent of the representative for any such offer; or

c) in any other circumstances falling within Section 86 of the FSMA.

provided that no such offer of the shares shall require the company and/or any underwriters or any of their affiliates to publish a prospectus pursuant to Section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation. For the purposes of this provision, the expression an "offer to the public" in relation to the shares in the United Kingdom means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares and the expression “UK Prospectus Regulation” means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018.

Each person in the UK who acquires any shares in the offering or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with the company, the underwriters and their affiliates that it meets the criteria outlined in this section.

Canada

The shares may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions, and Ongoing Registrant Obligations. Any resale of the shares must be made in accordance with an exemption form, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this document (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Hong Kong

The shares may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) (Companies (Winding Up and Miscellaneous Provisions) Ordinance) or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) (Securities and Futures Ordinance), or (ii) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore (the SFA)) under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for six months after that corporation has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation’s securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore (Regulation 32)

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for six months after that trust has acquired the shares under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S$200,000 (or its equivalent in a foreign currency) for each transaction

(whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

Japan

The shares have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended) (the FIEA). The shares may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

Legal Matters

The validity of the shares of Class A common stock offered hereby will be passed upon for us by Latham & Watkins LLP, Menlo Park, California. Skadden, Arps, Slate, Meagher & Flom LLP, New York, New York, has acted as counsel for the underwriters in connection with certain legal matters related to this offering.

Experts

The financial statements as of December 31, 2020 and 2019, and for each of the two years in the period ended December 31, 2020, included in this registration statement, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report appearing herein. Such financial statements have been so included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

Where You Can Find Additional Information

We have filed with the SEC a registration statement on Form S-1, including exhibits and schedules, under the Securities Act, with respect to the shares of Class A common stock being offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and our Class A common stock, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You may read our SEC filings, including this registration statement, over the Internet at the SEC's website at www.sec.gov. Upon the completion of this offering, we will be subject to the information reporting requirements of the Exchange Act and we will file reports, proxy statements, and other information with the SEC. These reports, proxy statements, and other information will be available for review at the SEC's website referred to above. We also maintain a website at www.Duolingo.com, at which, following the completion of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on, or that can be accessed through, our website does not constitute part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only. Investors should not rely on any such information in deciding whether to purchase our Class A common stock.

DUOLINGO, INC. AND SUBSIDIARIES
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Audited Consolidated Financial Statements as of December 31, 2020 and 2019 and for the two years then ended

Table of Contents

Index to the Unaudited Interim Condensed Consolidated Financial Statements as of March 31, 2021 and for the three months ended March 31, 2020 and 2021

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of Duolingo, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Duolingo, Inc. and subsidiaries (the “Company”) as of December 31, 2020 and 2019, the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders’ deficit, and cash flows, for the years ended December 31, 2020 and 2019, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for the years ended December 31, 2020 and 2019, in conformity with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

As discussed in Notes 2 and 6 to the financial statements, the Company has changed its method of accounting for leases due to the adoption of Financial Accounting Standards Board Accounting Standards Update No. 2016-02, Leases (Topic 842), using the modified retrospective approach. Our opinion is not modified with respect to this matter.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Deloitte & Touche LLP

New York, New York

April 30, 2021

We have served as the Company’s auditor since 2018.

DUOLINGO, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(Amounts in thousands, except par value amounts)

	December 31,	
	2019	2020
ASSETS		
Current assets		
Cash and cash equivalents	$ 59,843	$ 120,490
Accounts receivable	10,005	20,450
Deferred cost of revenues	6,932	13,585
Prepaid expenses and other current assets	2,143	3,855
Total current assets	78,923	158,380
Property and equipment, net	4,676	6,428
Capitalized software, net	1,791	2,296
Operating lease right-of-use assets	9,145	8,073
Other assets	524	562
Total assets	$ 95,059	$ 175,739
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT		
Current liabilities		
Accounts payable	$ 3,811	$ 2,196
Deferred revenues	26,307	54,792
Income tax payable	—	68
Accrued expenses and other current liabilities	1,989	8,634
Total current liabilities	32,107	65,690
Long term obligation under operating leases	9,242	8,131
Total liabilities	41,349	73,821
Commitments and contingencies (Note 10)		
Convertible preferred stock, $.0001 par value; 18,247 shares issued and outstanding at December 31, 2019 and 19,074 shares issued and outstanding at December 31, 2020	137,686	182,609
Stockholders' deficit		
Common stock, $.0001 par value; 42,800 authorized shares; 12,406 issued and outstanding at December 31, 2019 and 12,794 issued and outstanding at December 31, 2020.	1	1
Additional paid-in capital	11,026	30,087
Accumulated deficit	(95,003)	(110,779)
Total stockholders' deficit	(83,976)	(80,691)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 95,059	$ 175,739

See accompanying notes to the consolidated financial statements.

DUOLINGO, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(Amounts in thousands, except per share amounts)

	Year Ended December 31,	
	2019	2020
Revenues	$ 70,760	$ 161,696
Cost of revenues	20,737	45,987
Gross profit	50,023	115,709
Operating expenses:		
Research and development	31,560	53,024
Sales and marketing	14,989	34,983
General and administrative	16,371	43,713
Impairment of capitalized software	1,228	—
Total operating expenses	64,148	131,720
Loss from operations	(14,125)	(16,011)
Other income	591	388
Other expense	(20)	(85)
Other income, net	571	303
Loss before provision for income taxes	(13,554)	(15,708)
Provision for income taxes	—	68
Net loss and comprehensive loss	$ (13,554)	$ (15,776)
Basic and diluted net loss per share attributable to common stockholders	$ (1.10)	$ (1.24)

See accompanying notes to the consolidated financial statements.

DUOLINGO, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
(Amounts in thousands)

	Convertible Preferred Stock		Common Stock				
	Shares	Amount	Shares	Amount	Additional Paid-In Capital	Accumulated Deficit	Total
BALANCE—January 1, 2019	17,489	$ 107,838	12,110	$ 1	$ 6,011	$ (80,918)	$ (74,906)
Cumulative effect of adoption of ASC 842	—	—	—	—	—	(363)	(363)
Issuance of Series F convertible preferred stock, net $153 of fees	758	29,848	—	—	—	—	—
Stock-based compensation	—	—	—	—	3,725	—	3,725
Stock options exercised	—	—	317	—	1,290	—	1,290
Common stock repurchased and retired	—	—	(21)	—	—	(168)	(168)
Net loss and comprehensive loss	—	—	—	—	—	(13,554)	(13,554)
BALANCE—December 31, 2019	18,247	137,686	12,406	1	11,026	(95,003)	(83,976)
Issuance of Series G and H convertible preferred stock, net $76 of fees	827	44,923	—	—	—	—	—
Stock-based compensation	—	—	—	—	17,031		17,031
Stock options exercised	—	—	388	—	2,030		2,030
Net loss and comprehensive loss	—	—	—	—	—	(15,776)	(15,776)
BALANCE—December 31, 2020	19,074	$ 182,609	12,794	$ 1	$ 30,087	$ (110,779)	$ (80,691)

See accompanying notes to the consolidated financial statements.

DUOLINGO, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Amounts in thousands)

	Year Ended December 31,	
	2019	2020
Cash flows from operating activities:		
Net loss	$ (13,554)	$ (15,776)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation and amortization	1,251	2,256
Impairment of capitalized software	1,228	—
Stock-based compensation	3,725	17,031
Changes in:		
Deferred revenues	17,273	28,485
Accounts receivable	(5,301)	(10,445)
Deferred cost of revenues	(4,527)	(6,653)
Prepaid expenses and other current assets	(995)	(1,712)
Accounts payable	2,427	(1,615)
Accrued expenses and other current liabilities	1,442	6,213
Noncurrent assets and liabilities	(817)	(76)
Net cash provided by operating activities	**2,152**	**17,708**
Cash flows from investing activities:		
Maturities of investments	7,677	—
Capitalized software	(1,476)	(638)
Purchase of property and equipment	(3,770)	(3,376)
Net cash provided by (used for) investing activities	**2,431**	**(4,014)**
Cash flows from financing activities:		
Net proceeds from issuance of convertible preferred stock	29,848	44,923
Proceeds from exercise of stock options	1,290	2,030
Repurchase of common stock	(168)	—
Net cash provided by financing activities	**30,970**	**46,953**
Net increase in cash and cash equivalents	35,553	60,647
Cash and cash equivalents - Beginning of year	24,290	59,843
Cash and cash equivalents - End of year	$ 59,843	$ 120,490
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ —	$ —
Cash paid for income taxes	$ —	$ —
Supplemental disclosure of noncash investing activities:		
Capitalized software included in accrued expenses	$ —	$ 500

See accompanying notes to the consolidated financial statements.

DUOLINGO, INC. AND SUBSIDIARIES

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. DESCRIPTION OF THE BUSINESS AND BASIS OF PRESENTATION

Duolingo, Inc. (the “Company”) was formed on August 18, 2011 and the Duolingo app was launched to the general public on June 19, 2012. The Company’s headquarters are located in Pittsburgh, Pennsylvania.

Duolingo is a US-based language-learning website and mobile app, as well as a digital language proficiency assessment exam. The company has a freemium business model: the app and the website are accessible free of charge, although Duolingo also offers a premium service, Duolingo Plus, for a subscription fee. As of the date of this filing, Duolingo offers courses in 40 different languages, including Spanish, English, French, German, Italian, Portuguese, Japanese and Chinese. We have locations in the United States and China.

Principles of Consolidation—The Consolidated Financial Statements include the accounts of the Company and subsidiaries over which the Company has control. All intercompany transactions and balances have been eliminated.

Basis of Presentation—The accompanying Consolidated Financial Statements have been prepared in accordance with generally accepted accounting principles in the United States (“GAAP”) from the Company’s accounting records and reflect the consolidated financial position and results of operations for the fiscal years ended December 31, 2019 and 2020. Unless otherwise specified, all dollar amounts in this section are presented in thousands.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Under the JOBS Act, emerging growth companies also can delay adopting new or revised accounting standards until such time as those standards would otherwise apply to private companies. While we have not historically delayed the adoption of new or revised accounting standards until such time as those standards would apply to private companies, we have elected to take advantage of this extended transition period and, as a result, our operating results and financial statements in the future may not be comparable to the operating results and financial statements of companies who have adopted the new or revised accounting standards.

Accounting Principles—The financial statements and accompanying notes are prepared in accordance with generally accepted accounting principles in the United States of America (GAAP).

Use of Estimates—The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Significant estimates and assumptions reflected in the consolidated financial statements include, but are not limited to, useful lives of property and equipment, valuation of deferred tax assets and liabilities, stock-based compensation, common stock valuation, operating lease right-of-use assets and liabilities, capitalization of internally developed software and associated useful lives and contingent liabilities. Actual results may differ materially from such estimates. Management believes that the estimates, and judgments upon which they rely, are reasonable based upon information available to them at the time that these estimates and judgments are made. To the extent that there are material differences between these estimates and actual results, the Company’s consolidated financial statements will be affected.

The novel coronavirus, or COVID-19, pandemic has created, and may continue to create, significant uncertainty in macroeconomic conditions. The full extent to which the COVID-19 pandemic will directly or indirectly impact the global economy, the lasting social effects, and impact on the Company's business, results of operations, and financial condition will depend on future developments that are highly uncertain and cannot be accurately predicted. As of the date of issuance of the financial statements, the Company is not aware of any specific event of circumstance related to COVID-19 that would require it to update its estimates or judgments or adjust the carrying value of its assets or liabilities. Actual results could differ from those estimates and any such differences may be material to the consolidated financial statements. As events continue to evolve and additional information becomes available, the Company's estimates and assumptions may change materially in future periods.

Revenue Recognition—The Company has three predominant sources of revenue; time-based subscriptions, in-app advertising placement by third parties, and the Duolingo English Test. See Footnote 3 for further discussion.

Deferred Revenue—Revenue is recognized over the life of the subscription, or in the case of Duolingo English Test, revenue is recognized when the test is proctored. The Company classifies deferred revenue as a short-term liability on the consolidated balance sheets as the longest subscription plan is for twelve months, and Duolingo English Test purchases must be taken within 90 days.

Cost of Revenue—Cost of revenue predominantly consists of third-party payment processing fees charged by various distribution channel and hosting fees. To a much lesser extent, includes wages and share-based compensation for certain employees in the capacity of customer support, amortization of revenue generating capitalized software, and depreciation of certain property and equipment.

Deferred Cost of Revenue—Deferred cost of revenue includes third-party payment processing fees amortized over the subscription terms in proportion to the revenue recognized. In situations where fees are charged for subscriptions that exceed one month, costs are deferred and recognized over the life of the subscription and are classified as a current asset. The Company classifies deferred cost of revenue as a short-term asset on the Company's consolidated balance sheets as the longest subscription plan is for twelve months.

Cash and Cash Equivalents—Cash consists primarily of cash on hand and bank deposits. Cash equivalents consist primarily of money market accounts with maturities of three months or less at the date of acquisition and are stated at cost, which approximates fair value. The Company maintains cash deposits with financial institutions that may exceed federally insured limits at times. The following table shows the breakout between cash and money market funds.

	December 31,	
	2019	2020
Cash	$ 5,010	$ 20,428
Money market funds	54,833	100,062
Total	$ 59,843	$ 120,490

The Money market funds are considered Level 1 financial assets. Level 1 financial assets use inputs that are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.

Accounts Receivable—The Company adopted ASC 326, Credit Losses, on January 1, 2020. Accounts receivables are reported on the consolidated balance sheets at the outstanding principal amount adjusted for any allowance for credit losses and any charge offs. The Company provides an allowance for credit losses to reduce trade receivables to their estimated net realizable value equal to the amount that is

expected to be collected. This allowance is estimated based on historical collection experience, the aging of receivables, specific current and expected future macro-economic and market conditions, and assessments of the current creditworthiness and economic status of customers. Under previous guidance, judgments were made as to the Company's ability to collect outstanding receivables and provided allowances for a portion of receivables when collection became doubtful. The Company considers a receivable delinquent if it is unpaid after the term of the related invoice has expired. Balances that are still outstanding after management has used reasonable collection efforts are written off. The Company reviews its allowance for credit losses on a quarterly basis. As of December 31, 2019 and 2020, the Company has not recorded a reserve given the Company's lack of historical write offs.

Investments—The Company classified its debt securities as available-for-sale and reported them at fair value. Interest income was recorded as earned and included accretion of discounts and amortization of premiums using the effective yield method and was recorded in other income within the statements of operations. During 2019, the Company sold all their investments.

Property and Equipment—Property and equipment is stated at cost, less accumulated depreciation. Depreciation is computed on the straight-line method.

Asset Class	Estimated Useful Life
Furniture, fixtures and equipment	5 to 7 years
Leasehold improvements	4 to 6 years

Leasehold improvements are amortized over the lesser of the life of the lease or the estimated useful life of the leasehold improvements. Costs related to maintenance and repairs that do not extend the assets' useful life are expensed as incurred.

Capitalized software—The Company develops software for internal use and capitalizes the software development costs incurred during the application development stage. Costs incurred prior to and after the application development stage are charged to expense. When the software is ready for its intended use, capitalization ceases and such costs are amortized on a straight-line basis over the estimated life, which is generally three years. Relatively minor upgrades, enhancements and maintenance to the platform are expensed as incurred.

Impairment of Long-Lived Assets—The Company reviews its long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If the sum of the estimated undiscounted future cash flows expected to result from the use and eventual disposition of an asset is less than the carrying amount of the asset, an impairment loss is recognized. Measurement of an impairment loss is based on the fair value of the asset. The Company recorded a $1,228 charge, which represents an impairment to write-off the capitalization of an internal-use software project prior to being launched to the user base during the year ended December 31, 2019. No assets were impaired during the year ended December 31, 2020.

Income Taxes—The Company provides for income taxes in accordance with the asset and liability method. Under this method, deferred tax assets and liabilities are recognized for future tax consequences attributable to differences between the carrying amounts of existing assets and liabilities for financial reporting and for income tax reporting. The deferred tax asset or liability represents the future tax return consequences of those differences, which will either be taxable or deductible when the assets and liabilities are recovered or settled. A valuation allowance is established for any deferred tax asset for which it is determined that it is more likely than not that some or all of the deferred tax assets will not be realized.

The Company utilizes a two-step approach to recognizing and measuring uncertain tax positions accounted for in accordance with the asset and liability method. The first step is to evaluate the tax position for recognition by determining whether evidence indicates that it is more likely than not that a position will be sustained if examined by a taxing authority.

The second step is to measure the tax benefit as the largest amount that is 50% likely of being realized upon settlement with a taxing authority. There were no amounts recorded at December 31, 2019 and 2020 related to uncertain tax positions.

Foreign Currency—The functional currency of the Company and its subsidiaries is the United States dollar. Transactions denominated in currencies other than the functional currency are translated into the functional currency at the exchange rates prevailing at the dates of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated using the exchange rate prevailing at the balance sheet date. Non-monetary assets and liabilities are translated using the historical rate on the date of the transaction. All exchange gains or losses arising from translation of these foreign currency transactions are included in net loss for the year. The Company has not, to the date of these consolidated financial statements, entered into derivative instruments to offset the impact of foreign currency fluctuations.

Other Comprehensive Loss—Comprehensive loss is defined as net income and all other non-owner changes in stockholders' deficit. Other comprehensive loss results from items deferred from recognition into the statements of operations. The Company follows the provisions of ASC 220, *Comprehensive Income*, for the reporting and display of comprehensive loss and its components. The Company's accumulated other comprehensive loss consists of the unrealized loss on investments. Accumulated other comprehensive loss is separately presented on the Company's balance sheet as part of stockholders' deficit.

Stock-Based Compensation—The Company accounts for equity-based compensation using the fair value method as set forth in the ASC 718, Compensation—Stock Compensation, which requires the measurement and recognition of compensation expense for all share-based payment awards based on estimated fair values. This method requires companies to estimate the fair value of stock-based compensation on the date of grant using an option pricing model. The Company estimates the fair value of each equity-based payment award on the date of grant using the Black-Scholes pricing model.

The Black-Scholes model determines the fair value of equity-based payment awards based on the fair value of the underlying common stock on the date of grant and requires the use of estimates and assumptions, including the fair value of the Company's common stock, exercise price of the stock option, expected volatility, expected life, risk-free interest rate and dividend rate. The Company estimates the expected volatility of its stock options by taking the average historical volatility of a group of comparable publicly traded companies over a period equal to the expected life of the options; it is not practical for the Company to estimate its own volatility due to the lack of a liquid market and historical prices. The expected term of the options is determined in accordance with existing equity agreements as the underlying options are assumed to be exercised upon the passage of time. The risk-free interest rate is the estimated average interest rate based on US Treasury zero-coupon notes with terms consistent with the expected life of the awards. The expected dividend yield is zero as the Company does not anticipate paying any recurring cash dividends in the foreseeable future. The Company accounts for forfeitures as they occur.

Fair Value of Financial Instruments—The Company accounts for certain assets and liabilities at fair value in accordance with the accounting guidance applicable to fair value measurements and disclosures.

The carrying values of cash, cash equivalents, accounts receivable, accounts payable, and accrued expenses are deemed to be reasonable estimates of their fair values because of their short-term nature.

Research and Development Costs—Research and development expenses are incurred as the Company maintains and enhances its software and evaluates and develops other potential applications. Such expenses include compensation of engineering, product design and testing personnel, including share-based compensation, materials, travel and direct costs associated with the design and required testing of our platform and depreciation of certain property and equipment.

Sales and Marketing—Sales and marketing expenses are expensed as incurred and consists primarily of brand advertising, marketing, digital and social media spend, field marketing, travel, trade show sponsorships and events, conferences and other employee related compensation, including share-based compensation for personnel engaged in sales and marketing functions, and amortization of non-revenue generating capitalized software used to promote Duolingo, and depreciation of certain property and equipment. Advertising costs were approximately $9,642 and $27,352 for the years ended December 31, 2019 and 2020, respectively.

General and Administrative—General and administrative expense primarily consists of employee related compensation (including share-based compensation) for management and administrative functions, including our finance and accounting, legal, and people teams. General and administrative expense also includes certain professional services fees, general corporate and director and officer insurance, facilities costs, and other general overhead costs that support our operations, and depreciation of certain property and equipment.

Concentration of Credit Risk—The Company's concentration of credit risk relates to financial institutions holding the Company's cash and cash equivalents and platforms with significant accounts receivable balances and revenue transactions.

The Company maintains cash deposits with financial institutions that may exceed federally insured limits at times. Management believes that the financial institutions that hold the Company's deposits are financially credit worthy and, accordingly, minimal credit risk exists with respect to those balances.

The majority of our revenue comes through our subscriptions and advertising revenue streams and payments are made to Duolingo through service providers. The top two service providers, Apple and Google, accounted for 52.8% and 29.6% of total Accounts receivable as of December 31, 2019, respectively and the top three, Apple, Google and Stripe, accounted for 47.8%, 28.9% and 13.8% as of December 31, 2020, respectively.

Three service providers, Apple, Google and Facebook, processed 55.2%, 23.5% and 10.0% of total revenue for the year ended December 31, 2019 and two service providers, Apple and Google, processed 51.3% and 26.9% of total revenue for the year ended December 31, 2020.

Contingencies—The Company records accruals for contingencies and legal proceedings expected to be incurred in connection with a loss contingency when it is probable that a liability has been incurred and the amount can be reasonably estimated.

If a loss contingency is not probable, but is reasonably possible, or is probable but cannot be estimated, the nature of the contingent liability, together with an estimate of the range of possible loss, would be disclosed.

Segment—The Company operates as a single operating segment. The chief operating decision maker of the Company is its Chief Executive Officer, who makes resource allocation decisions and assesses performance based on financial information presented on a consolidated basis, accompanied by

disaggregated information of our revenue. Accordingly, the Company has determined that it has a single reportable segment and operating segment structure, and operates as one reporting unit.

Recently Adopted Accounting Pronouncements—

In February 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2016-02, *Leases (Topic 842) (ASU 2016-02)*. ASU 2016-02 requires virtually all leases, other than leases that meet the definition of a short-term lease, to be recorded on the balance sheet with a right-of-use (ROU) asset and corresponding lease liability. Leases will be classified as either operating or finance leases based on certain criteria. This classification will determine the timing and presentation of expenses on the income statement, as well as the presentation of related cash flows. The Company adopted this on January 1, 2019 using the modified retrospective approach. As an accounting policy election, the Company elected to exclude short term leases (initial term of 12 months or less) from the balance sheet and to account for non-lease and lease components separately for all asset classes. The Company recognized $5,798 of ROU assets related to operating leases in Operating lease right-of-use assets and $6,380 of corresponding lease liabilities, of which $187 is included in Accrued expenses and other liabilities and $6,193 is included in Long term obligation under operating leases on the consolidated balance sheets. The Company also recorded a Cumulative effect of adoption of new accounting standard to accumulated deficit of $363 .

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments (ASU 2016-13)*, which modifies the measurement of expected credit losses of certain financial instruments. This new guidance will be effective for private companies for fiscal years beginning after December 15, 2021, but early adoption is permitted. The Company adopted this guidance on January 1, 2020 and it did not have an impact on its consolidated financial statements and related disclosures upon adoption.

Recently Issued Pronouncements Not Yet Adopted

In August 2018, the FASB issued ASU No. 2018-15, *Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract (ASU 2018-15)*. ASU 2018-15 aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. This new guidance will be effective for fiscal years beginning after December 15, 2020. The adoption of this ASU will not have a significant impact on the Company's consolidated financial statements and related disclosures upon adoption.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*, which simplifies the accounting for income taxes by removing certain exceptions and by clarifying and amending existing guidance in order to improve consistent application of and simplify GAAP for other areas of Topic 740. The guidance will be effective for the Company beginning after December 15, 2021. Early adoption is permitted. The Company is currently evaluating the effect that ASU 2019-12 will have on its consolidated financial statements and related disclosures.

3. REVENUE

The Company has three predominant sources of revenue; time-based subscriptions, in-app advertising placement by third parties and the Duolingo English Test. Revenue is recognized upon transfer of control of promised products or services to users in an amount that reflects the consideration the Company expects to receive in exchange for those services. The Company does not enter into contracts with a customer that contain multiple promises that result in multiple performance obligations. Revenue is

recorded net of taxes assessed by a government authority that are both imposed on and concurrent with specific revenue transactions between us and our users.

Revenue from time-based subscriptions includes a stand-ready obligation to provide hosting services that are consumed by the customer over the subscription period. Users can purchase Duolingo monthly or they can purchase a six-month or year-long subscription and pay for the subscription at the time of purchase. Therefore, such payments are initially recorded to deferred revenue. The user has the ability to download limited content offline. However, as there is a significant level of integration and interdependency with the online functionality, the Company considers the service to be a single performance obligation for the online and offline content.

The Company enters into arrangements with advertising networks to monetize the in-app advertising inventory. Revenue from in-app advertising placement is recognized at a point in time when the advertisement is placed and is based upon the amount received.

Duolingo English Test revenue is generally recognized once the tests have gone through the proctoring process and a certification decision has been made. This process usually takes less than 48 hours after the test has been completed and uploaded. Customers have 90 days from the date of purchase to take the exam or their purchase will expire and revenue will be recognized. Virtually all customers complete their exams prior to expiration. Sometimes organizations may purchase tests in bulk via coupons with a one year expiration date. The Company will defer revenue from all tests that have not been proctored nor expired.

The Company's users have the option to purchase consumable in-app virtual goods. The Company recognizes revenue over the period in which the user consumes the virtual good, which is generally within a month.

Principal Agent Considerations—The Company makes its application available to be downloaded through third-party digital distribution service providers. Users who purchase subscriptions also pay through the respective app stores. The Company evaluates the purchases via third-party payment processors to determine whether its revenues should be reported gross or net of fees retained by the payment processor. The Company is the principal in the transaction with the end user as a result of controlling, hosting, and integrating the delivery of the virtual items to the end user. The Company records revenue gross as a principal and records fees paid to third-party payment processors as Cost of revenues.

Contract Balances—Deferred revenue mostly consists of payments we receive in advance of revenue recognition, and is mostly related to time-based subscriptions, which will be recognized into revenue over the course of the upcoming year, which is 12 months or less. Additionally, Duolingo English Test has deferred revenue related to tests that have been purchased, but will not be recognized until the tests have been proctored.

Disaggregation of Revenue

In accordance with ASC 606, *Revenue from Contracts with Customers*, the Company disaggregates revenue from contracts with customers into source of revenue and geographical regions, which most closely depicts how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors.

Information regarding source of revenues:

	2019	2020
Over time	$ 54,848	$ 117,501
Point in time	15,912	44,195
Total revenues	$ 70,760	$ 161,696

Information regarding revenue by stream:

	2019	2020
Revenues:		
Subscription	$ 54,848	$ 117,501
Advertising	14,118	27,043
Duolingo English Test	1,022	15,155
Other(1)	772	1,997
Total revenues	$ 70,760	$ 161,696

(1) Other revenue is mainly comprised of in app purchases of virtual goods.

Information regarding geography of revenue is based upon the location where the users are located or, in the case of the Duolingo English Test, where the tests are taken:

	2019	2020
United States	$ 33,307	$ 70,978
Rest of World	37,453	90,718
Total	$ 70,760	$ 161,696

Customers located in the United States accounted for 47% and 44% of total revenue for the year ended December 31, 2019 and 2020, respectively. No other country accounted for 10% or more of revenue for the periods presented.

Changes in deferred revenues were as follows:

	2019	2020
Beginning balance—January 1	$ 9,034	$ 26,307
Amount from beginning balance recognized into revenues	(9,034)	(26,307)
Recognition of deferred revenues	(45,814)	(91,193)
Deferral of revenues	72,121	145,985
Ending balance—December 31	$ 26,307	$ 54,792

4. PROPERTY and EQUIPMENT, net

Property and equipment consists of the following as of December 31, 2019 and 2020:

	2019	2020
Leasehold improvements	$ 5,158	$ 7,536
Furniture, fixtures and equipment	962	1,959
Total property and equipment	6,120	9,495
Less: accumulated depreciation	(1,444)	(3,067)
Total property and equipment, net	$ 4,676	$ 6,428

Depreciation expense was $527 and $1,624 in 2019 and 2020, respectively, and is predominately included within general and administrative, with nominal amounts in Cost of revenues, Research and development and Sales and marketing in the Company's consolidated statement of operations.

5. CAPITALIZED SOFTWARE, net

Capitalized software consists of the following as of December 31, 2019 and 2020:

	2019	2020
Capitalized software	$ 7,444	$ 8,181
Less: accumulated amortization	(5,653)	(5,885)
Capitalized software, net	$ 1,791	$ 2,296

Amortization expense of $724 and $632 is recorded in the statements of operations in 2019 and 2020, respectively. For the year ended December 31, 2019, the Company recorded an impairment to write-off the capitalization of an internal-use software project prior to being launched to the user base. The associated amounts have been removed from the gross capitalized software balance and accumulated amortization in the table above.

Amortization expense is included within the following financial statement line items within the Company's consolidated statement of operations:

	2019	2020
Cost of revenues	$ 103	$ 86
Sales and marketing	621	546
Total	$ 724	$ 632

6. LEASES

As discussed in Note 2, "Accounting Policies" the Company adopted ASC 842, *Leases*, on January 1, 2019. ASC 842 requires a lessee to recognize assets and liabilities on the balance sheet for all leases, with the result being the recognition of a right-of-use (ROU) asset and a corresponding lease liability. The lease liability is equal to the present value of the minimum lease payments for the term of the lease using the discount rate determined at lease commencement and including any optional renewal periods that were determined to be reasonably certain to be exercised. The ROU asset is equal to the initial measurement of the lease liability plus any lease payments made to the lessor at or before the commencement date and any unamortized initial indirect costs incurred by the lessee, less any unamortized lease incentives received. ROU assets are periodically reviewed for impairment whenever events or changes in circumstances arise. During the years ended December 31, 2019 and 2020, the Company incurred no impairment charges on ROU assets.

The discount rate utilized in calculating the lease liability is the rate implicit in the lease, if known; otherwise, the incremental borrowing rate (“IBR”) for the expected lease term is used. The Company’s IBR approximates the rate the Company would have to pay, on a collateralized basis, to borrow an amount equal to the lease payments under similar terms.

The Company occupies certain facilities with lease agreements which may contain lease escalation clauses and purchase and renewal options. At the inception of a contract, the Company determines whether the arrangement is or contains a lease. A lease is determined to exist if there is an identified asset, the Company has the right to obtain substantially all of the economic benefits from the use of the identified asset, and also the right to direct the use of the asset. Once a lease is determined to exist, the Company determines the lease classification at lease commencement. Leases are classified as operating or finance leases based on specific criteria. The Company determined that it only has operating leases. Operating lease expense is recognized on a straight-line basis on the consolidated statements of operations in general and administrative expenses. On the consolidated statements of changes in cash flows, payments for operating leases, including the interest component, are included in operating activities.

The Company has entered into various operating leases for its office space expiring between fiscal 2021 and 2035. Certain lease agreements contain an option for the Company to renew a lease for a term of up to five years. The Company considers these options, which may be elected at the Company’s sole discretion, in determining the lease term on a lease-by-lease basis.

During 2016, the Company moved into new office space under an operating lease that expires on May 31, 2030. The lease for the Company's office space provides the ability for the Company to cancel the lease with at least twelve months prior written notice; this ability starts on October 31, 2025. Additionally there is a five year extension option in the lease which the company has not included in the lease term. The remaining payments related to this lease agreement as of December 31, 2020 are approximately $9,568.

In November 2019, the Company signed a new lease for contiguous space. The term of the newly executed lease is 127 months beginning on November 1, 2019 and expiring on May 31, 2030. The lease for the company's office space provides the ability for the Company to cancel the lease with at least twelve months prior written notice starting October 31, 2025. Additionally there is a five year extension option in the lease which the company has not included in the lease term. The remaining payments related to this lease agreement as of December 31, 2020 are approximately $2,380.

The Company applied ASC 842 to all existing leases at January 1, 2019 using the modified retrospective approach. As a result, prior period amounts have not been adjusted and continue to be reported in accordance with the Company’s historical accounting under ASC 840, *Leases*. The Company has elected to separate lease and non-lease components for all asset classes, did not elect to use hindsight to determine the lease term, and made an accounting policy election for short-term leases which does not require the capitalization of leases with terms of 12 months or less at lease commencement.

As a result of adoption of ASC 842 on January 1, 2019, the Company recognized $5,798 of ROU assets related to operating leases in Operating lease right-of-use assets and $6,380 of corresponding lease liabilities, of which $187 is included in Accrued expenses and other liabilities and $6,193 is included in Obligation under operating leases on the consolidated balance sheets. The difference is attributable to the deferred rent and tenant improvement allowance balance as of December 31, 2018 that reduced the ROU asset balance on January 1, 2019, of which $581 was removed from Long-term liabilities on the consolidated balance sheets. The Company also recorded a Cumulative effect of adoption of new

accounting standard to accumulated deficit of $363. See Note 2, “Summary of Significant Accounting Policies” for further information on the impact of adoption.

The following represents the components of lease cost for the years ended December 31, 2019 and 2020:

	Year Ended December 31,	
	2019	2020
Operating lease cost	$ 787	$ 1,721
Operating cash flows from operating leases	$ 903	$ 1,624
Operating lease assets obtained in exchange for new lease liabilities	$ 3,345	$ —
Weighted-average remaining lease term	9 years, 7 months	8 years, 11 months
Weighted-average discount rate	7 %	7 %

Short-term lease cost of $235 and $317 and is recorded in the statements of operations in 2019 and 2020, respectively. The following table reconciles future minimum undiscounted rental commitments for operating leases to operating lease liabilities record on the consolidated balance sheet as of December 31, 2020:

Fiscal year	
2021	$ 1,696
2022	1,192
2023	1,211
2024	1,231
2025	1,265
Thereafter	5,876
Total undiscounted lease payments	$ 12,471
Present value adjustment	(3,229)
Operating lease liabilities	$ 9,242

Current lease liabilities of $974 and $1,111 are presented within Accrued expenses and other liabilities while non-current lease liabilities of $9,242 and $8,131 are presented within the obligation under operating leases, net on the consolidated balance sheets for the years ended December 31, 2019 and 2020 respectively.

7. INCOME TAXES

The Company had no income tax provision during the year ended 2019. The Company has incurred $68 provision for income taxes for the year ended December 31, 2020, of which $26 was related to foreign income taxes and $42 for state income taxes.

The Company has the following deferred tax assets (liabilities) as of December 31, 2019 and 2020:

	2019	2020
Net operating loss carryforwards	$ 20,479	$ 20,912
Equity compensation	103	1,063
Research and development credits	3,338	4,936
Lease liability	2,373	2,184
Other DTA	100	65
Sales tax / VAT reserve	—	544
Valuation allowance	(23,851)	(26,236)
Total deferred tax assets	2,542	3,468
ROU asset	(2,124)	(1,908)
Property and equipment	(16)	(1,014)
Capitalized software	(396)	(543)
Other DTL	(6)	(3)
Total deferred tax liabilities	(2,542)	(3,468)
Net deferred taxes	$ —	$ —

The Company has provided a valuation allowance for the net deferred tax asset as it is not more likely than not that the asset will be realized. The movement in valuation allowance of $2,385 is primarily related to the generation of additional net operating losses and research and development credits.

The following table represents the activity in our valuation allowance for the years ended December 31, 2019 and 2020:

	Year Ended December 31,	
	2019	2020
Beginning balance—January 1	$ (20,602)	$ (23,851)
Valuation allowances established	(3,249)	(2,928)
Release of valuation allowances	—	543
Ending balance—December 31	$ (23,851)	$ (26,236)

The provision for income taxes differs from the amounts computed by applying the federal statutory rate as follows for the periods ended December 31, 2019 and 2020:

	2019	2020
Federal statutory rate	21.0 %	21.0 %
State taxes	3.0	1.8
Meals and entertainment	(2.2)	(0.9)
Commuter benefits	(0.1)	(0.1)
Stock options	(5.5)	(18.4)
GILTI	—	(0.5)
Other permanent adjustments	(0.2)	(0.3)
Research and development credit	7.3	10.2
Valuation allowance	(23.3)	(13.2)
Effective income tax rate	— %	(0.4)%

The 2019 and 2020 effective tax rate is less than the statutory rate primarily as a result of the valuation allowance for net deferred tax assets.

No uncertain tax benefits have been recorded in 2019 or 2020, respectfully.

On December 22, 2017, the US government enacted comprehensive tax legislation under the Tax Cuts and Jobs Act (the “Tax Act”), which, among other things, included a provision designed to tax Global Intangible Low Tax Income (“GILTI”) earned by non-US corporate subsidiaries of US shareholders starting in 2018. Due to operations of a foreign subsidiary beginning in 2020, the Company has elected to account for any future GILTI tax liabilities as period costs and will expense those liabilities in the period incurred.

On March 27, 2020, the “Coronavirus Aid, Relief and Economic Security (CARES) Act” (the “Act”) was signed into law. The Act includes provisions relating to refundable payroll tax credits, deferment of the employer portion of certain payroll taxes, net operating loss carryback periods, alternative minimum tax credit refunds, modifications to the net interest deduction limitations and technical corrections to tax depreciation methods for qualified improvement property. The Company analyzed the provisions of the Act and determined there was no significant impact to its income taxes for the year ended December 31, 2020.

The Company has approximately $82,231 in federal net operating loss carryforwards and approximately $41,096 in state net operating loss carryforwards. Certain of these loss carryforwards have an indefinite life and other amounts are available to offset future taxable income through 2040. The Company has approximately $4,936 in federal general business credits that are available to offset future taxable income through 2040. The Company is in the process of completing an IRC Section 382 and 383 analysis for 2020 and will update the deferred tax assets for any changes in the NOLs and R&D tax credit once the analysis is complete. Any future ownership changes could also impact the utilization of the NOLs and R&D tax credits.

The Company’s tax years through the 2020 tax year remain subject to examination by federal and state tax authorities.

8. CONVERTIBLE PREFERRED STOCK

Convertible preferred stock is comprised of the following as of December 31, 2019 and 2020:

December 31, 2019	Shares						
Series	Authorized	Outstanding	Per share price at issuance	Aggregate liquidation preference	Funds received	Fees incurred	Carrying value of convertible preferred stock
A	3,865	3,865	$ 0.85	$ 3,300	$ 3,300	$ 52	$ 3,248
B	6,298	6,298	2.38	15,000	15,000	60	14,940
C	2,948	2,948	6.78	20,000	20,000	112	19,888
D	3,154	3,154	14.27	45,000	45,000	146	44,853
E	1,224	1,224	20.43	25,000	25,000	92	24,909
F	758	758	39.57	30,000	30,000	153	29,848
Total	18,247	18,247		$ 138,300	$ 138,300	$ 614	$ 137,686

December 31, 2020	Shares						
Series	Authorized	Outstanding	Per share price at issuance	Aggregate liquidation preference	Funds received	Fees incurred	Carrying value of convertible preferred stock
A	3,865	3,865	$ 0.85	$ 3,300	$ 3,300	$ 52	$ 3,248
B	6,298	6,298	2.38	15,000	15,000	60	14,940
C	2,948	2,948	6.78	20,000	20,000	112	19,888
D	3,154	3,154	14.27	45,000	45,000	146	44,853
E	1,224	1,224	20.43	25,000	25,000	92	24,909
F	758	758	39.57	30,000	30,000	153	29,848
G	241	241	41.38	10,000	10,000	24	9,976
H	586	586	59.77	35,000	35,000	52	34,947
Total	19,074	19,074		$ 183,300	$ 183,300	$ 691	$ 182,609

Each share of convertible preferred stock has a liquidation preference over common stock equal to the original issue price of the preferred stock plus any declared but unpaid dividends. No single class of preferred stock has liquidation preference that is senior in payment to other classes of preferred stock. The preferred stock does not accumulate undeclared and unpaid dividends.

Each share of convertible preferred stock is convertible into shares of common stock at the option of the stockholder based upon a conversion rate that is 1:1 and may be adjusted under certain circumstances as defined in the Company's Amended and Restated Certificate of Incorporation. If the Company consummates a public offering from which the Company receives gross proceeds of at least $50,000, the conversion becomes mandatory for the convertible preferred stockholders. Also, the conversion becomes mandatory for a preferred stock class, if the holders of at least 65% of the then outstanding shares of preferred stock elect to convert. The Company has reserved an equal number of shares of common stock for the potential conversion of each series of convertible preferred stock. The convertible preferred stockholders have voting rights equal to common stockholders. The preferred stockholders are entitled to the number of votes equal to the number of shares of common stock into which the preferred shares could be converted.

In November 2019, the Company completed the Series F Convertible Preferred Stock (Series F) financing and issued 758 shares of Series F preferred stock to accredited investors for $39.57 per share, generating gross proceeds of $30,000 and incurring issuance costs of $153, which were recorded as a reduction to the carrying value.

In April 2020, the Company completed the Series G Convertible Preferred Stock (Series G) financing and issued 241 shares of Series G preferred stock to accredited investors for $41.38 per share, generating gross proceeds of $10,000 and incurring issuance costs of $24, which were recorded as a reduction to the carrying value of the convertible preferred stock.

In November 2020, the Company completed the Series H Convertible Preferred Stock (Series H) financing and issued 586 shares of Series H preferred stock to accredited investors for $59.77 per share, generating gross proceeds of $35,000 and incurring issuance costs of $52, which were recorded as a reduction to the carrying value of the convertible preferred stock.

All classes of convertible preferred stock are being classified as outside of stockholders' deficit as the preferred stock has redemption features that are outside of the Company's control upon certain triggering events, such as a "Deemed Liquidation Event." In the case of a Deemed Liquidation Event, the holders of Preferred Stock are entitled to be paid out of the assets of the Company, prior and in preference to any distribution to the holders of the common stock. Because the Company's common stockholders do not control the Company's Board of Directors, a potential Deemed Liquidation Event is considered to be outside of the control of the Company, resulting in classification outside of stockholders' deficit.

9. STOCK-BASED COMPENSATION

The Company has a stock incentive plan whereby the Board of Directors may grant stock options or restricted stock units (RSUs) to employees, directors and consultants to purchase shares of the Company's common stock under the 2011 Equity Incentive Plan (Plan). The Company has authorized 10,113 common shares to be issued under the Plan. The Plan permits the granting of incentive stock options and nonqualified stock options. The Company's stock options vest based on terms in the stock option agreements and generally vest over four years and have a term of ten years subject to the continuous service to the Company by the optionee. Incentive stock options may be granted at an exercise price of not less than 100% of the estimated fair value of the stock at the date of the grant as determined by the Company's Board of Directors. If incentive stock options are granted to a stockholder who owns more than 10% of the voting power of all classes of stock of the Company, the exercise price of the incentive stock options must be at least 110% of the estimated fair value of the common stock at the date of the grant.

In November of 2020, the Board approved the amended and restated Plan, which provides for, among other things, the ability of the Company to grant RSUs. Each RSU award vests based upon the satisfaction, during the term of the RSUs, of two requirements: length of service and a liquidity event defined as a change in control or a qualified IPO.

No compensation expense has been included for RSUs as the vesting conditions are not probable. As of December 31, 2020, the Company had granted 34 RSUs, with a weighted-average grant date fair value of $38.08.

Stock option activity for 2020 and 2019 is set forth below:

	Number of options	Weighted-average exercise price	Weighted- average remaining contractual life (years)	Aggregate intrinsic value
Options outstanding at January 1, 2019	4,899	$ 5.10		
Granted	2,079	9.42		
Exercised	(317)	4.07		
Repurchased	—	—		
Forfeited and expired	(154)	5.79		
Options outstanding at December 31, 2019	6,507	$ 6.51	7.68	$ 51,488
Granted	2,295	21.49		
Exercised	(388)	5.22		
Repurchased	—	—		
Forfeited and expired	(49)	8.17		
Options outstanding at December 31, 2020	8,365	$ 10.68	7.47	$ 230,596
Options exercisable at December 31, 2020	4,190	$ 5.65	6.04	$ 137,142

The total weighted-average grant date fair value of options granted was $4.27 and $9.77 and for the years ended December 31, 2019 and 2020, respectively. The total intrinsic value of options exercised was approximately $6,058 during the year ended December 31, 2020. There were 1,491 and 475 options available for grant at December 31, 2019 and 2020, respectively.

As of December 31, 2020, there was approximately $27,966 of unrecognized compensation cost related to stock options granted under the plan. That cost is expected to be recognized over a weighted-average period of approximately three years. The amount of unrecognized compensation expense for RSUs as of December 31, 2020 was $1,311 with a weighted-average remaining contractual life of 3.67 years, for a total unrecognized compensation expense of $29,276.

On November 18, 2020, a secondary sale transaction was completed between certain founders and employees of the Company and a new investor. The investor purchased 468 shares of common stock at a purchase price of $59.77 per share, which was deemed in excess of the fair market value of the common stock of $38.08 per share on the date of purchase. The Company did not arrange these transactions but did waive its right of first refusal in order to permit such transactions. Further, the Company did not receive any proceeds from these transactions. Stock-based compensation expenses of $10,158 were recognized in the consolidated statements of operations and comprehensive loss within general and administrative expense for the year ended December 31, 2020, to reflect the difference in the Company's fair market value of its common stock and the purchase price.

Compensation expense is recognized over the service period, which approximates the vesting period. Total compensation expense was $3,725 and $17,031 in 2019 and 2020, respectively.

Stock based compensation expense is included in the consolidated statements of operations as shown in the following table:

	Year Ended December 31,	
	2019	2020
Cost of revenues	$ 6	$ 6
Research and development	1,552	2,773
Sales and marketing	341	348
General and administrative	1,826	13,904
Total	$ 3,725	$ 17,031

Nominal amounts of stock based compensation expense was capitalized into capitalized software for the years ended December 31, 2019 and 2020.

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions:

	2019	2020
Risk-free interest rate	1.60–2.52%	0.32–0.68%
Expected life	5.97 years	6.01 years
Expected volatility	43.57 –46.65%	45.50 –49.38%
Dividend yield	— %	— %
Fair value of common stock	$7.48 - $14.42	$14.42 - $38.08

The risk-free interest rate is based on the US treasury yield curve in effect as of the grant date. When establishing the expected life assumptions, the Company annually reviews historical employee exercise behavior of option grants and other economic data impacting the period the stock options are expected to remain outstanding. Expected volatility is determined using a benchmark index of similar public companies. The Company based the assumed dividend yield on its expectation of not paying dividends in the foreseeable future. Because the Company's common stock is not yet publicly traded, the Company must estimate the fair value of common stock. The Board estimates the fair value of the common stock at the time awards are granted based on factors such as valuations of comparable companies, the status of the Company's development and sales efforts, revenue growth, and additional objective and subjective factors relating to the Company's business.

10. COMMITMENTS AND CONTINGENCIES

Legal Proceedings - From time to time, the Company may become involved in various legal proceedings in the ordinary course of its business and may be subject to third-party infringement claims.

Sales and use and value-added tax (VAT) - The Company determined that it was required to pay sales and use and VAT taxes in various jurisdictions. The Company is in the process of filing voluntary disclosure agreements with certain jurisdictions and remitting the estimated taxes. If these jurisdictions determine that additional amounts are necessary, the Company will be required to pay accordingly.

Related Parties - The Company has determined that there were no transactions with related parties as of or during the year ended December 31, 2019 and 2020.

11. ACCRUED EXPENSES AND OTHER LIABILITIES

Accrued expenses and other liabilities consisted of the following:

	December 31,	
	2019	2020
Sales and VAT tax accrual	$ 23	$ 2,301
Marketing related accruals	—	1,513
Obligations under current leases	974	1,111
Employee related benefits	847	889
Other	145	2,820
Total	$ 1,989	$ 8,634

12. EMPLOYEE BENEFIT PLAN

The Company sponsors a profit sharing plan with a 401(k) feature, the Duolingo Retirement Plan, (the “Plan”) for eligible employees. The Plan provides for Company safe harbor matching contributions of 100% of the first 3% of the employees’ elective deferrals and 50% of the next 2%, with vesting starting upon the first day of employment. The Company also has the option to make discretionary matching or profit sharing contributions. The Company made safe harbor matching contributions of approximately $1,014 and $1,796 and during 2019 and 2020, respectively. The Company did not make any discretionary matching or profit sharing contributions during 2019 or 2020.

13. EARNINGS PER SHARE

Basic and diluted net loss per share attributable to common stockholders is presented in conformity with the two-class method required for participating securities. The Company considers all series of the Convertible preferred stock to be participating securities. Under the two-class method, the net loss attributable to common stockholders is not allocated to the Convertible preferred stock as the holders of the Convertible preferred stock do not have a contractual obligation to share in the Company’s losses. Basic net loss per share attributable to common stockholders is computed by dividing the net loss by the weighted-average number of shares of common stock outstanding during the period, less shares subject to repurchase. The diluted net loss per share attributable to common stockholders is computed by giving effect to all potential dilutive common stock equivalents outstanding for the period. For purposes of this calculation, the Convertible preferred stock are considered to be potential common stock equivalents but have been excluded from the calculation of diluted net loss per share attributable to common stockholders as their effect is anti-dilutive.

	Year Ended December 31,	
(In thousands, except per share data)	2019	2020
Numerator:		
Net loss	$ (13,554)	$ (15,776)
Denominator:		
Weighted-average shares used in computing net loss per share attributable to common stockholders, basic and diluted	12,373	12,735
Basic and diluted loss per common share	$ (1.10)	$ (1.24)

Since the Company was in a net loss position for the year ended December 31, 2019 and 2020, there is no difference between the number of shares used to calculate basic and diluted loss per share. The potential shares of common stock that were excluded from the computation of diluted net loss per share

attributable to common stockholders for the period presented because including them would have been antidilutive are as follows:

	Number of Shares	
	12/31/2019	12/31/2020
Convertible preferred stock	18,247	19,074
Stock options	3,189	4,191
Total	21,436	23,265

14. SUBSEQUENT EVENTS

Subsequent events were evaluated through April 30, 2021, the date that these consolidated financial statements were available to be issued.

In February 2021, the Company initiated a tender offer which allowed employees to sell up to 10% of their vested options or shares back to the Company at selling price of $59.77, which was above fair market value of $38.08. The Company paid $13,479 and incurred $5,275 of additional compensation expense related to this tender representing the difference between the aggregate selling price and fair market value of the options and shares sold, and a $7,335 increase to Additional paid-in capital. As a result of this tender, 220 shares underlying options were put back into the option pool and 23 shares were retired with an $868 increase to Additional paid-in capital.

On March 10, 2021, the Company announced that it is ending its non-employee volunteer program, which began in 2013 to build and improve the courses using an internal tool. As part of this change, those contributors who helped pave the way to Duolingo’s success will be eligible to receive a one-time award, up to an aggregate amount of approximately $5,098, including fees paid to process payments of approximately $526. The payments are expected to be paid out during the second quarter of 2021, but the expense will be recognized in the first quarter of 2021.

DUOLINGO, INC. AND SUBSIDIARIES
UNAUDITED CONDENSED CONSOLIDATED BALANCE SHEETS
(Amounts in thousands, except par value amounts)

	December 31, 2020	March 31, 2021
ASSETS		
Current assets		
Cash and cash equivalents	$ 120,490	$ 117,459
Accounts receivable	20,450	23,347
Deferred cost of revenues	13,585	16,059
Prepaid expenses and other current assets	3,855	2,129
Total current assets	158,380	158,994
Property and equipment, net	6,428	6,815
Capitalized software, net	2,296	3,154
Operating lease right-of-use assets	8,073	7,260
Other assets	562	651
Total assets	$ 175,739	$ 176,874
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT		
Current liabilities		
Accounts payable	$ 2,196	$ 3,780
Deferred revenues	54,792	65,262
Income tax payable	68	80
Accrued expenses and other current liabilities	8,634	14,956
Total current liabilities	65,690	84,078
Long term obligation under operating leases	8,131	7,972
Total liabilities	73,821	92,050
Commitments and contingencies (Note 9)		
Convertible preferred stock, $.0001 par value; 19,074 shares issued and outstanding at December 31, 2020 and March 31, 2021	182,609	182,609
Stockholders' deficit		
Common stock, $.0001 par value; 42,800 authorized shares; 12,794 issued and outstanding at December 31, 2020 and 13,118 issued and outstanding at March 31, 2021.	1	1
Additional paid-in capital	30,087	26,465
Accumulated deficit	(110,779)	(124,251)
Total stockholders' deficit	(80,691)	(97,785)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 175,739	$ 176,874

See accompanying notes to the unaudited condensed consolidated financial statements.

DUOLINGO, INC. AND SUBSIDIARIES
UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(Amounts in thousands, except per share amounts)

	Three Months Ended March 31,	
	2020	2021
Revenues	$ 28,112	$ 55,360
Cost of revenues	8,214	15,019
Gross profit	19,898	40,341
Operating expenses:		
Research and development	9,576	22,529
Sales and marketing	5,511	19,773
General and administrative	7,266	11,453
Total operating expenses	22,353	53,755
Loss from operations	(2,455)	(13,414)
Other income (expense), net	233	(41)
Loss before provision for income taxes	(2,222)	(13,455)
Provision for income taxes	11	17
Net loss and comprehensive loss	$ (2,233)	$ (13,472)
Basic and diluted net loss per share attributable to common stockholders	$ (0.18)	$ (1.04)

See accompanying notes to the unaudited condensed consolidated financial statements.

DUOLINGO, INC. AND SUBSIDIARIES
UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
(Amounts in thousands)

	Preferred Stock		Common Stock				
	Shares	Amount	Shares	Amount`	Additional Paid-In Capital	Retained Deficit	Total
BALANCE—Balance—January 1, 2020	18,247	$ 137,686	12,406	$ 1	$ 11,026	$ (95,003)	$ (83,976)
Stock-based compensation	—	—	—	—	1,154	—	1,154
Stock options exercised	—	—	50	—	282	—	282
Net loss and comprehensive loss	—	—	—	—	—	(2,233)	(2,233)
BALANCE—March 31, 2020	18,247	$ 137,686	12,456	$ 1	$ 12,462	$ (97,236)	$ (84,773)
Balance—January 1, 2021	19,074	$ 182,609	12,794	$ 1	$ 30,087	$ (110,779)	$ (80,691)
Stock-based compensation	—	—	—	—	2,551	—	2,551
Stock options exercised	—	—	347	—	2,030	—	2,030
Common stock repurchased and retired	—	—	(23)	—	(868)	—	(868)
Options repurchased	—	—	—	—	(7,335)	—	(7,335)
Net loss and comprehensive loss	—	—	—	—	—	(13,472)	(13,472)
BALANCE—March 31, 2021	19,074	$ 182,609	13,118	$ 1	$ 26,465	$ (124,251)	$ (97,785)

See accompanying notes to the unaudited condensed consolidated financial statements.

DUOLINGO, INC. AND SUBSIDIARIES
UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Amounts in thousands)

	Three Months Ended March 31,	
	2020	2021
Cash flows from operating activities:		
Net loss	$ (2,233)	$ (13,472)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation and amortization	399	600
Stock-based compensation	1,154	2,551
Changes in:		
Deferred revenue	8,769	10,470
Accounts receivable	(3,083)	(2,897)
Deferred cost of revenue	(2,300)	(2,474)
Prepaid expenses and other current assets	1	1,929
Accounts payable	(448)	1,584
Accrued expenses and other current liabilities	1,484	6,267
Noncurrent assets and liabilities	976	565
Net cash provided by operating activities	**4,719**	**5,123**
Cash flows from investing activities:		
Capitalized software	(123)	(939)
Purchase of property and equipment	(1,600)	(839)
Net cash used for investing activities	**(1,723)**	**(1,778)**
Cash flows from financing activities:		
Proceeds from exercise of stock options	282	2,030
Repurchases of stock options	—	(7,335)
Repurchase of common stock	—	(868)
Payment of deferred offering costs	—	(203)
Net cash (used for) provided by financing activities	**282**	**(6,376)**
Net (decrease) increase in cash and cash equivalents	3,278	(3,031)
Cash and cash equivalents - Beginning of period	59,843	120,490
Cash and cash equivalents - End of period	$ 63,121	$ 117,459
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ —	$ —
Cash paid for income taxes	$ —	$ 1
Supplemental disclosure of noncash investing activities:		
Capitalized software included in accrued expenses	$ —	$ 67

See accompanying notes to the unaudited condensed consolidated financial statements.

DUOLINGO, INC. AND SUBSIDIARIES

NOTES TO THE UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. DESCRIPTION OF THE BUSINESS AND BASIS OF PRESENTATION

Duolingo, Inc. (the "Company") was formed on August 18, 2011 and the Duolingo app was launched to the general public on June 19, 2012. The Company's headquarters are located in Pittsburgh, Pennsylvania.

Duolingo is a US-based language-learning website and mobile app, as well as a digital language proficiency assessment exam. The Company has a freemium business model: the app and the website are accessible free of charge, although Duolingo also offers a premium service, Duolingo Plus, for a subscription fee. As of the date of this filing, Duolingo offers courses in 40 different languages, including Spanish, English, French, German, Italian, Portuguese, Japanese and Chinese. We have locations in the United States and China.

Principles of Consolidation—The Unaudited Condensed Consolidated Financial Statements include the accounts of the Company and subsidiaries over which the Company has control. All intercompany transactions and balances have been eliminated.

Basis of Presentation—The accompanying Unaudited Condensed Consolidated Financial Statements have been prepared in accordance with generally accepted accounting principles in the United States ("GAAP") from the Company's accounting records and reflect the consolidated financial position and results of operations for the three months ended March 31, 2020 and 2021. Unless otherwise specified, all dollar amounts are referred to in thousands.

The Unaudited Condensed Consolidated Financial Statements have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC"). Certain information and note disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to such SEC rules. We believe that the disclosures made are adequate to make the information presented not misleading. In our opinion, all adjustments considered necessary for a fair presentation of the financial statements have been included, and all adjustments are of a normal and recurring nature. We consistently applied the accounting policies consistent with the annual consolidated financial statements elsewhere in this prospectus, in preparing these Unaudited Condensed Consolidated Financial Statements, with the exception of accounting standard updates described in Note 2, "Recently Added Accounting Pronouncements." These Unaudited Condensed Consolidated Financial Statements should be read in conjunction with the audited financial statements and the notes included in elsewhere in this prospectus.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Under the JOBS Act, emerging growth companies also can delay adopting new or revised accounting standards until such time as those standards would otherwise apply to private companies. While we have not historically delayed the adoption of new or revised accounting standards until such time as those standards would apply to private companies, we have elected to take advantage of this extended transition period and, as a result, our operating results and financial statements in the future may not be comparable to the operating results and financial statements of companies who have adopted the new or revised accounting standards.

Accounting Principles—The financial statements and accompanying notes are prepared in accordance with generally accepted accounting principles in the United States of America (GAAP).

Use of Estimates—The preparation of unaudited condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Significant estimates and assumptions reflected in the consolidated financial statements include, but are not limited to, useful lives of property and equipment, valuation of deferred tax assets and liabilities, stock-based compensation, common stock valuation, operating lease right-of-use assets and liabilities, capitalization of internally developed software and associated useful lives and contingent liabilities. Actual results may differ materially from such estimates. Management believes that the estimates, and judgments upon which they rely, are reasonable based upon information available to them at the time that these estimates and judgments are made. To the extent that there are material differences between these estimates and actual results, the Company's consolidated financial statements will be affected.

Deferred Offering Costs—Deferred offering costs, which consist of direct incremental legal, accounting, and consulting fees relating to the IPO, are capitalized. The deferred offering costs will be offset against IPO proceeds upon the consummation of the IPO. In the event the planned IPO is terminated, the deferred offering costs will be expensed. There were no deferred offering costs recorded as of December 31, 2020. As of March 31, 2021, there was $203 of deferred offering costs recorded within Prepaid expenses and other current assets on the unaudited condensed consolidated balance sheets.

Cash and Cash Equivalents—Cash consists primarily of cash on hand and bank deposits. Cash equivalents consist primarily of money market accounts with maturities of three months or less at the date of acquisition and are stated at cost, which approximates fair value. The Company maintains cash deposits with financial institutions that may exceed federally insured limits at times. The following table shows the breakout between cash and money market funds.

	December 31, 2020	March 31, 2021
Cash	$ 20,428	$ 13,396
Money market funds	100,062	104,063
Total	$ 120,490	$ 117,459

The Money market funds are considered Level 1 financial assets. Level 1 financial assets use inputs that are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.

Advertising Costs—Advertising costs were approximately $12,066 and $4,035 for the three months ended March 31, 2021 and 2020, respectively, and are included within Sales and marketing in the unaudited condensed consolidated statements of operations.

Income Taxes—The Company's interim period provision for income taxes is computed by using an estimate of the annual effective tax rate, adjusted for discrete items taken into account in the relevant period, if any. Each quarter, the annual effective income tax rate is recomputed and if there are material changes in the estimate, a cumulative adjustment is made.

Contributors—On March 10, 2021, the Company announced that it was ending its non-employee volunteer program, which began in 2013 to build and improve language courses. As part of this change, those contributors who participated in the program became eligible to receive a one-time award, up to an aggregate amount of approximately $5,098, including fees paid to process payments of approximately $526. The Company accounted for this under ASC 958-720, *Not-For-Profit Entities - Other Expenses* and ASC 720-25, *Contributions Made*, based on the nature of this contribution, which is an unconditional promise. This amount was included in the unaudited condensed consolidated statement of operations within Sales and marketing in the three months ended March 31, 2021, which is when the Company made the unconditional promise to pay, and is included in the unaudited condensed consolidated balance

sheets within Accrued expenses and other liabilities as of March 31, 2021. The payments are expected to be paid out during the second quarter of 2021.

Concentration of Credit Risk—The Company's concentration of credit risk relates to financial institutions holding the Company's cash and cash equivalents and platforms with significant accounts receivable balances and revenue transactions.

The Company maintains cash deposits with financial institutions that may exceed federally insured limits at times. Management believes that the financial institutions that hold the Company's deposits are financially credit worthy and, accordingly, minimal credit risk exists with respect to those balances.

The majority of our revenue comes through our subscriptions and advertising streams and payments are made to Duolingo through service providers. The top three service providers, Apple, Google and Stripe, accounted for 47.8%, 28.9% and 13.8% of total Accounts receivable as of December 31, 2020, respectively. The top two, Apple and Google, accounted for 62.7% and 20.6% as of March 31, 2021, respectively.

Two service providers, Apple and Google, processed 55.1% and 29.3% of total revenue for the three months ended March 31, 2020 and three service providers, Apple, Google and Stripe, processed 50.1%, 28.3% and 10.3% of total revenue for the three months ended March 31, 2021, respectively.

Recently Adopted Accounting Pronouncements—

In August 2018, the FASB issued Accounting Standard Update (ASU) No. 2018-15, *Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract (ASU 2018-15)*. ASU 2018-15 aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The Company adopted this guidance on January 1, 2021 and it did not have a material impact on its consolidated financial statements and related disclosures upon adoption.

Recently Issued Pronouncements Not Yet Adopted

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*, which simplifies the accounting for income taxes by removing certain exceptions and by clarifying and amending existing guidance in order to improve consistent application of and simplify GAAP for other areas of Topic 740. The guidance will be effective for the Company beginning after December 15, 2021. Early adoption is permitted. The Company is currently evaluating the effect that ASU 2019-12 will have on its consolidated financial statements and related disclosures.

3. REVENUE

The Company has three predominant sources of revenue; time-based subscriptions, in-app advertising placement by third parties and the Duolingo English Test. Revenue is recognized upon transfer of control of promised products or services to users in an amount that reflects the consideration the Company expects to receive in exchange for those services. The Company does not enter into contracts with a customer that contain multiple promises that result in multiple performance obligations. Revenue is recorded net of taxes, assessed by a government authority that are both imposed on and concurrent with specific revenue transactions between us and our users.

Revenue from time-based subscriptions includes a stand-ready obligation to provide hosting services that are consumed by the customer over the subscription period. Users can purchase Duolingo monthly or they can purchase a six-month or year-long subscription and pay for the subscription at the time of

purchase. Therefore, such payments are initially recorded to deferred revenue. The user has the ability to download limited content offline. However, as there is a significant level of integration and interdependency with the online functionality, the Company considers the service to be a single performance obligation for the online and offline content.

The Company enters into arrangements with advertising networks to monetize the in-app advertising inventory. Revenue from in-app advertising placement is recognized at a point in time when the advertisement is placed and is based upon the amount received.

Duolingo English Test revenue is generally recognized once the tests have gone through the proctoring process and a certification decision has been made. This process usually takes less than 48 hours after the test has been completed and uploaded. Customers have 90 days from the date of purchase to take the exam or their purchase will expire and revenue will be recognized. Virtually all customers complete their exams prior to expiration. Sometimes organizations may purchase tests in bulk via coupons with a one year expiration date. The company will defer revenue from all tests that haven't been proctored nor expired.

The Company's users have the option to purchase consumable in-app virtual goods. The Company recognizes revenue over the period in which the user consumes the virtual good, which is generally within a month.

Principal Agent Considerations—The Company makes its application available to be downloaded through third-party digital distribution service providers. Users who purchase subscriptions also pay through the respective app stores. The Company evaluates the purchases via third-party payment processors to determine whether its revenues should be reported gross or net of fees retained by the payment processor. The Company is the principal in the transaction with the end user as a result of controlling, hosting, and integrating the delivery of the virtual items to the end user. The Company records revenue gross as a principal and records fees paid to third-party payment processors as Cost of revenues.

Contract Balances—Deferred revenue mostly consists of payments we receive in advance of revenue recognition, and is mostly related to time-based subscriptions, which will be recognized into revenue over the course of the upcoming year, which is 12 months or less. Additionally, Duolingo English Test has deferred revenue related to tests that have been purchased, but will not be recognized until the tests have been proctored.

Disaggregation of Revenue

In accordance with Accounting Standards Codification 606, *Revenue from Contracts with Customers*, the Company disaggregates revenue from contracts with customers into source of revenue and geographical regions, which most closely depicts how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors.

Information regarding source of revenues:

	Three Months Ended March 31,	
	2020	2021
Over time	$ 22,171	$ 40,055
Point in time	5,941	15,305
Total revenue	$ 28,112	$ 55,360

Information regarding revenue by stream:

	Three Months Ended March 31,	
	2020	2021
Revenues:		
Subscription	$ 22,171	$ 40,055
Advertising	5,008	9,275
Duolingo English Test	753	5,035
Other (1)	180	995
Total revenues	$ 28,112	$ 55,360

(1) Other revenue is mainly comprised of in app purchases of virtual goods.

Changes in deferred revenues were as follows:

	Three Months Ended March 31,	
	2020	2021
Beginning balance—January 1	$ 26,307	$ 54,792
Amount from beginning balance recognized into revenue	(12,045)	(25,891)
Recognition of deferred revenue	(10,126)	(15,741)
Deferral of revenue	30,940	52,102
Ending balance—March 31	$ 35,076	$ 65,262

4. PROPERTY AND EQUIPMENT, net

Property and equipment consists of the following as of December 31, 2020 and March 31, 2021:

	December 31, 2020	March 31, 2021
Leasehold improvements	$ 7,536	$ 8,310
Furniture, fixtures and equipment	1,959	2,025
Total property and equipment	9,495	10,335
Less: accumulated depreciation	(3,067)	(3,520)
Total property and equipment, net	$ 6,428	$ 6,815

Depreciation expense for the three months ended March 31, 2020 and 2021 was $340 and $452, respectively, and is predominately included within General and administrative, with nominal amounts in Cost of revenues, Research and development and Sales and marketing in the unaudited condensed consolidated statement of operations.

5. CAPITALIZED SOFTWARE, net

Capitalized software consists of the following as of December 31, 2020 and March 31, 2021:

	December 31, 2020	March 31, 2021
Capitalized software	$ 8,181	$ 9,187
Less: accumulated amortization	(5,885)	(6,033)
Capitalized software, net	$ 2,296	$ 3,154

Amortization expense for the three months ended March 31, 2020 and 2021 was $59 and $148, respectively, and is recorded in the Company's unaudited condensed consolidated statement of operations within the following financial statement line items:

	Three Months Ended March 31,	
	2020	2021
Cost of revenue	$ 26	$ —
Sales and marketing	33	148
Total	$ 59	$ 148

The Company reviews its long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If the sum of the estimated undiscounted future cash flows expected to result from the use and eventual disposition of an asset is less than the carrying amount of the asset, an impairment loss is recognized. Measurement of an impairment loss is based on the fair value of the asset. No assets were impaired during the year ended December 31, 2020 or the three months ended March 31, 2021.

6. INCOME TAXES

The income tax provision for interim periods is comprised of tax on ordinary income (loss) provided at the most recent projected annual effective tax rate (PAETR), adjusted for the tax effect of discrete items. Management estimates the PAETR each quarter based on the forecasted annual pretax income or (loss). The Company is required to reduce deferred tax assets by a valuation allowance if, based on all available evidence, it is considered more likely than not that some portion or all of the benefit of the deferred tax assets will not be realized in future periods. The Company also records the income tax impact of certain discrete, unusual or infrequently occurring items including changes in judgment about valuation allowances and effects of changes in tax laws or rates, in the interim period in which they occur.

The actual year-to-date income tax expense (benefit) is the product of the most current PAETR and the actual year-to-date pretax income (loss) adjusted for any discrete tax items. The income tax expense (benefit) for a particular quarter, except for the first quarter, is the difference between the year-to-date calculation of income tax expense (benefit) and the year-to-date calculation for the prior quarter. Items unrelated to current period ordinary income or (loss) are recognized entirely in the period identified as a discrete item of tax. The inclusion of discrete items in a particular quarter can cause the actual effective rate for that quarter to vary significantly from the PAETR.

Therefore, the actual effective income tax rate for a particular quarter can vary significantly based upon the jurisdictional mix and timing of actual earnings compared to projected annual earnings, permanent items, earnings for those jurisdictions that maintain a valuation allowance, tax associated with jurisdictions excluded from the PAETR calculation and discrete items.

Annual Effective Tax Rate

The PAETR, which excludes the impact of discrete items, was (0.5)% and (0.1)% as of the three months ended March 31, 2020 and 2021, respectively. The PAETR was lower than the US federal statutory rate of 21.0% primarily due to the impact of maintaining a US valuation allowance provided on US deferred tax assets.

The Company continues to maintain a full valuation allowance on US federal and state net deferred tax assets (excluding the tax effects of deferred tax liabilities associated with indefinite lived intangibles) for the period ending March 31, 2021 as a result of pretax losses incurred since the Company's inception in early 2012. The Company is projecting pre-tax loss in 2021.

Current and Prior Period Tax Expense

For the three months ended March 31, 2020 and 2021, the Company recognized income tax expense of $11 and $17 on pretax losses of $2,222 and $13,455, respectively.

7. CONVERTIBLE PREFERRED STOCK

Convertible preferred stock is comprised of the following as of December 31, 2020 and March 31, 2021:

	Shares						
Series	Authorized	Outstanding	Per share price at issuance	Aggregate liquidation preference	Funds received	Fees incurred	Carrying value of convertible preferred stock
A	3,865	3,865	$ 0.85	$ 3,300	$ 3,300	$ 52	$ 3,248
B	6,298	6,298	2.38	15,000	15,000	60	14,940
C	2,948	2,948	6.78	20,000	20,000	112	19,888
D	3,154	3,154	14.27	45,000	45,000	146	44,853
E	1,224	1,224	20.43	25,000	25,000	92	24,909
F	758	758	39.57	30,000	30,000	153	29,848
G	241	241	41.38	10,000	10,000	24	9,976
H	586	586	59.77	35,000	35,000	52	34,947
	19,074	19,074		$ 183,300	$ 183,300	$ 691	$ 182,609

Each share of convertible preferred stock has a liquidation preference over common stock equal to the original issue price of the preferred stock plus any declared but unpaid dividends. No single class of preferred stock has liquidation preference that is senior in payment to other classes of preferred stock. The preferred stock does not accumulate undeclared and unpaid dividends.

Each share of convertible preferred stock is convertible into shares of common stock at the option of the stockholder based upon a conversion rate that is 1:1 and may be adjusted under certain circumstances as defined in the Company's Amended and Restated Certificate of Incorporation. If the Company consummates a public offering from which the Company receives gross proceeds of at least $50,000, the conversion becomes mandatory for the convertible preferred stockholders. Also, the conversion becomes mandatory for a preferred stock class, if the holders of at least 65% of the then outstanding shares of preferred stock elect to convert. The Company has reserved an equal number of shares of common stock for the potential conversion of each series of convertible preferred stock. The convertible preferred stockholders have voting rights equal to common stockholders. The preferred stockholders are entitled to the number of votes equal to the number of shares of common stock into which the preferred shares could be converted.

All classes of convertible preferred stock are being classified as outside of stockholders' deficit as the preferred stock has redemption features that are outside of the Company's control upon certain triggering events, such as a "Deemed Liquidation Event." In the case of a Deemed Liquidation Event, the holders of Preferred Stock are entitled to be paid out of the assets of the Company, prior and in preference to any distribution to the holders of the common stock. Because the Company's common stockholders do not control the Company's Board of Directors, a potential Deemed Liquidation Event is considered to be outside of the control of the Company, resulting in classification outside of stockholders' deficit.

8. STOCK-BASED COMPENSATION

The Company has a stock incentive plan whereby the Board of Directors may grant stock options or restricted stock units to employees, directors and consultants to purchase shares of the Company's common stock under the 2011 Equity Incentive Plan (Plan). The Company has authorized 10,113 common shares to be issued under the Plan. The Plan permits the granting of incentive stock options and nonqualified stock options. The Company's stock options vest based on terms in the stock option agreements and generally vest over four years and have a term of ten years subject to the continuous service to the Company by the optionee. Incentive stock options may be granted at an exercise price of not less than 100% of the estimated fair value of the stock at the date of the grant as determined by the Company's Board of Directors. If incentive stock options are granted to a stockholder who owns more than 10% of the voting power of all classes of stock of the Company, the exercise price of the incentive stock options must be at least 110% of the estimated fair value of the common stock at the date of the grant.

In November of 2020, the Board approved the amended and restated Plan, which provides for, among other things, the ability of the Company to grant restricted stock units (RSUs). Each RSU award vests based upon the satisfaction, during the term of the RSUs, of two requirements: length of service and a liquidity event defined as a change in control or a qualified IPO. No compensation expense has been included for RSUs as the vesting conditions are not probable.

Stock option activity for the three months ended March 31, 2021 is set forth below:

	Number of options	Weighted-average exercise price	Weighted- average remaining contractual life (years)	Aggregate intrinsic value
Options outstanding at January 1, 2021	8,365	$ 10.68	7.47	$ 230,596
Granted	0	—		
Exercised	(347)	5.85		
Repurchased	(220)	4.81		
Forfeited and expired	(26)	14.14		
Options outstanding at March 31, 2021	7,772	$ 11.05	7.35	$ 324,453
Options exercisable at March 31, 2021	4,134	6.52	6.15	$ 191,298

There were no options granted during the three months ended March 31, 2021. The total intrinsic value of options exercised was approximately $13,714 during the three months ended March 31, 2021. There were 715 options available for grant at March 31, 2021.

RSU activity for the three months ended March 31, 2021 is set forth below:

	Share units	Weighted-average grant date fair value per share
Outstanding at January 1, 2021	34	$ 38.08
Granted	8	38.08
Vested	—	—
Forfeited	—	—
Outstanding at March 31, 2021	42	$ 38.08

As of March 31, 2021, there was approximately $25,240 of unrecognized compensation cost related to stock options granted under the plan. That cost is expected to be recognized over a weighted-average period of approximately two years. The amount of unrecognized compensation expense for RSUs as of March 31, 2021 was $1,596 with a weighted-average remaining contractual life of approximately three years, for a total unrecognized compensation expense of $26,836.

In February of 2021, the Company initiated a tender offer which allowed employees to sell up to 10% of their vested options or shares back to the Company at selling price of $59.77, which was above fair market value of $38.08. The Company paid $13,479 and incurred $5,275 of additional compensation expense related to this tender representing the difference between the aggregate selling price and fair market value of the options and shares sold, and a $7,335 increase to Additional paid-in capital. As a result of this tender, 220 options were put back into the option pool and 23 shares were retired with an $868 increase to Additional paid-in capital.

Compensation expense is recognized over the service period, which approximates the vesting period. Total compensation expense was $1,154 and $2,551 for the three months ended March 31, 2020 and 2021, respectively.

Stock based compensation expense is included in the unaudited condensed consolidated statement of operations as shown in the following table:

	Three Months Ended March 31,	
	2020	2021
Cost of Revenue	$ 1	$ 2
Research and development	447	1,111
Sales and marketing	73	68
General and administrative	633	1,370
Total	$ 1,154	$ 2,551

Nominal amounts of stock based compensation expense is capitalized into capitalized software.

9. COMMITMENTS AND CONTINGENCIES

Legal Proceedings - From time to time, the Company may become involved in various legal proceedings in the ordinary course of its business and may be subject to third-party infringement claims.

Sales and use and value-added tax (VAT) - The Company determined that it was required to pay sales and use and VAT taxes in various jurisdictions. The Company is in the process of filing voluntary disclosure agreements with certain jurisdictions and remitting the estimated taxes. If these jurisdictions determine that additional amounts are necessary, the Company will be required to pay accordingly.

Related Parties - The Company has determined that there were no transactions with related parties as of or during the three months ended March 31, 2020 and 2021.

10. ACCRUED EXPENSES AND OTHER LIABILITIES

Accrued expenses and other liabilities consisted of the following:

	December 31, 2020	March 31, 2021
Contributor awards	$ —	$ 5,098
Sales and VAT tax accrual	2,301	3,182
Marketing related accruals	1,513	1,757
Obligations under current leases	1,111	979
Employee related benefits	889	514
Other	2,820	3,426
Total	$ 8,634	$ 14,956

11. EMPLOYEE BENEFIT PLAN

The Company sponsors a profit sharing plan with a 401(k) feature, the Duolingo Retirement Plan, (the "Plan") for eligible employees. The current Plan, effective January 1, 2021, provides for Company safe harbor matching contributions of 100% of the first 4% of the employees' elective deferrals and 50% of the next 2%, with vesting starting upon the first day of employment. The prior year Plan provided for Company safe harbor matching contributions of 100% of the first 3% of the employees' elective deferrals and 50% of the next 2%, with vesting starting upon the first day of employment. The Company also has the option to make discretionary matching or profit sharing contributions. The Company made safe harbor matching contributions of approximately $341 and $702 during the three months ended March 31, 2020 and 2021, respectively. The Company did not make any discretionary matching or profit sharing contributions during the three months ended March 31, 2020 or 2021.

12. EARNINGS PER SHARE

Basic and diluted net loss per share attributable to common stockholders is presented in conformity with the two-class method required for participating securities. The Company considers all series of the convertible preferred stock to be participating securities. Under the two-class method, the net loss attributable to common stockholders is not allocated to the convertible preferred stock as the holders of the convertible preferred stock do not have a contractual obligation to share in the Company's losses. Basic net loss per share attributable to common stockholders is computed by dividing the net loss by the weighted-average number of shares of common stock outstanding during the period, less shares subject to repurchase. The diluted net loss per share attributable to common stockholders is computed by giving effect to all potential dilutive common stock equivalents outstanding for the period. For purposes of this calculation, the convertible preferred stock are considered to be potential common stock equivalents but have been excluded from the calculation of diluted net loss per share attributable to common stockholders as their effect is anti-dilutive.

	Three Months Ended March 31,	
(In thousands, except per share data)	2020	2021
Numerator:		
Net loss	$ (2,233)	$ (13,472)
Denominator:		
Weighted-average shares used in computing net loss per share attributable to common stockholders, basic and diluted	12,403	12,916
Basic and diluted loss per common share	$ (0.18)	$ (1.04)

Since the Company was in a net loss position for the three months ended March 31, 2020 and 2021, there is no difference between the number of shares used to calculate basic and diluted loss per share. The potential shares of common stock that were excluded from the computation of diluted net loss per share attributable to common stockholders for the period presented because including them would have been antidilutive are as follows:

	Number of shares March 31,	
	2020	2021
Convertible preferred stock	18,247	19,074
Stock options	3,451	4,136
Total	21,698	23,210

13. SUBSEQUENT EVENTS

Subsequent events were evaluated through July 19, 2021, the date that these unaudited condensed consolidated financial statements were available to be issued.

In April 2021, the Company granted options to purchase 72 shares of common stock at an exercise price of $52.80 per share and 553 RSUs to employees. The options and RSUs have unrecognized compensation expense of approximately $1,764 and $29,187, respectively, which the Company expects to recognize over a period of four years.

In June 2021, the Company granted 1,800 performance-based RSUs to the Company's founders (the Founder Awards). The Founder Awards vest upon the satisfaction of both a service-based condition and a performance-based condition and generally are settled one year after vesting. The service-based condition is satisfied as to 25% of the Founder Awards on each anniversary of the completion of the IPO, subject to the continuous service of the founders through the applicable date. The performance-based condition will be satisfied only if the closing price of the Company's Class A common stock reaches certain stock-price hurdles that are significantly in excess of the Company's current valuation over a period of ten years. The Founder Awards are divided into ten equal tranches with each tranche becoming eligible to vest upon achievement of the specified stock-price hurdles. The unrecognized compensation expense related to the Founder Awards is estimated to be approximately $100,543, which the Company expects to recognize over a period of one to seven years, depending upon the achievement of the stock-price hurdles.

Through and including , 2021 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

Part II

Information Not Required in Prospectus

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses, other than the underwriting discounts and commissions, payable by us, in connection with the sale of our Class A common stock being registered. All amounts are estimates except for the Securities and Exchange Commission (SEC) registration fee, the Financial Industry Regulatory Authority (FINRA) filing fee, and the Nasdaq Global Select Market listing fee.

SEC registration fee	$	60,861
FINRA filing fee		84,177
Nasdaq Global Select Market listing fee		125,000
Printing fees and expenses		300,000
Legal fees and expenses		1,600,000
Accounting fees and expenses		1,200,000
Transfer agent and registrar fees and expenses		30,000
Miscellaneous fees and expenses		599,962
Total	$	4,000,000

Item 14. Indemnification of Directors and Officers.

We expect to adopt an amended and restated certificate of incorporation, which will become effective immediately prior to the completion of this offering and will contain provisions authorized by the General Corporation Law of the State of Delaware (the Delaware General Corporation Law) that limit the personal liability of our directors for monetary damages to the fullest extent permitted by Delaware law. Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as directors, except liability for the following:

- any breach of the director's duty of loyalty to our company or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions in violation of Delaware law; or
- any transaction from which the director derived an improper personal benefit.

Any amendment to, or repeal of, these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission, or claim that occurred or arose prior to that amendment or repeal. If the Delaware General Corporation Law is amended to provide for further limitations on the personal liability of directors of corporations, then the personal liability of our directors will be further limited to the greatest extent permitted by the Delaware General Corporation Law.

Section 145 of the Delaware General Corporation Law, among other things, grants a Delaware corporation the power to, and authorizes a court to award, indemnification and advancement of expenses to officers, directors, and other corporate agents.

We expect to adopt amended and restated bylaws, which will become effective immediately prior to the completion of this offering and will provide that we will indemnify, to the fullest extent permitted by law, any

person who is or was a party or is threatened to be made a party to any action, suit, or proceeding by reason of the fact that he or she is or was one of our directors or officers or is or was serving at our request as a director or officer of another corporation, partnership, joint venture, trust, or other enterprise. Our amended and restated bylaws are expected to provide that we may indemnify to the fullest extent permitted by law any person who is or was a party or is threatened to be made a party to any action, suit, or proceeding by reason of the fact that he or she is or was one of our employees or agents or is or was serving at our request as an employee or agent of another corporation, partnership, joint venture, trust, or other enterprise. Our amended and restated bylaws will also provide that we must advance expenses incurred by or on behalf of a director or officer in advance of the final disposition of any action or proceeding, subject to very limited exceptions.

In addition, the Delaware General Corporation Law provides that to the extent a present or former director or officer of the corporation has been successful on the merits or otherwise in defense of any generally indemnifiable action, suit, or proceeding, that such person shall be indemnified by the corporation against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with such action, suit, or proceeding. For any acts or omissions occurring after December 31, 2020, the officers referenced in the immediately preceding sentence could be more limited as a matter of Delaware law.

Further, we have entered into or intend to enter into indemnification agreements with each of our directors and executive officers. Subject to certain limitations, these indemnification agreements will require us, among other things, to indemnify such directors and executive officers for certain expenses and against certain liabilities including, among other things, attorneys' fees, judgments, fines, and settlement amounts actually and reasonably paid or incurred by such director or officer in any action, suit, or proceeding arising out of their services as a director or officer or any other company or enterprise to which the person provides services at our request. Subject to certain exceptions, these indemnification agreements will also require us to advance certain expenses (including attorneys' fees and disbursements) actually and reasonably paid or incurred by the directors and executive officers in advance of the final disposition of the action, suit, or proceeding. We believe that these indemnification agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers.

The limitation of liability and indemnification provisions that are expected to be included, or are included, in our amended and restated certificate of incorporation, amended and restated bylaws, and in indemnification agreements that we enter into with our directors and executive officers may discourage stockholders from bringing a lawsuit against our directors and executive officers for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against our directors and executive officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be harmed to the extent that we pay the costs of settlement and damage awards against directors and executive officers as required by these indemnification provisions. At present, we are not aware of any pending litigation or proceeding involving any person who is or was one of our directors, officers, employees, or other agents or is or was serving at our request as a director, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise, for which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

We expect to obtain insurance policies under which, subject to the limitations of the policies, coverage is provided to our directors and executive officers against loss arising from claims made by reason of breach of fiduciary duty or other wrongful acts as a director or executive officer, including claims relating to public securities matters, and to us with respect to payments that may be made by us to these directors and executive officers pursuant to our indemnification obligations or otherwise as a matter of law.

Certain of our non-employee directors may, through their relationships with their employers, be insured and/or indemnified against certain liabilities incurred in their capacity as members of our board of directors.

The form of underwriting agreement for this initial public offering provides for indemnification by the underwriters of us and our officers and directors who sign this registration statement for specified liabilities, including matters arising under the Securities Act of 1933, as amended (the “Securities Act”).

Item 15. Recent Sales of Unregistered Securities.

The following list sets forth information as to all securities we have sold since January 1, 2018, which were not registered under the Securities Act.

(1) In November 2020, we issued an aggregate of 585,623 shares of our Series H convertible preferred stock to two accredited investors, at a price per share of $59.7653, for gross proceeds of approximately $35.0 million.

(2) In April 2020, we issued an aggregate of 241,658 shares of our Series G convertible preferred stock to one accredited investor, at a price per share of $41.3807, for gross proceeds of approximately $10.0 million.

(3) In November 2019, we issued an aggregate of 758,146 shares of our Series F convertible preferred stock to one accredited investor, at a price per share of $39.5702, for gross proceeds of approximately $30.0 million.

(4) We granted to our directors, employees, consultants, and other service providers options to purchase an aggregate of 5,436,303 shares of our common stock under our 2011 Equity Incentive Plan (2011 Plan), at exercise prices ranging from $7.11 to $52.80 per share.

(5) We granted to our directors, employees, consultants, and other service providers restricted stock units representing an aggregate of 594,705 shares of our common stock, under our 2011 Plan.

(6) We issued and sold to our employees, consultants, and other service providers an aggregate of 3,227,266 shares of our common stock upon the exercise of stock options under our 2011 Plan, for a weighted-average exercise price of $8.74 and aggregate consideration of approximately $9.5 million.

We claimed exemption from registration under the Securities Act for the sale and issuance of securities in the transactions described in paragraphs (1) through (3) by virtue of Section 4(a)(2) and/or Regulation D promulgated thereunder as transactions not involving any public offering. All of the purchasers of unregistered securities for which we relied on Section 4(a)(2) and/or Regulation D represented that they were accredited investors as defined under the Securities Act. We claimed such exemption on the basis that (a) the purchasers in each case represented that they intended to acquire the securities for investment only and not with a view to the distribution thereof and that they either received adequate information about the registrant or had access, through employment or other relationships, to such information and (b) appropriate legends were affixed to the stock certificates issued in such transactions.

We claimed exemption from registration under the Securities Act for the sales and issuances of securities in the transactions described in paragraphs (4)-(6) above under Section 4(a)(2) of the Securities Act in that such sales and issuances did not involve a public offering or under Rule 701 promulgated under the Securities Act, in that they were offered and sold either pursuant to written compensatory plans or pursuant to a written contract relating to compensation, as provided by Rule 701.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

Exhibit Number	Exhibit Description
1.1	Form of Underwriting Agreement
3.1	Amended and Restated Certificate of Incorporation, as currently in effect
3.2	Form of Amended and Restated Certificate of Incorporation, to be in effect immediately prior to the completion of this offering
3.3^	Bylaws, as currently in effect
3.4	Form of Amended and Restated Bylaws, to be in effect immediately prior to the completion of this offering
4.1	Reference is made to Exhibits 3.1 through 3.4
4.2^	Form of Class A Common Stock Certificate
4.3^	Amended and Restated Investors' Rights Agreement, dated November 6, 2020, by and among the Registrant and the investors listed therein
5.1	Opinion of Latham & Watkins LLP
10.1(a)^	Office Lease Agreement, dated November 18,2015, by and between Alpha 4, L.P. and the Registrant
10.1(b)^	Amendment to Office Lease Agreement, dated June 16, 2016, by and between Alpha 4, L.P. and the Registrant
10.1(c)^	Second Amendment to Office Lease Agreement, dated October 16, 2017, by and between Alpha 4, L.P. and the Registrant
10.1(d)^	Third Amendment to Office Lease Agreement, dated December 31, 2017, by and between Alpha 4, L.P. and the Registrant
10.1(e)^	Fourth Amendment to Office Lease Agreement, dated August 10, 2018, by and between Alpha 4, L.P. and the Registrant
10.1(f)^	Fifth Amendment to Office Lease Agreement, dated October 22, 2018, by and between Alpha 4, L.P. and the Registrant
10.1(g)^	Sixth Amendment to Office Lease Agreement, dated November 8, 2019, by and between Alpha 4, L.P. and the Registrant
10.2(a)#^	2011 Equity Incentive Plan, as amended
10.2(b)#^	Form of Stock Option Grant Notice and Stock Option Agreement under 2011 Equity Incentive Plan, as amended
10.2(c)#^	Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under 2011 Equity Incentive Plan, as amended
10.3(a)#	2021 Incentive Award Plan
10.3(b)#	Form of Stock Option Grant Notice and Stock Option Agreement under the 2021 Incentive Award Plan
10.3(c)#	Form of Restricted Stock Unit Award Grant Notice and Restricted Stock Unit Award Agreement under the 2021 Incentive Award Plan
10.4#	Employee Stock Purchase Plan
10.5#	Offer Letter by and between the Registrant and Luis von Ahn
10.6#	Offer Letter by and between the Registrant and Severin Hacker
10.7#	Offer Letter by and between the Registrant and Matthew Skaruppa
10.8#	Offer Letter by and between the Registrant and Robert Meese
10.9#	Offer Letter by and between the Registrant and Natalie Glance
10.10#	Offer Letter by and between the Registrant and Stephen Chen
10.11#	Non-Employee Director Compensation Program
10.12#	Form of Indemnification Agreement for Directors and Officers
10.13	Form of Exchange Agreement by and among the Registrant and the stockholders listed therein
10.14#	Form of Change in Control and Severance Agreement
21.1^	List of Subsidiaries
23.1	Consent of Deloitte & Touche LLP, Independent Registered Public Accounting Firm
23.2	Consent of Latham & Watkins LLP (included in Exhibit 5.1)
24.1^	Power of Attorney (reference is made to the signature page to the Registration Statement)

_____
# Indicates management contract or compensatory plan.
^ Previously filed.

(b) Financial Statement Schedules.

A financial statement schedule is included in the consolidated financial statements, which form part of this registration statement, and is incorporated herein by reference.

Item 17. Undertakings.

(a) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(b) The undersigned Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b) (1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Signatures

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Amendment No. 1 to Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Pittsburgh, Pennsylvania on July 19, 2021.

DUOLINGO, INC.

By: /s/ Luis von Ahn
Luis von Ahn
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Amendment No. 1 to Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Luis von Ahn Luis von Ahn	Chief Executive Officer and Director (Principal Executive Officer)	July 19, 2021
/s/ Matthew Skaruppa Matthew Skaruppa	Chief Financial Officer (Principal Financial and Accounting Officer)	July 19, 2021
* Amy Bohutinsky	Director	July 19, 2021
* Sara Clemens	Director	July 19, 2021
* Bing Gordon	Director	July 19, 2021
/s/ Severin Hacker Severin Hacker	Chief Technology Officer and Director	July 19, 2021
* Gillian Munson	Director	July 19, 2021
* Jim Shelton	Director	July 19, 2021
* Laela Sturdy	Director	July 19, 2021

By: /s/ Luis von Ahn
Luis von Ahn
Attorney-in-fact

Exhibit 1.1

Duolingo, Inc.

Class A Common Stock

Underwriting Agreement

[●], 2021

Goldman Sachs & Co. LLC,
As representative (the "Representative") of the several Underwriters
named in Schedule I hereto

c/o Goldman Sachs & Co. LLC
200 West Street
New York, New York 10282

Ladies and Gentlemen:

Duolingo, Inc., a Delaware corporation (the "Company"), proposes, subject to the terms and conditions stated in this agreement (this "Agreement"), to issue and sell to the Underwriters named in Schedule I hereto (the "Underwriters") an aggregate of [●] shares and, at the election of the Underwriters, up to [●] additional shares of Class A Common Stock, par value $0.0001 per share ("Stock") of the Company and the stockholders of the Company named in Schedule II hereto (the "Selling Stockholders") propose, subject to the terms and conditions stated in this Agreement, to sell to the Underwriters an aggregate of [●] shares. The aggregate of [●] shares of Stock to be sold by the Company and the Selling Stockholders is herein called the "Firm Shares" and the aggregate of [●] additional shares of Stock to be sold by the Company is herein called the "Optional Shares". The Firm Shares and the Optional Shares that the Underwriters elect to purchase pursuant to Section 2 hereof are herein collectively called the "Shares".

1. (a) The Company represents and warrants to, and agrees with, each of the Underwriters that:

(i) A registration statement on Form S–1 (File No. 333-257483) (the "Initial Registration Statement") in respect of the Shares has been filed with the Securities and Exchange Commission (the "Commission"); the Initial Registration Statement and any post-effective amendment thereto, each in the form heretofore delivered to you, have been declared effective by the Commission in such form; other than a registration statement, if any, increasing the size of the offering (a "Rule 462(b) Registration Statement"), filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the "Act"), which became effective upon filing, no other document with respect to the Initial Registration Statement has been filed with the Commission; and no stop order suspending the effectiveness of the Initial Registration Statement, any post-effective amendment thereto or the Rule 462(b) Registration Statement, if any, has been issued and, to the Company's knowledge, no proceeding for that purpose or pursuant to Section 8A of the Act has been initiated or threatened by the Commission (any preliminary prospectus included in the Initial Registration Statement or filed with the Commission pursuant to Rule 424(a) under the Act is hereinafter called a "Preliminary Prospectus"; the various parts of the Initial Registration Statement and the Rule 462(b) Registration

Statement, if any, including all exhibits thereto and including the information contained in the form of final prospectus filed with the Commission pursuant to Rule 424(b) under the Act in accordance with Section 5(a) hereof and deemed by virtue of Rule 430A under the Act to be part of the Initial Registration Statement at the time it was declared effective, each as amended at the time such part of the Initial Registration Statement became effective or such part of the Rule 462(b) Registration Statement, if any, became or hereafter becomes effective, are hereinafter collectively called the "Registration Statement"; the Preliminary Prospectus relating to the Shares that was included in the Registration Statement immediately prior to the Applicable Time (as defined in Section 1(a)(iii) hereof) is hereinafter called the "Pricing Prospectus"; such final prospectus, in the form first filed pursuant to Rule 424(b) under the Act, is hereinafter called the "Prospectus"; any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Act or Rule 163B under the Act is hereinafter called a "Testing-the-Waters Communication"; any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Act is hereinafter called a "Written Testing-the-Waters Communication"; and any "issuer free writing prospectus" as defined in Rule 433 under the Act relating to the Shares is hereinafter called an "Issuer Free Writing Prospectus");

(ii) (A) No order preventing or suspending the use of any Preliminary Prospectus or any Issuer Free Writing Prospectus has been issued by the Commission, and (B) each Preliminary Prospectus, at the time of filing thereof, conformed in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder, and did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with the Underwriter Information (as defined in Section 9(c) of this Agreement)**;**

(iii) For the purposes of this Agreement, the "Applicable Time" is [●] [a.m.][p.m.] (Eastern time) on the date of this Agreement; the Pricing Prospectus, as supplemented by the information listed on Schedule III(c) hereto, taken together (collectively, the "Pricing Disclosure Package"), as of the Applicable Time, did not, and as of each Time of Delivery (as defined in Section 4(a) of this Agreement) will not, include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and each Issuer Free Writing Prospectus and each Written Testing-the-Waters Communication does not conflict with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus, and each Issuer Free Writing Prospectus and each Written Testing-the-Waters Communication, as supplemented by and taken together with the Pricing Disclosure Package, as of the Applicable Time, did not, and as of each Time of Delivery, will not, include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to statements or omissions made in reliance upon and in conformity with the Underwriter Information;

(iv) The Registration Statement conforms, and the Prospectus and any further amendments or supplements to the Registration Statement and the Prospectus will conform, in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder and do not and will not, as of the applicable effective date as to each part of the Registration Statement, as of the applicable filing date as to the Prospectus and any amendment or supplement thereto, and as of each Time of Delivery, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with the Underwriter Information;

(v) Neither the Company nor any of its subsidiaries has, since the date of the latest audited financial statements included in the Pricing Prospectus, (i) sustained any loss or interference with its business that is material to the Company and its subsidiaries taken as a whole from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree or (ii) entered into any transaction or agreement (whether or not in the ordinary course of business) that is material to the Company and its subsidiaries taken as a whole or incurred any liability or obligation, direct or contingent, that is material to the Company and its subsidiaries taken as a whole, in each case otherwise than as set forth or contemplated in the Pricing Prospectus; and, since the respective dates as of which information is given in the Registration Statement and the Pricing Prospectus and other than as described therein, there has not been (x) any change in the capital stock (other than as a result of (i) the exercise or settlement, if any, of stock options, restricted stock units or other awards, or the award, if any, of stock options, restricted stock, restricted stock units or other awards in the ordinary course of business pursuant to the Company's equity plans that are described in the Pricing Prospectus and the Prospectus or (ii) the issuance, if any, of stock upon the reclassification, conversion and/or stock split of Company securities as described in the Pricing Prospectus and the Prospectus) or long-term debt of the Company or any of its subsidiaries or (y) any Material Adverse Effect (as defined below); as used in this Agreement, “Material Adverse Effect” shall mean any material adverse change or effect, or any development involving a prospective material adverse change or effect, in or affecting (i) the business, properties, general affairs, management, financial position, stockholders' equity or results of operations of the Company and its subsidiaries, taken as a whole, except as set forth or contemplated in the Pricing Prospectus, or (ii) the ability of the Company to perform its obligations under this Agreement, including the issuance and sale of the Shares, or to consummate the transactions contemplated in the Pricing Prospectus and the Prospectus;

(vi) The Company and its subsidiaries do not own any real property and good and marketable title to all personal property owned by them that is material to the business of the Company and its subsidiaries taken as a whole, in each case free and clear of all liens, encumbrances and defects except such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company and its subsidiaries; and any real property and buildings held under lease by the Company and its subsidiaries are held by them under valid, subsisting and enforceable leases (subject to the effects of (i) bankruptcy, insolvency, fraudulent conveyance, fraudulent transfer, reorganization, moratorium, or

other similar laws relating to or affecting rights or remedies of creditors generally, (ii) the application of general principles of equity (including without limitation, concepts of materiality, reasonableness, good faith, and fair dealing, regardless of whether enforcement is considered in proceedings at law or in equity) and (iii) applicable laws and public policy with respect to rights to indemnity and contribution) with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and buildings by the Company and its subsidiaries;

(vii) Each of the Company and each of its subsidiaries has been (i) duly organized and is validly existing and in good standing (where such concept exists) under the laws of its jurisdiction of organization, with power and authority (corporate and other) to own its properties and conduct its business as described in the Pricing Prospectus, and (ii) duly qualified as a foreign corporation for the transaction of business and is in good standing (where such concept exists) under the laws of each other jurisdiction in which it owns or leases properties or conducts any business so as to require such qualification, except, in the case of this clause (ii), where the failure to be so qualified or in good standing would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and each subsidiary of the Company required to be listed in the Registration Statement under Item 601(b)(21) of Regulation S-K has been listed in the Registration Statement;

(viii) The Company has an authorized capitalization as set forth in the Pricing Prospectus and all of the issued shares of capital stock of the Company, including the Shares to be sold by the Selling Stockholders, have been duly and validly authorized and issued and are fully paid and non-assessable and conform in all material respects to the description of the Stock contained in the Pricing Disclosure Package and the Prospectus; and all of the issued shares of capital stock of each subsidiary of the Company have been duly and validly authorized and issued, are fully paid and non-assessable and (except, in the case of any foreign subsidiary, for directors' qualifying shares) are owned directly or indirectly by the Company, free and clear of all liens, encumbrances, equities or claims;

(ix) The Shares to be issued and sold by the Company to the Underwriters hereunder have been duly and validly authorized and, when issued and delivered against payment therefor as provided herein, will be duly and validly issued and fully paid and non-assessable and will conform in all material respects to the description of the Stock contained in the Pricing Disclosure Package and the Prospectus; and the issuance of the Shares is not subject to any preemptive or similar rights except as have been validly waived or complied with;

(x) The issue and sale of the Shares to be sold by the Company and the compliance by the Company with this Agreement and the consummation of the transactions contemplated in this Agreement and the Pricing Prospectus will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, (A) any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any of the property or assets of the Company or any of its subsidiaries is subject, (B) the certificate of incorporation or by-laws (or other applicable organizational document) of the Company,

or (C) any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its subsidiaries or any of their properties except, in the case of clauses (A) and (C) for such defaults, breaches, or violations that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental agency or body is required for the issue of the Shares to be sold by the Company and the sale of the Shares or the consummation by the Company of the transactions contemplated by this Agreement, except such as have been obtained under the Act, the approval by the Financial Industry Regulatory Authority ("FINRA") of the underwriting terms and arrangements, the approval for listing of the Shares on the Nasdaq Global Select Market (the "Exchange"), and such consents, approvals, authorizations, orders, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the purchase and distribution of the Shares by the Underwriters;

(xi) Neither the Company nor any of its subsidiaries is (i) in violation of its certificate of incorporation or by-laws (or other applicable organizational document), (ii) in violation of any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its subsidiaries or any of their properties, or (iii) in default in the performance or observance of any obligation, agreement, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which it is a party or by which it or any of its properties may be bound, except, in the case of the foregoing clauses (ii) and (iii), for such violations or defaults as would not, individually or in the aggregate, have a Material Adverse Effect;

(xii) The statements set forth in the Pricing Prospectus and the Prospectus under the caption "Description of Capital Stock", insofar as they purport to constitute a summary of the terms of the Stock, under the caption "Material U.S. Federal Income Tax Consequences to Non-U.S. Holders", and under the caption "Underwriting", insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate and complete in all material respects;

(xiii) Other than as set forth in the Pricing Prospectus and the Prospectus, there are no legal, governmental or regulatory investigations, actions, demands, claims, suits, arbitrations, inquiries or proceedings ("Actions") pending to which the Company or any of its subsidiaries or, to the Company's knowledge, any officer or director of the Company is a party or of which any property or assets of the Company or any of its subsidiaries or, to the Company's knowledge, any officer or director of the Company is the subject which, if determined adversely to the Company or any of its subsidiaries (or such officer or director), would individually or in the aggregate reasonably be expected to have a Material Adverse Effect; and, to the Company's knowledge, no such proceedings are threatened or contemplated by governmental authorities or others;

(xiv) The Company is not and, after giving effect to the offering and sale of the Shares and the application of the proceeds thereof as described in the Pricing Prospectus and the Prospectus, will not be an "investment company", as such term is defined in the Investment Company Act of 1940, as amended (the "Investment Company Act");

(xv) At the time of filing the Initial Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or any offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the Act) of the Shares, and at the date hereof, the Company was not and is not an "ineligible issuer," as defined in Rule 405 under the Act;

(xvi) Deloitte & Touche LLP, who has certified certain financial statements of the Company and its subsidiaries, is an independent public accounting firm as required by the Act and the rules and regulations of the Commission thereunder;

(xvii) The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) that (i) has been designed to comply with the requirements of the Exchange Act applicable to the Company, (ii) has been designed by the Company's principal executive officer and principal financial officer, or under their supervision**,** to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles ("GAAP") and (iii) is designed to provide reasonable assurance that (A) transactions are executed in accordance with management's general or specific authorization, (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets, (C) access to assets is permitted only in accordance with management's general or specific authorization and (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and except as disclosed in the Pricing Prospectus and the Prospectus, the Company is not aware of any material weaknesses in its internal control over financial reporting, it being understood that this subsection shall not require the Company to comply with Section 404 of the Sarbanes Oxley Act of 2002, as amended, and the rules and regulations promulgated in connection therewith (the "Sarbanes-Oxley Act"), as of an earlier date than it would otherwise be required to so comply under applicable law;

(xviii) Since the date of the latest audited financial statements included in the Pricing Prospectus, there has been no change in the Company's internal control over financial reporting that has materially and adversely affected, or is reasonably likely to materially and adversely affect, the Company's internal control over financial reporting;

(xix) The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act; such disclosure controls and procedures have been designed to ensure that material information relating to the Company and its subsidiaries is made known to the Company's principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective;

(xx) This Agreement has been duly authorized, executed and delivered by the Company;

(xxi) Neither the Company nor any of its subsidiaries, nor any director or officer, nor, to the knowledge of the Company, any employee of the Company or any of its subsidiaries or any agent, affiliate or other person associated with or acting on behalf

of the Company or any of its subsidiaries has (i) made, offered, promised or authorized any unlawful contribution, gift, entertainment or other unlawful expense (or taken any act in furtherance thereof); (ii) made, offered, promised or authorized any direct or indirect unlawful payment; or (iii) violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977, as amended, or the rules and regulations thereunder, the Bribery Act 2010 of the United Kingdom or any other applicable anti-corruption, anti-bribery or related law, statute or regulation (collectively, "Anti-Corruption Laws"); the Company and its subsidiaries have conducted their businesses in compliance with Anti-Corruption Laws and have instituted and maintained and will continue to maintain policies and procedures reasonably designed to promote and achieve compliance with such laws and with the representations and warranties contained herein; neither the Company nor any of its subsidiaries will use, directly or, to their respective knowledge, indirectly, the proceeds of the offering in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any person in violation of Anti-Corruption Laws;

(xxii) The operations of the Company and its subsidiaries are and have been conducted at all times in compliance in all material respects with the requirements of applicable anti-money laundering laws, including, but not limited to, the Bank Secrecy Act of 1970, as amended by the USA PATRIOT ACT of 2001, and the rules and regulations promulgated thereunder, and the applicable anti-money laundering laws of the various jurisdictions in which the Company and its subsidiaries conduct business, the rules and regulations thereunder and any related or similar rules, regulation or guidelines issued, administered or enforced by any governmental agency (collectively, the "Money Laundering Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened;

(xxiii) Neither the Company nor any of its subsidiaries, nor any director or officer, nor, to the knowledge of the Company, any employee of the Company or any of its subsidiaries or any agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries is (i) currently the subject or the target of any sanctions administered or enforced by the U.S. Government, including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury ("OFAC"), or the U.S. Department of State and including, without limitation, the designation as a "specially designated national" or "blocked person," the European Union, Her Majesty's Treasury, the United Nations Security Council, or other applicable sanctions authority (collectively, "Sanctions"), (ii) located, organized, or resident in a country or territory that is the subject or target of Sanctions (a "Sanctioned Jurisdiction"). The Company will not directly or indirectly use the proceeds of the offering of the Shares hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund or facilitate any unauthorized activities of or business with any person that is the target of Sanctions, or in any country or territory, that, at the time of such funding, is the subject or the target of comprehensive Sanctions or (ii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions. The Company and its subsidiaries are not now knowingly engaged in, and will not knowingly engage in, any unauthorized dealings or transactions

with or involving any individual or entity that is at the time of such dealing or transaction, the subject or target of Sanctions or with any Sanctioned Jurisdiction; the Company and its subsidiaries have instituted, and maintain, policies and procedures designed to promote and achieve continued compliance with Sanctions;

(xxiv) The financial statements included in the Registration Statement, the Pricing Prospectus and the Prospectus, together with the related schedules and notes, present fairly in all material respects the financial position of the Company and its subsidiaries at the dates indicated and the statement of operations, stockholders' equity and cash flows of the Company and its subsidiaries for the periods specified; said financial statements have been prepared in conformity with GAAP applied on a consistent basis throughout the periods involved. The selected financial data and the summary financial information included in the Registration Statement, the Pricing Prospectus and the Prospectus present fairly in all material respects the information shown therein and have been compiled on a basis consistent with that of the audited financial statements included therein. Except as included therein, no historical or pro forma financial statements or supporting schedules are required to be included in the Registration Statement, the Pricing Prospectus or the Prospectus under the Act or the rules and regulations promulgated thereunder. All disclosures contained in the Registration Statement, the Pricing Prospectus and the Prospectus regarding "non-GAAP financial measures" (as such term is defined by the rules and regulations of the Commission) comply with Regulation G of the Exchange Act and Item 10 of Regulation S-K of the Act, to the extent applicable;

(xxv) Except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, the Company and each of its subsidiaries (i) own or otherwise possess adequate rights to use all material patents, patent applications, trademarks, service marks, trade names, domain names, copyrights and registrations and applications thereof, licenses, know-how, software, systems and technology (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures and other intellectual property) necessary for the conduct of their respective businesses, (ii) to the Company's knowledge, do not, through the conduct of their respective businesses, infringe, violate or conflict with any such right of others and (iii) have not received any written notice of any claim of infringement, violation or conflict with, any such rights of others;

(xxvi) Except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect: (1) the Company and its subsidiaries' information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, "IT Systems") are adequate for, and operate and perform as required in connection with the operation of the business of the Company and its subsidiaries as currently conducted, and to the Company's knowledge, are free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants; (2) the Company and its subsidiaries have implemented and maintained commercially reasonable controls, policies, procedures, and safeguards to maintain and protect their material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and data (including all personal and, personally identifiable ("Personal Data")) used in connection with their businesses; (3) there have been no breaches, violations, outages or unauthorized uses of or accesses to same, except for those that have been

remedied without material cost or liability or the duty to notify any other person, nor any incidents under internal review or investigations relating to the same; and (4) the Company and its subsidiaries are presently in compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Personal Data and to the protection of such IT Systems and Personal Data from unauthorized use, access, misappropriation or modification;

(xxvii) Nothing has come to the attention of the Company that has caused the Company to believe that the statistical and market-related data included in each of the Registration Statement, the Pricing Prospectus and the Prospectus is not based on or derived from sources that are reliable and accurate in all material respects;

(xxviii) There is and has been no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply with any applicable provision of the Sarbanes-Oxley Act, including Section 402 related to loans and Sections 302 and 906 related to certifications;

(xxix) Neither the Company nor, to the Company's knowledge, any individual or entity acting on the Company's behalf has taken or will take, directly or indirectly, any action designed to or that could reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company or any of its subsidiaries in connection with the offering of the Shares;

(xxx) The Company and each of its subsidiaries have such permits, licenses, approvals, consents, franchises, certificates of need and other approvals or authorizations of governmental or regulatory authorities ("Permits") as are necessary under applicable law to own their respective properties and conduct their respective businesses in the manner described in the Registration Statement, the Pricing Prospectus and the Prospectus, except for any of the foregoing that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Neither the Company nor any of its subsidiaries has received notice of any proceedings related to the revocation or modification of any such Permits that, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected to have a Material Adverse Effect;

(xxxi) The Company and its subsidiaries, taken as a whole, are insured against such losses and risks and in such amounts as are, in the reasonable judgment of the Company, prudent and customary in the businesses in which they are engaged and as required by law;

(xxxii) From the time of initial confidential submission of a registration statement relating to the Shares with the Commission through the date hereof, the Company has been and is an "emerging growth company" as defined in Section 2(a)(19) of the Act (an "Emerging Growth Company"); and

(xxxiii) Neither the Company nor any of its subsidiaries has any securities rated by any "nationally recognized statistical rating organization," as such term is defined in Section 3(a)(62) of the Exchange Act.

(b) Each of the Selling Stockholders severally and not jointly represents and warrants to, and agrees with, each of the Underwriters and the Company that:

(i) All consents, approvals, authorizations and orders necessary for the execution and delivery by such Selling Stockholder of this Agreement and the Power of Attorney and the Custody Agreement referred to below, and for the sale and delivery of the Shares to be sold by such Selling Stockholder hereunder, have been obtained, except for the registration under the Act of the Shares and such consents, approvals, authorizations and orders as may be required under state securities or Blue Sky laws in connection with the purchase and distribution of the Shares by the Underwriters, the rules and regulations of FINRA or the approval for listing on the Exchange or such consents, approvals, authorizations and orders that have been obtained or such consents, approvals, authorizations and orders that have been obtained or, if not obtained, would not individually or in the aggregate, affect the validity of the Shares to be sold by such Selling Stockholder or reasonably be expected to materially impair the ability of such Selling Stockholder to consummate the transactions contemplated by this Agreement; and such Selling Stockholder has full right, power and authority to enter into this Agreement, the Power-of-Attorney and the Custody Agreement and to sell, assign, transfer and deliver the Shares to be sold by such Selling Stockholder hereunder;

(ii) The sale of the Shares to be sold by such Selling Stockholder to the Underwriters hereunder and the compliance by such Selling Stockholder with this Agreement, the Power of Attorney and the Custody Agreement and the consummation of the transactions herein and therein contemplated will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, any statute, indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which such Selling Stockholder is a party or by which such Selling Stockholder is bound or to which any of the property or assets of such Selling Stockholder is subject, nor will such action result in any violation of the provisions of the Certificate of Incorporation or By-laws of such Selling Stockholder if such Selling Stockholder is a corporation or the Partnership Agreement of such Selling Stockholder if such Selling Stockholder is a partnership (or similar applicable organizational document) or any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over such Selling Stockholder or any of its subsidiaries or any property or assets of such Selling Stockholder, except, in each case, for any such conflict, breach, violation or default that would not, individually or in the aggregate, affect the validity of the Shares to be sold by such Selling Stockholder to the Underwriters hereunder or reasonably be expected to materially impair the ability of such Selling Stockholder to consummate the transactions contemplated by this Agreement;

(iii) Such Selling Stockholder has, and immediately prior to each Time of Delivery (as defined in Section 4 hereof) such Selling Stockholder will have, good and valid title to, or a valid “security entitlement” within the meaning of Section 8-501 of the New York Uniform Commercial Code in respect of, the Shares to be sold by such Selling Stockholder hereunder at such Time of Delivery, free and clear of all liens, encumbrances, equities or claims other than those set forth in the Custody Agreement; and, upon delivery of such Shares and payment therefor pursuant hereto, good and valid title to such Shares, free and clear of all liens, encumbrances, equities or claims will pass to the several Underwriters;

(iv) On or prior to the date of the Pricing Prospectus, such Selling Stockholder has executed and delivered to the Underwriters an agreement substantially in the form of Annex II hereto.

(v) Such Selling Stockholder has not taken and will not take, directly or indirectly, any action that is designed to or that has constituted or would reasonably be expected to cause or result in stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Shares;

(vi) To the extent that any statements or omissions made in the Registration Statement, any Preliminary Prospectus, the Prospectus or any amendment or supplement thereto are made in reliance upon and in conformity with written information furnished to the Company by such Selling Stockholder pursuant to Items 7 and 11(m) of Form S–1 and expressly for use therein it being understood and agreed that the only information furnished by such Selling Stockholder to the Company consists of (i) the legal name of such Selling Stockholder, (ii) the number of Shares beneficially owned by such Selling Stockholder before and after the offering, and (iii) the address and other information with respect to such Selling Stockholder (excluding percentages) which appears in the Registration Statement, the Preliminary Prospectus or the Prospectus in the table (and corresponding footnote) under the caption “Principal and Selling Stockholders” (with respect to such Selling Stockholder, the “Selling Stockholder Information”), such Registration Statement and Preliminary Prospectus did, each as of its respective date, and the Prospectus and any further amendments or supplements to the Registration Statement and the Prospectus will, each as of its respective date, when they become effective or are filed with the Commission, as the case may be, not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading;

(vii) In order to document the Underwriters' compliance with the reporting and withholding provisions of the Tax Equity and Fiscal Responsibility Act of 1982 with respect to the transactions herein contemplated, such Selling Stockholder will deliver to you prior to or at the Time of Delivery a properly completed and executed United States Treasury Department Form W-9 (or other applicable form or statement specified by Treasury Department regulations in lieu thereof);

(viii) Certificates in negotiable form or book-entry securities entitlements representing all of the Shares to be sold by such Selling Stockholder hereunder have been placed in custody under a Custody Agreement, in the form heretofore furnished to you (the “Custody Agreement”), duly executed and delivered by such Selling Stockholder to American Stock Transfer & Trust Company, LLC, as custodian (the “Custodian”), and such Selling Stockholder has duly executed and delivered a Power of Attorney, in the form heretofore furnished to you (the “Power of Attorney”), appointing the persons indicated in Schedule II hereto, and each of them, as such Selling Stockholder's attorneys-in-fact (the “Attorneys-in-Fact”) with authority to execute and deliver this Agreement on behalf of such Selling Stockholder, to determine the purchase price to be paid by the Underwriters to the Selling Stockholders as provided in Section 2 hereof, to authorize the delivery of the Shares to be sold by such Selling Stockholder hereunder and otherwise to act on behalf of such Selling Stockholder in connection with the transactions contemplated by this Agreement and the Custody Agreement;

(ix) The Shares held in custody for such Selling Stockholder under the Custody Agreement are subject to the interests of the Underwriters hereunder; the arrangements made by such Selling Stockholder for such custody, and the appointment by such Selling Stockholder of the Attorneys-in-Fact by the Power of Attorney, are to that extent irrevocable; the obligations of the Selling Stockholders hereunder shall not be terminated by operation of law, whether by the death or incapacity of any individual Selling Stockholder or, in the case of an estate or trust, by the death or incapacity of any executor or trustee or the termination of such estate or trust, or in the case of a partnership or corporation, by the dissolution of such partnership, limited liability company or corporation, or by the occurrence of any other event; if any individual Selling Stockholder or any such executor or trustee should die or become incapacitated, or if any such estate or trust should be terminated, or if any such partnership, limited liability company or corporation should be dissolved, or if any other such event should occur, before the delivery of the Shares to be sold by such Selling Stockholder hereunder, certificates representing the Shares to be sold by such Selling Stockholder hereunder shall be delivered by or on behalf of the Selling Stockholders in accordance with the terms and conditions of this Agreement and of the Custody Agreements; and actions taken by the Attorneys-in-Fact pursuant to the Powers of Attorney shall be as valid as if such death, incapacity, termination, dissolution or other event had not occurred, regardless of whether or not the Custodian, the Attorneys-in-Fact, or any of them, shall have received notice of such death, incapacity, termination, dissolution or other event;

(x) Such Selling Stockholder will not directly or indirectly use the proceeds of the offering of the Shares hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, (i) to fund or facilitate any activities of or business with any person, or in any country or territory, that, at the time of such funding, is the subject or the target of Sanctions, or in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions, or (ii) in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any person in violation of any Money Laundering Laws or any Anti-Corruption Laws; and

(xi) Such Selling Stockholder is not prompted by any material information concerning the Company or any of its subsidiaries that is not disclosed in the Pricing Prospectus to sell its Shares pursuant to this Agreement.

2. Subject to the terms and conditions herein set forth, the Company and each of the Selling Stockholders agree, severally and not jointly, to sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company and each of the Selling Stockholders, at a purchase price per share of $[●], the number of Firm Shares (to be adjusted by you so as to eliminate fractional shares) determined by multiplying the aggregate number of Firm Shares to be sold by the Company and each of the Selling Stockholders as set forth opposite their respective names in Schedule II hereto by a fraction, the numerator of which is the aggregate number of Firm Shares to be purchased by such Underwriter as set forth opposite the name of such Underwriter in Schedule I hereto and the denominator of which is the aggregate number of Firm Shares to be purchased by all of the Underwriters from the Company and all of the Selling Stockholders hereunder and (b) in the event and to the extent that the Underwriters shall exercise the election to purchase Optional Shares as provided below, the Company agrees to sell to each of the Underwriters, and each of

the Underwriters agrees, severally and not jointly, to purchase from the Company, at the purchase price per share set forth in clause (a) of this Section 2 (provided that the purchase price per Optional Share shall be reduced by an amount per share equal to any dividends or distributions declared by the Company and payable on the Firm Shares but not payable on the Optional Shares), that portion of the number of Optional Shares as to which such election shall have been exercised (to be adjusted by you so as to eliminate fractional shares) determined by multiplying such number of Optional Shares by a fraction, the numerator of which is the maximum number of Optional Shares which such Underwriter is entitled to purchase as set forth opposite the name of such Underwriter in Schedule I hereto and the denominator of which is the maximum number of Optional Shares that all of the Underwriters are entitled to purchase hereunder.

The Company hereby grants to the Underwriters the right to purchase at their election up to [●] Optional Shares, at the purchase price per share set forth in the paragraph above, for the sole purpose of covering sales of shares in excess of the number of Firm Shares; provided that the purchase price per Optional Share shall be reduced by an amount per share equal to any dividends or distributions declared by the Company and payable on the Firm Shares but not payable on the Optional Shares. Any such election to purchase Optional Shares may be exercised only by written notice from you to the Company and the Attorneys-in-Fact, given within a period of 30 calendar days after the date of this Agreement and setting forth the aggregate number of Optional Shares to be purchased and the date on which such Optional Shares are to be delivered, as determined by you but in no event earlier than the First Time of Delivery (as defined in Section 4 hereof) or, unless you and the Company and the Attorneys-in-Fact otherwise agree in writing, earlier than two or later than ten business days after the date of such notice.

3. Upon the authorization by you of the release of the Shares, the several Underwriters propose to offer the Shares for sale upon the terms and conditions set forth in the Pricing Disclosure Package and the Prospectus.

4. (a) The Shares to be purchased by each Underwriter hereunder, in definitive or book-entry form, and in such authorized denominations and registered in such names as the Representatives may request upon at least forty-eight hours' prior notice to the Company and the Selling Stockholders shall be delivered by or on behalf of the Company and the Selling Stockholders to the Representatives, through the facilities of the Depository Trust Company (“DTC”), for the account of such Underwriter, against payment by or on behalf of such Underwriter of the purchase price therefor by wire transfer of Federal (same-day) funds to the accounts specified by the Company and the Custodian to the Representatives at least forty-eight hours in advance. The Company and the Selling Stockholders will cause the certificates, if any, representing the Shares to be made available for checking and packaging at least twenty-four hours prior to the Time of Delivery (as defined below) with respect thereto at the office of DTC or its designated custodian (the “Designated Office”). The time and date of such delivery and payment shall be, with respect to the Firm Shares, 9:30 a.m., New York time, on [●] 2021 or such other time and date as the Representatives, the Company and the Attorneys-in-Fact may agree upon in writing, and, with respect to the Optional Shares, 9:30 a.m., New York time, on the date specified by the Representatives in each written notice given by the Representatives of the Underwriters' election to purchase such Optional Shares, or such other time and date as the Representatives**,** the Company and the Attorneys-in-Fact may agree upon in writing. Such time and date for delivery of the Firm Shares is herein called the “First Time of Delivery”, each such time and date for delivery of the Optional Shares, if not the First Time of Delivery, is herein

called the “Second Time of Delivery”, and each such time and date for delivery is herein called a “Time of Delivery”.

(b) The documents to be delivered at each Time of Delivery by or on behalf of the parties hereto pursuant to Section 8 hereof, including the cross receipt for the Shares and any additional documents requested by the Underwriters pursuant to Section 8(l) hereof will be delivered at the offices of Skadden, Arps, Slate, Meagher & Flom LLP, One Manhattan West, New York, NY 10001 (the “Closing Location”), and the Shares will be delivered at the Designated Office, all at such Time of Delivery; provided that all documents may be delivered electronically unless otherwise agreed by the parties hereto.

5. The Company agrees with each of the Underwriters:

(a) To prepare the Prospectus in a form approved by you and to file such Prospectus pursuant to Rule 424(b) under the Act not later than the Commission's close of business on the second business day following the execution and delivery of this Agreement, or, if applicable, such earlier time as may be required by Rule 430A(a)(3) under the Act; to make no further amendment or any supplement to the Registration Statement or the Prospectus prior to the last Time of Delivery which shall be disapproved by you promptly after reasonable notice thereof; to advise you, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any amendment or supplement to the Prospectus has been filed and to furnish you with copies thereof; to file promptly all material required to be filed by the Company with the Commission pursuant to Rule 433(d) under the Act; to advise you, promptly after it receives notice thereof, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus in respect of the Shares, of the suspension of the qualification of the Shares for offering or sale in any jurisdiction, of the initiation or threatening of any proceeding for any such purpose, or of any request by the Commission for the amending or supplementing of the Registration Statement or the Prospectus or for additional information; and, in the event of the issuance of any stop order or of any order suspending the effectiveness of the Registration Statement or any part thereof or preventing or suspending the use of any Preliminary Prospectus or other prospectus or suspending any such qualification, to promptly use its best efforts to obtain the withdrawal of such order;

(b) Promptly from time to time to take such action as you may reasonably request to qualify the Shares for offering and sale under the securities laws of such jurisdictions as you may request and to use commercially reasonable efforts to comply with such laws so as to permit the continuance of sales and dealings therein in such jurisdictions for as long as may be necessary to complete the distribution of the Shares, provided that in connection therewith the Company shall not be required to qualify as a foreign corporation (where not otherwise required) or to file a general consent to service of process in any jurisdiction (where not otherwise required);

(c) Prior to 10:00 a.m., New York City time, on the New York Business Day next succeeding the date of this Agreement (or such other time as may be agreed to by you, the Company and the Selling Stockholders) and from time to time, to furnish the Underwriters with written and electronic copies of the Prospectus in New York City in such quantities as you may reasonably request, and, if the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required at any time prior to the expiration of nine months after the time of issue of the Prospectus in connection with the offering or sale of the Shares and if at

such time any event shall have occurred as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is delivered, not misleading, or, if for any other reason it shall be necessary during such same period to amend or supplement the Prospectus in order to comply with the Act, to notify you and upon your request to prepare and furnish without charge to each Underwriter and to any dealer in securities as many written and electronic copies as you may from time to time reasonably request of an amended Prospectus or a supplement to the Prospectus which will correct such statement or omission or effect such compliance; and in case any Underwriter is required to deliver a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) in connection with sales of any of the Shares at any time nine months or more after the time of issue of the Prospectus, upon your request but at the expense of such Underwriter, to prepare and deliver to such Underwriter as many written and electronic copies as you may request of an amended or supplemented Prospectus complying with Section 10(a)(3) of the Act; "New York Business Day" shall mean each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in New York are generally authorized or obligated by law or executive order to close;

(d) To make generally available to its securityholders as soon as practicable (which may be satisfied by filing with the Commission's Electronic Data Gathering Analysis and Retrieval System ("EDGAR")), but in any event not later than sixteen months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Act), an earnings statement of the Company and its subsidiaries (which need not be audited) complying with Section 11(a) of the Act and the rules and regulations of the Commission thereunder (including, at the option of the Company, Rule 158);

(e) During the period beginning from the date hereof and continuing to and including the date 180 days after the date of the Prospectus (the "Company Lock-Up Period"), not to (i) offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, or file with or to the Commission a registration statement under the Act relating to, any securities of the Company that are substantially similar to the Shares, including but not limited to any options or warrants to purchase shares of Stock, shares of the Company's Class B Common Stock (the "Class B Common Stock" and together with the Stock, the "Common Stock") or any other securities that are convertible into or exchangeable for, or that represent the right to receive, Common Stock or any such substantially similar securities, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing or (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Stock or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise, without Goldman Sachs & Co. LLC's prior written consent; provided that the foregoing restrictions shall not apply to: (A) the Shares to be sold hereunder; (B) any reclassification of the Common Stock as described in the Pricing Prospectus; (C) the issuance by the Company of Common Stock or any securities or other awards convertible into, exercise for, or that represent the right to receive Common Stock pursuant to the Company's equity incentive plans or employee stock purchase plans that are described in the Pricing Prospectus (the "Company's Plans") or otherwise in equity compensation arrangements described in the Pricing Prospectus or any shares of Common Stock issuable upon the conversion, exercise or settlement of such awards; (D) the

issuance by the Company of Shares upon the conversion or exchange of convertible or exchangeable securities or the exercise of warrants or options (including net exercise, conversion or settlement and in respect of tax withholding payments due upon the exercise of options or the vesting of equity-based awards) or the settlement of restricted stock units or other equity awards (including net settlement and in respect of tax withholding payments), in each case outstanding on or prior to the date hereof or as otherwise contemplated by any Lock-Up Letter (as defined in Section 8(j) below) entered into by the Company's securityholders; (E) facilitating the establishment of a trading plan on behalf of a securityholder, officer or director of the Company pursuant to Rule 10b5-1 under the Exchange Act for the transfer of Common Stock as permitted by a Lock-Up Letter; (F) the entry into an agreement providing for the issuance by the Company of shares of Common Stock or any security convertible into or exercisable for shares of Common Stock in connection with the acquisition by the Company or any of its subsidiaries of the securities, business, technology, property or other assets of another person or entity or pursuant to an employee benefit plan assumed by the Company in connection with such acquisition, and the issuance of any such securities pursuant to any such agreement; (G) the entry into any agreement providing for the issuance of shares of Common Stock or any security convertible into or exercisable for shares of Common Stock in connection with joint ventures, commercial relationships or other strategic transactions, and the issuance of any such securities pursuant to any such agreement; and (H) the filing of any registration statement on Form S-8 or a successor form thereto relating to the resale of securities as contemplated by any Lock-Up Letter or the Company's Plans or any assumed employee benefit plan contemplated by clause (F); provided that in the case of clauses (F) and (G), the aggregate number of shares of Stock that the Company may sell or issue or agree to sell or issue pursuant to clauses (F) and (G) shall not exceed 10% of the total number of shares of Common Stock issued and outstanding immediately following the completion of the transactions contemplated by this Agreement; and provided further that, in the case of clauses (C), (D), (F) and (G), the recipient of such securities shall have executed a Lock-Up Letter on or prior to the date of issuance of such securities;

(ii) If Goldman Sachs & Co. LLC, in its sole discretion, agrees to release or waive the restrictions in a Lock-Up Letter, in each case for an officer or director of the Company, and provides the Company with notice of the impending release or waiver at least three business days before the effective date of the release or waiver, the Company agrees to announce the impending release or waiver by a press release substantially in the form of Annex I hereto through a major news service at least two business days before the effective date of the release or waiver;

(f) During a period of three years from the effective date of the Registration Statement, so long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act, to furnish to its stockholders as soon as practicable after the end of each fiscal year an annual report (including a balance sheet and statements of income, stockholders ' equity and cash flows of the Company and its consolidated subsidiaries certified by independent public accountants) and, as soon as practicable after the end of each of the first three quarters of each fiscal year (beginning with the fiscal quarter ending after the effective date of the Registration Statement), to make available to its stockholders consolidated summary financial information of the Company and its subsidiaries for such quarter in reasonable detail; provided, however, that no reports, communications or financial information need to be furnished or filed pursuant to this Section 5(f) to the extent they are available on EDGAR;

(g) During a period of three years from the effective date of the Registration Statement, so long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act, to furnish to you copies of all reports or other communications (financial or other) furnished to stockholders, and to deliver to you as soon as they are available, copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange on which any class of securities of the Company is listed; provided that no reports, communications or financial information need to be furnished pursuant to this Section 5(g) to the extent they are available on EDGAR;

(h) To use the net proceeds received by it from the sale of the Shares pursuant to this Agreement in the manner specified in the Pricing Prospectus under the caption “Use of Proceeds”;

(i) To use its best efforts to list for trading, subject to official notice of issuance the Shares on the Exchange;

(j) To file with the Commission such information on Form 10-Q or Form 10-K as may be required by Rule 463 under the Act;

(k) If the Company elects to rely upon Rule 462(b) under the Act, the Company shall file a Rule 462(b) Registration Statement with the Commission in compliance with Rule 462(b) under the Act by 10:00 p.m., Washington, D.C. time, on the date of this Agreement, and the Company shall at the time of filing either pay to the Commission the filing fee for the Rule 462(b) Registration Statement or give irrevocable instructions for the payment of such fee pursuant to Rule 3a(c) of the Commission's Informal and Other Procedures (16 CFR 202.3a);

(l) Upon request of any Underwriter, to furnish, or cause to be furnished, to such Underwriter an electronic version of the Company's trademarks, servicemarks and corporate logo for use on the website, if any, operated by such Underwriter for the purpose of facilitating the on-line offering of the Shares (the “License”); provided, however, that the License shall be used solely for the purpose described above, is granted without any fee and may not be assigned or transferred;

(m) To promptly notify you if the Company ceases to be an Emerging Growth Company at any time prior to the later of (i) completion of the distribution of the Shares within the meaning of the Act and (ii) the last Time of Delivery.

6. (a) The Company represents and agrees that, without the prior consent of the Representatives, it has not made and will not make any offer relating to the Shares that would constitute a “free writing prospectus” as defined in Rule 405 under the Act; each Selling Stockholder represents and agrees that, without the prior consent of the Company and the Representatives, it has not made and will not make any offer relating to the Shares that would constitute a free writing prospectus; and each Underwriter represents and agrees that, without the prior consent of the Company and the Representatives, it has not made and will not make any offer relating to the Shares that would constitute a free writing prospectus required to be filed with the Commission; any such free writing prospectus the use of which has been consented to by the Company and the Representatives is listed on Schedule III(a) hereto;

(b) The Company has complied and will comply with the requirements of Rule 433 under the Act applicable to any Issuer Free Writing Prospectus, including timely filing with the Commission or retention where required and legending; and the Company represents that it has

satisfied and agrees that it will satisfy the conditions under Rule 433 under the Act to avoid a requirement to file with the Commission any electronic road show;

(c) The Company agrees that if at any time following issuance of an Issuer Free Writing Prospectus or Written Testing-the-Waters Communication prepared or authorized by it any event occurred or occurs as a result of which such Issuer Free Writing Prospectus or Written Testing-the-Waters Communication prepared or authorized by it would conflict with the information in the Registration Statement, the Pricing Prospectus or the Prospectus or would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances then prevailing, not misleading, the Company will give prompt notice thereof to the Representatives and, if requested by the Representatives, will prepare and furnish without charge to each Underwriter an Issuer Free Writing Prospectus, Written Testing-the-Waters Communication or other document which will correct such conflict, statement or omission; provided, however, that this representation and warranty shall not apply to any statements or omissions in an Issuer Free Writing Prospectus or Written Testing-the-Waters Communication made in reliance upon and in conformity with the Underwriter Information;

(d) The Company represents and agrees that (i) it has not engaged in, or authorized any other person to engage in, any Testing-the-Waters Communications, other than Testing-the-Waters Communications with the prior consent of the Representatives with entities that the Company reasonably believes are qualified institutional buyers as defined in Rule 144A under the Act or institutions that are accredited investors as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7) or (a)(8) under the Act; and (ii) it has not distributed, or authorized any other person to distribute, any Written Testing-the-Waters Communication, other than those distributed with the prior consent of the Representatives that are listed on Schedule III(d) hereto; and the Company reconfirms that the Underwriters have been authorized to act on its behalf in engaging in Testing-the-Waters Communications;

(e) Each Underwriter represents and agrees that (i) any Testing-the-Waters Communications undertaken by it were with entities that such Underwriter reasonably believes are qualified institutional buyers as defined in Rule 144A under the Act or institutions that are accredited investors as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7) or (a)(8) under the Act, and (ii) it has not distributed, or authorized any other person to distribute any Written Testing-the-Waters Communication, other than those distributed with the prior authorization of the Company.

7. The Company and each of the Selling Stockholders covenant and agree with one another and with the several Underwriters that (a) the Company will pay or cause to be paid the following: (i) the fees, disbursements and expenses of the Company's counsel and accountants in connection with the registration of the Shares under the Act and all other expenses in connection with the preparation, printing, reproduction and filing of the Registration Statement, any Preliminary Prospectus, any Written Testing-the-Waters Communication, any Issuer Free Writing Prospectus and the Prospectus and amendments and supplements thereto and the mailing and delivering of copies thereof to the Underwriters and dealers; (ii) the cost of printing or producing any Agreement among Underwriters, this Agreement, the Blue Sky Memorandum, closing documents (including any compilations thereof) and any other documents in connection with the offering, purchase, sale and delivery of the Shares; (iii) all expenses in connection with the qualification of the Shares for offering and sale under state securities laws as provided in Section 5(b) hereof, including the fees and disbursements of counsel for the Underwriters in

connection with such qualification and in connection with the Blue Sky survey; (iv) all fees and expenses in connection with listing the Shares on the Exchange; and (v) the filing fees incident to, and the fees and disbursements of counsel for the Underwriters in connection with, any required review by FINRA of the terms of the sale of the Shares; provided that the aggregate amount payable pursuant to subjections (iii) and (v) (excluding filing fees and disbursements) shall not exceed $40,000; (b) the Company will pay or cause to be paid: (i) the cost of preparing stock certificates; if applicable (ii) the cost and charges of any transfer agent or registrar, and (iii) all other costs and expenses incident to the performance of its and the Selling Stockholders' obligations (including any expenses of the Attorneys-in-Fact and the Custodian) hereunder which are not otherwise specifically provided for in this Section; and (c) such Selling Stockholder will pay or cause to be paid all costs and expenses incident to the performance of such Selling Stockholder's obligations hereunder with respect to: (i) any fees and expenses of counsel for such Selling Stockholder not paid for by the Company and (ii) all expenses and taxes incident to the sale and delivery of the Shares to be sold by such Selling Stockholder to the Underwriters hereunder**.** In connection with clause (c)(ii) of the preceding sentence, the Representatives agree to pay New York State stock transfer tax, and the Selling Stockholder agrees to reimburse the Representatives for associated carrying costs if such tax payment is not rebated on the day of payment and for any portion of such tax payment not rebated. It is understood, however, that (i) the Company shall bear, and the Selling Stockholders shall not be required to pay or to reimburse the Company for, the cost of any other matters not directly relating to the sale and purchase of the Shares pursuant to this Agreement, and that, except as provided in this Section, and Sections 9 and 12 hereof, the Underwriters will pay all of their own costs and expenses, including the fees of their counsel, stock transfer taxes on resale of any of the Shares by them, and any advertising expenses connected with any offers they may make, (ii) the Company will bear all of the Company's (but not the Underwriters') travel and lodging expenses and the Underwriters will bear all of the Underwriters' (but not the Company's) travel and lodging expenses, in each case, in connection with any "roadshow" presentation to investors and (iii) notwithstanding clause (ii), the Company, on the one hand, and the Underwriters, on the other hand, shall each pay 50% of the cost of any chartered plane, chartered jet or other chartered aircraft used in connection with any "roadshow" presentation to investors.

8. The obligations of the Underwriters hereunder, as to the Shares to be delivered at each Time of Delivery, shall be subject, in their discretion, to the condition that all representations and warranties and other statements of the Company and the Selling Stockholders herein are, at and as of the Applicable Time and such Time of Delivery, true and correct, the condition that the Company and the Selling Stockholders shall have performed all of its and their obligations hereunder theretofore to be performed, and the following additional conditions:

(a) The Prospectus shall have been filed with the Commission pursuant to Rule 424(b) under the Act within the applicable time period prescribed for such filing by the rules and regulations under the Act and in accordance with Section 5(a) hereof; all material required to be filed by the Company pursuant to Rule 433(d) under the Act shall have been filed with the Commission within the applicable time period prescribed for such filing by Rule 433; if the Company has elected to rely upon Rule 462(b) under the Act, the Rule 462(b) Registration Statement shall have become effective by 10:00 p.m., Washington, D.C. time, on the date of this Agreement; no stop order suspending the effectiveness of the Registration Statement or any part thereof shall have been issued and no proceeding for that purpose or pursuant to Section 8A of the Act shall have been initiated or, to the Company's knowledge, threatened by the

Commission no stop order suspending or preventing the use of the Pricing Prospectus, Prospectus or any Issuer Free Writing Prospectus shall have been initiated or, to the Company's knowledge, threatened by the Commission; and all requests for additional information on the part of the Commission shall have been complied with to your reasonable satisfaction;

(b) Skadden, Arps, Slate, Meagher & Flom LLP, counsel for the Underwriters, shall have furnished to you such written opinion or opinions dated such Time of Delivery, in form and substance reasonably satisfactory to you, and such counsel shall have received such papers and information as they may reasonably request to enable them to pass upon such matters;

(c) Latham & Watkins LLP, counsel for the Company, shall have furnished to you their written opinion, dated such Time of Delivery, in form and substance reasonably satisfactory to you;

(d) The respective counsel for each of the Selling Stockholders, as indicated in Schedule II hereto, each shall have furnished to you their written opinion with respect to each of the Selling Stockholders for whom they are acting as counsel, dated such Time of Delivery, in form and substance reasonably satisfactory to you;

(e) On the date of the Prospectus at a time prior to the execution of this Agreement, at or around 9:30 a.m., New York City time, on the effective date of any post-effective amendment to the Registration Statement filed subsequent to the date of this Agreement and also at each Time of Delivery, Deloitte & Touche LLP shall have furnished to you a letter or letters, dated the respective dates of delivery thereof, in form and substance reasonably satisfactory to you;

(f) The Company shall have delivered to you on the date of the Prospectus and at such Time of Delivery a certificate of the Chief Financial Officer of the Company, in form and substance reasonably satisfactory to you;

(g) (i) Neither the Company nor any of its subsidiaries shall have sustained since the date of the latest audited financial statements included in the Pricing Prospectus any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Pricing Prospectus, and (ii) since the respective dates as of which information is given in the Pricing Prospectus there shall not have been any change in the capital stock (other than as a result of the grant, vesting, exercise or settlement, if any, of options or restricted stock units in the ordinary course of business pursuant to the Company's Plans or the reclassification or conversion of the Company's capital stock as described the Pricing Prospectus) or long-term debt of the Company or any of its subsidiaries or any change or effect, or any development involving a prospective change or effect, in or affecting (x) the business, properties, general affairs, management, financial position, stockholders' equity or results of operations of the Company and its subsidiaries, taken as a whole, except as set forth or contemplated in the Pricing Prospectus, or (y) the ability of the Company to perform its obligations under this Agreement**,** including the issuance and sale of the Shares, or to consummate the transactions contemplated in the Pricing Prospectus and the Prospectus, the effect of which, in any such case described in clause (i) or (ii), is in your judgment so material and adverse as to make it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(h) On or after the Applicable Time there shall not have occurred any of the following: (i) a suspension or material limitation in trading in securities generally on the Exchange; (ii) a suspension or material limitation in trading in the Company's securities on the Exchange; (iii) a general moratorium on commercial banking activities declared by either Federal or New York State authorities or a material disruption in commercial banking or securities settlement or clearance services in the United States; (iv) the outbreak or escalation of hostilities involving the United States or the declaration by the United States of a national emergency or war or (v) the occurrence of any other calamity or crisis or any change in financial, political or economic conditions in the United States or elsewhere, if the effect of any such event specified in clause (iv) or (v) in your judgment makes it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(i) The Shares to be sold at such Time of Delivery shall have been duly listed, subject to official notice of issuance, on the Exchange;

(j) The Company shall have obtained and delivered to the Underwriters executed copies of an agreement from each officer, director, and stockholder of the Company representing substantially all of the outstanding shares of capital stock of the Company, substantially to the effect set forth in Annex II hereto (a “Lock-Up Letter”);

(k) The Company shall have complied with the provisions of Section 5(c) hereof with respect to the furnishing of prospectuses on the New York Business Day next succeeding the date of this Agreement; and

(l) The Company and the Selling Stockholders shall have furnished or caused to be furnished to you at such Time of Delivery certificates of officers of the Company and an Attorney-in-Fact of the Selling Stockholders, respectively, reasonably satisfactory to you as to the accuracy of the representations and warranties of the Company and the Selling Stockholders, respectively, herein at and as of such Time of Delivery, as to the performance by the Company and the Selling Stockholders of all of their respective obligations hereunder to be performed at or prior to such Time of Delivery, as to such other matters as you may reasonably request, and the Company shall have furnished or caused to be furnished certificates as to the matters set forth in subsections (a) and (f) of this Section 8.

9. (a) The Company will indemnify and hold harmless each Underwriter and each Selling Stockholder against any losses, claims, damages or liabilities, joint or several, to which such Underwriter or Selling Stockholder may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, any Issuer Free Writing Prospectus, any “roadshow” as defined in Rule 433(h) under the Act (a “roadshow”), any “issuer information” filed or required to be filed pursuant to Rule 433(d) under the Act or any Testing-the-Waters Communication prepared or authorized by the Company, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and will reimburse each Underwriter or Selling Stockholder for any documented out-of-pocket legal or other expenses reasonably incurred by such Underwriter in connection with investigating or defending any such action or

claim as such expenses are incurred; provided, however, that the Company and the Selling Stockholders shall not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus or any Testing-the-Waters Communication, in reliance upon and in conformity with the Underwriter Information.

(b) Each of the Selling Stockholders, severally and not jointly, will indemnify and hold harmless each Underwriter against any losses, claims, damages or liabilities, joint or several, to which such Underwriter may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, any Issuer Free Writing Prospectus, any roadshow or any Testing-the-Waters Communication, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus, or any roadshow or any Testing-the-Waters Communication, in reliance upon and in conformity with written information furnished to the Company by such Selling Stockholder expressly for use therein which constitutes Selling Stockholder Information; and will reimburse each Underwriter for any documented out-of-pocket legal or other expenses reasonably incurred by such Underwriter in connection with investigating or defending any such action or claim as such expenses are incurred; provided, however, that such Selling Stockholder shall not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus or any amendment or supplement thereto or any Issuer Free Writing Prospectus in reliance upon and in conformity with the Underwriter Information. Notwithstanding anything to the contrary in this Section 9, the liability of each Selling Stockholder under this Section 9(b) shall in no event exceed the amount of such Selling Stockholder's net proceeds (after deducting underwriting discounts and commissions but before deducting any other expenses) from its sale of the Shares under this Agreement (the "Selling Stockholder Proceeds").

(c) Each Underwriter, severally and not jointly, will indemnify and hold harmless the Company and each Selling Stockholder against any losses, claims, damages or liabilities to which the Company or such Selling Stockholder may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or any roadshow, or any Testing-the-Waters Communication, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, any Preliminary

Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or any roadshow, or any Testing-the-Waters Communication, in reliance upon and in conformity with the Underwriter Information; and will reimburse the Company and each Selling Stockholder for any documented out-of-pocket legal or other expenses reasonably incurred by the Company or such Selling Stockholder in connection with investigating or defending any such action or claim as such expenses are incurred. As used in this Agreement with respect to an Underwriter and an applicable document, "Underwriter Information" shall mean the written information furnished to the Company by such Underwriter through the Representatives expressly for use therein; it being understood and agreed upon that the only such information furnished by any Underwriter consists of the following information in the Prospectus furnished on behalf of each Underwriter: the concession and reallowance figures appearing in the [●] paragraph under the caption "Underwriting", and the information contained in the [●] paragraph under the caption "Underwriting".

(d) Promptly after receipt by an indemnified party under subsection (a), (b), or (c) of this Section 9 of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; provided that the failure to notify the indemnifying party shall not relieve it from any liability that it may have under the preceding paragraphs of this Section 9 except to the extent that it has been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure; and provided further that the failure to notify the indemnifying party shall not relieve it from any liability that it may have to an indemnified party otherwise than under the preceding paragraphs of this Section 9. In case any such action shall be brought against any indemnified party and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel reasonably satisfactory to such indemnified party (who shall not, except with the consent of the indemnified party, be counsel to the indemnifying party), and, after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal expenses of other counsel or any other expenses, in each case subsequently incurred by such indemnified party, in connection with the defense thereof other than reasonable costs of investigation unless (i) the indemnifying party and the indemnified party shall have mutually agreed to the contrary, (ii) the indemnifying party has failed within a reasonable time to retain counsel reasonably satisfactory to the indemnified party, (iii) the indemnified party shall have reasonably concluded that there may be legal defenses available to it that are different from or in addition to those available to the indemnifying party, or (iv) the named parties in any such proceeding (including any impleaded parties) include both the indemnifying person and the indemnified person and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interest between them. No indemnifying party shall, without the written consent of the indemnified party, effect the settlement or compromise of, or consent to the entry of any judgment with respect to, any pending or threatened action or claim in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified party is an actual or potential party to such action or claim) unless such settlement, compromise or judgment (i) includes an unconditional release of the indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any indemnified party.

(e) If the indemnification provided for in this Section 9 is unavailable to or insufficient to hold harmless an indemnified party under subsection (a), (b) or (c) above in respect of any losses, claims, damages or liabilities (or actions in respect thereof) referred to therein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company and the Selling Stockholders on the one hand and the Underwriters on the other from the offering of the Shares. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law, then each indemnifying party shall contribute to such amount paid or payable by such indemnified party in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company and the Selling Stockholders on the one hand and the Underwriters on the other in connection with the statements or omissions which resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company and the Selling Stockholders on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company and the Selling Stockholders bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or the Selling Stockholders on the one hand or the Underwriters on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company, each of the Selling Stockholders and the Underwriters agree that it would not be just and equitable if contribution pursuant to this subsection (e) were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this subsection (e). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to above in this subsection (e) shall be deemed to include any documented out-of-pocket legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this subsection (e), no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Shares underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages which such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations in this subsection (e) to contribute are several in proportion to their respective underwriting obligations and not joint. Notwithstanding anything to the contrary in this Section 9, the liability of each Selling Stockholder under this Section 9(e) shall in no event exceed its Selling Stockholder Proceeds; provided, however, in no event shall any Selling Stockholder be required to contribute pursuant to this subsection (e) any amount in excess of the amount by which the Selling Stockholder Proceeds received by such Selling Stockholder from the sale of the Shares exceeds the damages that such Selling Stockholder would have otherwise been required to pay under subsection (b) above.

(f) The obligations of the Company and the Selling Stockholders under this Section 9 shall be in addition to any liability which the Company and the Selling Stockholders may otherwise have and shall extend, upon the same terms and conditions, to each employee, officer and director of each Underwriter and each person, if any, who controls any Underwriter within the meaning of the Act and each broker-dealer or other affiliate of any Underwriter; and the obligations of the Underwriters under this Section 9 shall be in addition to any liability which the respective Underwriters may otherwise have and shall extend, upon the same terms and conditions, to each officer and director of the Company (including any person who, with his or her consent, is named in the Registration Statement as about to become a director of the Company) and to each person, if any, who controls the Company or any Selling Stockholder within the meaning of the Act.

10. (a) If any Underwriter shall default in its obligation to purchase the Shares that it has agreed to purchase hereunder at a Time of Delivery, you may in your discretion arrange for you or another party or other parties to purchase such Shares on the terms contained herein. If within thirty-six hours after such default by any Underwriter you do not arrange for the purchase of such Shares, then the Company and the Selling Stockholders shall be entitled to a further period of thirty-six hours within which to procure another party or other parties reasonably satisfactory to you to purchase such Shares on such terms. In the event that, within the respective prescribed periods, you notify the Company and the Selling Stockholders that you have so arranged for the purchase of such Shares, or the Company or a Selling Stockholder notifies you that it has so arranged for the purchase of such Shares, you or the Company or the Selling Stockholders shall have the right to postpone such Time of Delivery for a period of not more than seven days, in order to effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus, or in any other documents or arrangements, and the Company agrees to file promptly any amendments or supplements to the Registration Statement or the Prospectus which in your opinion may thereby be made necessary. The term “Underwriter” as used in this Agreement shall include any person substituted under this Section with like effect as if such person had originally been a party to this Agreement with respect to such Shares.

(b) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by you, the Company and the Selling Stockholders as provided in subsection (a) above, the aggregate number of such Shares which remains unpurchased does not exceed one-eleventh of the aggregate number of all the Shares to be purchased at such Time of Delivery, then the Company and the Selling Stockholders shall have the right to require each non-defaulting Underwriter to purchase the number of Shares which such Underwriter agreed to purchase hereunder at such Time of Delivery and, in addition, to require each non-defaulting Underwriter to purchase its pro rata share (based on the number of Shares which such Underwriter agreed to purchase hereunder) of the Shares of such defaulting Underwriter or Underwriters for which such arrangements have not been made; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

(c) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by you, the Company and the Selling Stockholders as provided in subsection (a) above, the aggregate number of such Shares which remains unpurchased exceeds one-eleventh of the aggregate number of all of the Shares to be purchased at such Time of Delivery, or if the Company and the Selling Stockholders shall not exercise the right described in subsection (b) above to require non-defaulting Underwriters to purchase Shares of a defaulting Underwriter or Underwriters, then this Agreement (or, with

respect to a Second Time of Delivery, the obligations of the Underwriters to purchase and of the Company and the Selling Stockholders to sell the Optional Shares) shall thereupon terminate, without liability on the part of any non-defaulting Underwriter, the Company or the Selling Stockholders, except for the expenses to be borne by the Company, the Selling Stockholders and the Underwriters as provided in Section 7 hereof and the indemnity and contribution agreements in Section 9 hereof; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

11. The respective indemnities, rights of contribution, agreements, representations, warranties and other statements of the Company, the Selling Stockholders and the several Underwriters, as set forth in this Agreement or made by or on behalf of them, respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation (or any statement as to the results thereof) made by or on behalf of any Underwriter or any director, officer, employee, affiliate or controlling person of any Underwriter, or the Company, or any of the Selling Stockholders, or any officer or director or controlling person of the Company, or any controlling person of any Selling Stockholder, and shall survive delivery of and payment for the Shares.

12. If this Agreement shall be terminated pursuant to Section 10 hereof, neither the Company nor the Selling Stockholders shall then be under any liability to any Underwriter except as provided in Sections 7 and 9 hereof; but, if for any other reason any Shares are not delivered by or on behalf of the Company and the Selling Stockholders as provided herein, or the Underwriters decline to purchase the Shares for any reason permitted under this Agreement, the Company will reimburse the Underwriters through you for all out-of-pocket expenses approved in writing by you, including documented fees and disbursements of counsel, reasonably incurred by the Underwriters in making preparations for the purchase, sale and delivery of the Shares not so delivered, but the Company and the Selling Stockholders shall then be under no further liability to any Underwriter except as provided in Sections 7 and 9 hereof.

13. In all dealings hereunder, the Representative shall act on behalf of each of the Underwriters, and the parties hereto shall be entitled to act and rely upon any statement, request, notice or agreement on behalf of any Underwriter made or given by you; and in all dealings with any Selling Stockholder hereunder, you and the Company shall be entitled to act and rely upon any statement, request, notice or agreement on behalf of such Selling Stockholder made or given by any or all of the Attorneys-in-Fact for such Selling Stockholder.

In accordance with the requirements of the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)), the Underwriters are required to obtain, verify and record information that identifies their respective clients, including the Company and the Selling Stockholders, which information may include the name and address of their respective clients, as well as other information that will allow the Underwriters to properly identify their respective clients.

All statements, requests, notices and agreements hereunder shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to Goldman Sachs & Co. LLC**,** 200 West Street, New York, New York 10282, Attention: Registration Department; if to any Selling Stockholder shall be delivered or sent by mail, telex or facsimile transmission to each of the Attorneys-in-Fact named in the Power of Attorney, c/o the Company at the address set forth on the cover of the Registration Statement, Attention: General Counsel

with a copy, which shall not constitute notice, to Whalen LLP, 1601 Dove Street, Suite 270, Newport Beach, California 92660; if to the Company shall be delivered or sent by mail, telex or facsimile transmission to the address of the Company set forth on the cover of the Registration Statement, Attention: Secretary; provided, however, that any notice to an Underwriter pursuant to Section 9(d) hereof shall be delivered or sent by mail, telex or facsimile transmission to such Underwriter at its address set forth in its Underwriters' Questionnaire or telex constituting such Questionnaire, which address will be supplied to the Company or the Selling Stockholders by you on request; provided further that notices under subsection 5(e) shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to you as you at Goldman Sachs & Co. LLC, 200 West Street, New York, New York 10282, Attention: Control Room. Any such statements, requests, notices or agreements shall take effect upon receipt thereof.

14. This Agreement shall be binding upon, and inure solely to the benefit of, the Underwriters, the Company and the Selling Stockholders and, to the extent provided in Sections 9 and 11 hereof, the officers and directors of the Company and each person who controls the Company, any Selling Stockholder or any Underwriter, or any director, officer, employee, or affiliate of any Underwriter, and their respective heirs, executors, administrators, successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement. No purchaser of any of the Shares from any Underwriter shall be deemed a successor or assign by reason merely of such purchase.

15. Time shall be of the essence of this Agreement. As used herein, the term “business day” shall mean any day when the Commission's office in Washington, D.C. is open for business.

16. The Company and the Selling Stockholders acknowledge and agree that (i) the purchase and sale of the Shares pursuant to this Agreement is an arm's-length commercial transaction between the Company and the Selling Stockholders, on the one hand, and the several Underwriters, on the other, (ii) in connection therewith and with the process leading to such transaction each Underwriter is acting solely as a principal and not the agent or fiduciary of the Company or any Selling stockholder, (iii) no Underwriter has assumed an advisory or fiduciary responsibility in favor of the Company or any Selling Stockholder with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company or any Selling Stockholder on other matters) or any other obligation to the Company or any Selling Stockholder except the obligations expressly set forth in this Agreement, (iv) the Company and each Selling Stockholder has consulted its own legal and financial advisors to the extent it deemed appropriate, and (v) none of the activities of the Underwriters in connection with the transactions contemplated herein constitutes a recommendation, investment advice, or solicitation of any action by the Underwriters with respect to any entity or natural person. The Company and each Selling Stockholder agrees that it will not claim that the Underwriters, or any of them, has rendered advisory services of any nature or respect, or owes a fiduciary or similar duty to the Company or any Selling Stockholder, in connection with such transaction or the process leading thereto.

17. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company, the Selling Stockholders and the Underwriters, or any of them, with respect to the subject matter hereof.

18. This Agreement and any transaction contemplated by this Agreement and any claim, controversy or dispute arising under or related thereto shall be governed by and construed in accordance with the laws of the State of New York without regard to principles of conflict of laws that would results in the application of any other law than the laws of the State of New York. The Company and each Selling Stockholder agree that any suit or proceeding arising in respect of this Agreement or any transaction contemplated by this Agreement will be tried exclusively in the U.S. District Court for the Southern District of New York or, if that court does not have subject matter jurisdiction, in any state court located in The City and County of New York and the Company and each Selling Stockholder agree to submit to the jurisdiction of, and to venue in, such courts.

19. The Company, each Selling Stockholder and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

20. This Agreement may be executed by any one or more of the parties hereto in any number of counterparts, each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

21. Notwithstanding anything herein to the contrary, the Company and the Selling Stockholders are authorized to disclose to any persons the U.S. federal and state income tax treatment and tax structure of the potential transaction and all materials of any kind (including tax opinions and other tax analyses) provided to the Company and the Selling Stockholders relating to that treatment and structure, without the Underwriters imposing any limitation of any kind. However, any information relating to the tax treatment and tax structure shall remain confidential (and the foregoing sentence shall not apply) to the extent necessary to enable any person to comply with securities laws. For this purpose, “tax structure” is limited to any facts that may be relevant to that treatment.

22. Recognition of the U.S. Special Resolution Regimes.

(a) In the event that any Underwriter that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such Underwriter of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(b) In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

(c) As used in this section:

"BHC Act Affiliate" has the meaning assigned to the term "affiliate" in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k).

"Covered Entity" means any of the following:

(i) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b);

(ii) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or

(iii) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b).

"Default Right" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable.

"U.S. Special Resolution Regime" means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

If the foregoing is in accordance with your understanding, please sign and return to us counterparts hereof, and upon the acceptance hereof by you, on behalf of each of the Underwriters, this letter and such acceptance hereof shall constitute a binding agreement among each of the Underwriters, the Company and each of the Selling Stockholders. It is understood that your acceptance of this letter on behalf of each of the Underwriters is pursuant to the authority set forth in a form of Agreement among Underwriters, the form of which shall be submitted to the Company and the Selling Stockholders for examination, upon request, but without warranty on your part as to the authority of the signers thereof.

Any person executing and delivering this Agreement as Attorney-in-Fact for a Selling Stockholder represents by so doing that he has been duly appointed as Attorney-in-Fact by such Selling Stockholder pursuant to a validly existing and binding Power-of-Attorney that authorizes such Attorney-in-Fact to take such action.

Very truly yours,

Duolingo, Inc.

By: _____
Name:
Title:

Selling Stockholders, acting severally

By: _____
Name:
Title:

As Attorney-in-Fact acting on behalf of each of the Selling Stockholders named in Schedule II to this Agreement.

Accepted as of the date hereof in New York, New York:

Goldman Sachs & Co. LLC

By: _____
Name:
Title:

On behalf of each of the Underwriters

SCHEDULE I

Underwriter	Total Number of Firm Shares to be Purchased	Number of Optional Shares to be Purchased if Maximum Option Exercised
Goldman Sachs & Co. LLC		
Allen & Company LLC		
BofA Securities Inc.		
Barclays Capital Inc.		
Evercore Group L.L.C.		
William Blair & Company, L.L.C.		
KeyBanc Capital Markets Inc.		
JMP Securities LLC		
Piper Sandler & Co.		
Raymond James & Associates, Inc.		
Total		

SCHEDULE II

	Total Number of Firm Shares to be sold	Number of Optional Shares to be Sold if Maximum Option Exercised
The Company.		
The Selling Stockholder(s):		
[●](a)		
[●](b)		
[●](c)		
[●](d)		
[●](e)		
Total		

(a) This Selling Stockholder is represented by [●] and has appointed [●], and each of them, as the Attorneys-in-Fact for such Selling Stockholder.

(b) This Selling Stockholder is represented by [●] and has appointed [●], and each of them, as the Attorneys-in-Fact for such Selling Stockholder.

(c) This Selling Stockholder is represented by [●] and has appointed [●], and each of them, as the Attorneys-in-Fact for such Selling Stockholder.

(d) This Selling Stockholder is represented by [●] and has appointed [●], and each of them, as the Attorneys-in-Fact for such Selling Stockholder.

(e) This Selling Stockholder is represented by [●] and has appointed [●], and each of them, as the Attorneys-in-Fact for such Selling Stockholder.

SCHEDULE III

(a) Issuer Free Writing Prospectuses not included in the Pricing Disclosure Package

Electronic Roadshow dated [●]

(b) Additional documents incorporated by reference

None

(c) Information other than the Pricing Prospectus that comprise the Pricing Disclosure Package

The initial public offering price per share for the Shares is $[●]

The number of Firm Shares purchased by the Underwriters is [●].

The number of Optional Shares is [●].

(d) Written Testing-the-Waters Communications

[●]

ANNEX I

[FORM OF PRESS RELEASE]

Duolingo, Inc.
[Date]

Duolingo, Inc. (the "Company") announced today that Goldman Sachs & Co. LLC, the lead book-running manager in the recent public sale of shares of the Company's common stock, is [waiving] [releasing] a lock-up restriction with respect to shares of the Company's Class A common stock held by [certain officers or directors] [an officer or director] of the Company. The [waiver] [release] will take effect on , 20 , and the shares may be sold on or after such date.

This press release is not an offer for sale of the securities in the United States or in any other jurisdiction where such offer is prohibited, and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the United States Securities Act of 1933, as amended.

ANNEX II

[FORM OF LOCK-UP AGREEMENT]

, 2021

Goldman Sachs & Co. LLC,
As representative of the several Underwriters
named in Schedule I to the Underwriting Agreement

c/o Goldman Sachs & Co. LLC
200 West Street
New York, New York 10282

Re: Duolingo, Inc. - Lock-Up Agreement

Ladies and Gentlemen:

The undersigned understands that Goldman Sachs & Co. LLC, as representative (the "Representative"), proposes to enter into an underwriting agreement (the "Underwriting Agreement") on behalf of the several Underwriters named in Schedule I thereto (collectively, the "Underwriters"), with Duolingo, Inc., a Delaware corporation (the "Company"), and the stockholders of the Company named in Schedule II to the Underwriting Agreement, providing for a public offering (the "Public Offering") of shares of Class A common stock, par value $0.0001 per share, of the Company ("Class A Common Stock," and such shares, the "Shares") pursuant to a Registration Statement on Form S-1 (the "Registration Statement") filed or to be filed with the Securities and Exchange Commission (the "SEC").

In consideration of the agreement by the Underwriters to offer and sell the Shares, and of other good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the undersigned agrees that, subject to the provisions contained herein, during the period beginning from the date of this lock-up agreement (this "Lock-Up Agreement") and continuing to and including the date 180 days after the date (the "Public Offering Date") set forth on the final prospectus used to sell the Shares in the Public Offering (the "Prospectus") (such period as modified by paragraphs (a), (b), (c) and (d) below, as may be applicable to the undersigned, the "Lock-Up Period"), the undersigned shall not, and shall not cause or direct any of its affiliates to, (i) offer, sell, contract to sell, pledge, grant any option to purchase, lend or otherwise dispose of any shares of Class A Common Stock, or any options or warrants to purchase any shares of Class A Common Stock, or any securities convertible into, exchangeable for or that represent the right to receive shares of Class A Common Stock (such options, warrants or other securities, collectively, "Derivative Instruments"), including without limitation any such shares or Derivative Instruments now owned or hereafter acquired by the undersigned (collectively, the "Undersigned's Shares"), (ii) engage in any hedging or other transaction or arrangement (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) which is designed to or which reasonably could be expected to lead to or result in a sale, loan, pledge or other disposition (whether by the undersigned or someone other than the undersigned), or transfer of any of the economic consequences of ownership, in whole or in part, directly or indirectly, of any

shares of Class A Common Stock or Derivative Instruments, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of Class A Common Stock or other securities, in cash or otherwise (any such sale, loan, pledge or other disposition, or transfer of economic consequences, a "Transfer") or (iii) otherwise publicly announce any intention to engage in or cause any action or activity described in clause (i) above or transaction or arrangement described in clause (ii) above (except as may be permitted pursuant to exceptions and early release provisions in this Lock-Up Agreement, including the filing of a "reoffer" registration statement on Form S-8).

The undersigned represents and warrants that the undersigned is not, and has not caused or directed any of its affiliates to be or become, currently a party to any agreement or arrangement that provides for, is designed to or which reasonably could be expected to lead to or result in any Transfer during the Lock-Up Period. If the undersigned is not a natural person, the undersigned represents and warrants that no single natural person, entity or "group" (within the meaning of Section 13(d)(3) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")), other than a natural person, entity or "group" (as described above) that has executed a Lock-Up Agreement in substantially the same form as this Lock-Up Agreement, beneficially owns, directly or indirectly, 50% or more of the common equity interests, or 50% or more of the voting power, in the undersigned.

If the undersigned is an officer or director of the Company, (i) the undersigned agrees that the foregoing provisions shall be equally applicable to any issuer-directed or other Shares the undersigned may purchase in the Public Offering, (ii) the Representative agrees that, at least three business days before the effective date of any release or waiver of the foregoing restrictions in connection with a Transfer of shares of Class A Common Stock, the Representative will notify the Company of the impending release or waiver, and (iii) if required by FINRA Rule 5131 (or any successor provision thereto), the Company has agreed in the Underwriting Agreement to announce the impending release or waiver by press release through a major news service at least two business days before the effective date of the release or waiver. Any release or waiver granted by the Representative hereunder to any such officer or director shall only be effective two business days after the publication date of such press release. The provisions of this paragraph will not apply to any release pursuant to paragraphs (a), (b), (c) or (d) below or if (1) the release or waiver is effected solely to permit a Transfer not for consideration or to an immediate family member as defined in FINRA Rule 5130(i)(5) and (2) the transferee has agreed in writing to be bound by the same terms described in this Lock-Up Agreement to the extent and for the duration that such terms remain in effect at the time of the Transfer. For purposes of this Lock-Up Agreement "officer" of the Company means as defined in Rule 16a-1(f) under the Exchange Act.

Notwithstanding the foregoing:

(a) if the undersigned is a current employee, contractor or consultant of the Company or its subsidiaries (excluding any current officer or director of the Company), subject to compliance with applicable securities laws, including without limitation Rule 144 promulgated under the Securities Act of 1933, as amended (the "Securities Act"), the undersigned may sell in the public market, for a 7-consecutive Trading Day (as defined below) period (or such fewer number of consecutive Trading Days as the Company in its sole discretion shall determine) beginning at the commencement of trading on the first Trading Day on which the Class A Common Stock is traded on the Nasdaq Stock Market, a number of shares equal to 25% of the Undersigned's Shares measured as of the date set forth on the cover page of the pricing

prospectus for the Public Offering (the "Pricing Prospectus") (including any vested and exercisable stock options as of such date ("Vested Securities"), but excluding any unvested convertible securities, stock options, restricted stock units or other equity awards issued by the Company ("Unvested Securities"));

(b) if the undersigned is a current or former employee, contractor or consultant of the Company or its subsidiaries (excluding any current officer or director of the Company), the Lock-Up Period shall terminate with respect to all of the Undersigned's Shares immediately prior to the commencement of trading on the third Trading Day after the date the Company publishes its second quarterly financial results following the Public Offering Date (the "Second Quarterly Earnings Date");

(c) if the undersigned is an officer or director of the Company, the Lock-Up Period shall terminate with respect to a number of shares equal to 30% of the Undersigned's Shares (measured as of the Measurement Date and including any Vested Securities, but excluding any Unvested Securities) immediately prior to the commencement of trading on the third Trading Day (such date, the "Price-Based Early Release Date") immediately following the date the following conditions are met (such date, the "Measurement Date"): (1) the close of trading on the Second Quarterly Earnings Date and (2) the last reported closing price of the Class A Common Stock on the Nasdaq Stock Market is greater than the initial public offering price per share set forth on the cover page of the Prospectus for any 10 Trading Days (including the Measurement Date) out of any 15-consecutive Trading Day period (the "Measurement Period"); and

(d) if the undersigned irrevocably elects to sell shares of Class A Common Stock in the Public Offering pursuant to the Underwriting Agreement (each, a "Selling Investor"), the Lock-Up Period shall terminate immediately prior to the commencement of trading on the Price-Based Early Release Date with respect to a number of shares held by the undersigned, calculated as follows: (A) if the Selling Investor irrevocably elected to sell at least 10% but less than 20% of the aggregate number of the Undersigned's Shares held as of the date set forth on the cover page of the Pricing Prospectus (including the Vested Securities and excluding any Unvested Securities) (such aggregate amount, the "Selling Investor Pre-IPO Shares"), a number of shares held by the undersigned equal to 20% of the Selling Investor Pre-IPO Shares, and (B) if the Selling Investor irrevocably elected to sell at least 20% of the Selling Investor Pre-IPO Shares, a number of shares held by the undersigned equal to 30% of the Selling Investor Pre-IPO Shares. If the undersigned and its affiliates so elect, this paragraph shall apply on an aggregate basis to the undersigned and such affiliates (i.e., the calculation of the percentages irrevocably elected to be sold and the number of shares released pursuant this paragraph (d) shall be made on the basis of the aggregate number of shares irrevocably elected to be sold by the undersigned and such affiliates) and the undersigned and such affiliates may designate how to allocate the shares released pursuant to this paragraph (d) among them; provided that if the undersigned or its transferees will have securities released from the provisions of this Lock-Up Agreement pursuant to paragraph (c) above, then the undersigned shall not be entitled to any incremental release of securities pursuant to this paragraph (d).

For the avoidance of doubt, the Measurement Period may begin prior to the Second Quarterly Earnings Date. In addition, the Company may, in its discretion, extend the date of the Price-Based Early Release Date as reasonably needed for administrative processing or to the extent such release date would occur during a Company blackout period, in which case, the Company will publicly announce the date of the Price-Based Early Release Date following the close of trading on the date that is at least two Trading Days prior to such date.

For purposes of this Lock-Up Agreement, "Trading Day" is a day on which the New York Stock Exchange and the Nasdaq Stock Market are open for the buying and selling of securities.

In addition, notwithstanding the foregoing, and not by way of limitation of any Transfers by the undersigned that are permitted pursuant to paragraphs (a), (b), (c) or (d) above, the undersigned may:

1. Transfer the Undersigned's Shares:

(i) as a bona fide gift or gifts or charitable contribution, or for bona fide estate planning purposes;

(ii) to any member of the undersigned's immediate family or to any trust for the direct or indirect benefit of the undersigned or the undersigned's immediate family, or if the undersigned is a trust, to a trustor, trustee or beneficiary of the trust or to the estate of a trustor, trustee or beneficiary of such trust;

(iii) upon death or by will, testamentary document or intestate succession;

(iv) in connection with a sale of the Undersigned's Shares acquired (A) in the Public Offering (if the undersigned is not an officer or director of the Company) or (B) in open market transactions after the completion of the Public Offering;

(v) if the undersigned is a corporation, partnership, limited liability company or other business entity, (A) to another corporation, partnership, limited liability company or other business entity that is an affiliate (as defined in Rule 405 promulgated under the Securities Act) of the undersigned, or to any investment fund or other entity controlled or managed by the undersigned or affiliates of the undersigned, or (B) as part of a distribution by the undersigned to its stockholders, partners, members or other equityholders or to the estate of any such stockholders, partners, members or other equityholders;

(vi) any Transfer to the Company in connection with the vesting or settlement of restricted stock units or the "net" or "cashless" exercise of options, warrants or other rights to purchase shares of Class A Common Stock (for purposes of exercising such options, warrants or rights, including any Transfer to the Company for the payment of exercise price, tax withholdings or remittance payments, in each case due as a result of the vesting, settlement, or exercise of such options, warrants or other rights) pursuant to equity awards granted under an equity incentive plan, stock purchase plan or other equity award plan, which plan is described in the Registration Statement, the Pricing Prospectus or the Prospectus (such a plan, an "Equity Plan"), provided that any shares of Class A Common Stock received by the undersigned upon such vesting, settlement or exercise shall otherwise remain subject to the terms of this Lock-Up Agreement;

(vii) to the Company in connection with the repurchase of the Undersigned's Shares issued pursuant to equity awards granted under an Equity Plan, provided that such repurchase of Undersigned's Shares is in connection with the termination of the undersigned's relationship with the Company;

(viii) pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction made to all holders of shares of Class A Common Stock involving a Change of Control (as defined below) of the Company that is approved by the Board of Directors or the majority of voting power of outstanding capital stock of the Company, provided

that, in the event that such tender offer, merger, consolidation or other similar transaction is not completed, the Undersigned's Shares shall remain subject to the provisions of this Lock-Up Agreement;

(ix) in connection with the conversion or reclassification of the outstanding preferred stock or other classes of capital stock of the Company as described in the Pricing Prospectus and the Prospectus, provided that any such shares of Class A Common Stock or Derivative Securities received upon such conversion or reclassification shall remain subject to the provisions of this Lock-Up Agreement;

(x) by operation of law or pursuant to a qualified domestic order or in connection with a divorce settlement or any related court order;

(xi) to the Underwriters pursuant to the Underwriting Agreement; or

(xii) with the prior written consent of the Representative, on behalf of the Underwriters;

provided that (A) in the case of (i), (ii), (iii) and (v) above, such Transfer shall not involve a disposition for value and it shall be a condition to the Transfer or distribution that the donee, transferee or distributee, as the case may be, agrees in writing to be bound by the restrictions set forth herein, (B) in the case of (i), (ii), (iii), (iv), and (v) above, no filing under Section 16 of the Exchange Act, or other public filing (other than any required filing on Form 13F or Form 13H), report or announcement reporting a reduction in beneficial ownership of shares of Class A Common Stock shall be required or shall be voluntarily made during the Lock-Up Period, and (C) in the case of (vi), (vii) and (x) above, no filing under Section 16 of the Exchange Act, or other public filing, report or announcement reporting a reduction in beneficial ownership of shares of Class A Common Stock shall be voluntarily made during the Lock-Up Period and, if the undersigned is required to file a report under Section 16 of the Exchange Act during the Lock-Up Period, the undersigned shall include a statement in such report to the effect that such Transfer relates to the circumstances described in (vi), (vii) or (x) above, as the case may be; or

2. enter into a written plan meeting the requirements of Rule 10b5-1 under the Exchange Act after the date of this Lock-Up Agreement relating to the sale of the Undersigned's Shares, provided that the securities subject to such plan may not be transferred until after the expiration of the Lock-Up Period and, to the extent a public announcement, report or filing under the Exchange Act regarding the establishment of such plan shall be required during the Lock-Up Period, such announcement, report or filing shall include a statement to the effect that no Transfer of securities subject to such plan may be made under such plan until after the expiration of the Lock-Up Period; provided further that no such filing under Section 16 of the Exchange Act, or other public filing, report or announcement reporting a reduction in beneficial ownership of shares of Class A Common Stock shall be voluntarily made during the Lock-Up Period.

For purposes of this Lock-Up Agreement: "immediate family" shall mean any relationship by blood, marriage, domestic partnership or adoption, not more remote than first cousin; and "Change of Control" shall mean the transfer (whether by tender offer, merger, consolidation or other similar transaction), in one transaction or a series of related transactions, to a person or group of affiliated persons, of the Company's voting securities if, after such transfer, the Company's stockholders as of immediately prior to such transfer do not hold a majority of the outstanding voting securities of the Company (or the surviving entity).

If the Representative waives or terminates any of the restrictions with respect to shares of Class A Common Stock or Derivative Instruments herein (any such release, a "Triggering Release," and the party receiving such release, the "Triggering Release Party"), then a number of the Undersigned's Shares shall also be released from the restrictions set forth in this Lock-Up Agreement, such number of shares released being the total number of the Undersigned's Shares held on the date of such Triggering Release multiplied by a fraction, the numerator of which shall be the number of shares of Class A Common Stock and Derivative Instruments released pursuant to the Triggering Release, and the denominator of which shall be the total number of shares of Class A Common Stock and Derivative Instruments held by the Triggering Release Party on such date. The provisions of this paragraph will not apply if (i) (a) the release or waiver is effected solely to permit a transfer not for consideration and (b) the transferee has agreed in writing to be bound by the same terms described in this letter to the extent and for the duration that such terms remain in effect at the time of the transfer, (ii) in the case of any secondary underwritten public offering of shares of Class A Common Stock (including a secondary underwritten public offering with a primary component) (a "Follow-on Offering"), provided that the undersigned shall be offered the opportunity to participate on a pro rata basis in such Follow-on Offering and on pricing terms that are no less favorable than the terms of the Follow-on Offering or (iii) the aggregate number of shares of Class A Common Stock of the Company affected by such releases or waivers (whether in one or multiple releases or waivers) is less than or equal to 1% of the total number of outstanding shares of Class A Common Stock and Class B Common Stock of the Company. The Representative shall use commercially reasonable efforts to notify the Company, which shall then notify the undersigned, of any such release described in this paragraph within two business days before the effective date of any such release or waiver (provided that, in the absence of bad faith, the failure to provide such notices shall not give rise to any claim or liability against the Company, the Representative or the Underwriters).

This Lock-Up Agreement shall automatically terminate and the undersigned shall be released from all of his, her, or its obligations hereunder upon the earliest of (i) the date the Registration Statement filed with the SEC with respect to the Public Offering is withdrawn, (ii) the date on which for any reason the Underwriting Agreement is terminated (other than the provisions thereof that survive termination) prior to payment for and delivery of the Shares to be sold thereunder (other than pursuant to the Underwriters' over-allotment option), (iii) the date on which the Company notifies the Representative, in writing and prior to the execution of the Underwriting Agreement, that it does not intend to proceed with the Public Offering or (iv) September 30, 2021, in the event that the Underwriting Agreement has not been executed by such date, provided that the Company may, in its sole discretion, by written notice to the undersigned prior to such date, extend such date for a period of up to three additional months.

The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the Transfer of the Undersigned's Shares except in compliance with the foregoing restrictions.

The undersigned acknowledges and agrees that none of the Underwriters has made any recommendation or provided any investment or other advice to the undersigned with respect to this Lock-Up Agreement or the subject matter hereof, and the undersigned has consulted its own legal, accounting, financial, regulatory, tax and other advisors with respect to this Lock-Up Agreement and the subject matter hereof to the extent the undersigned has deemed appropriate.

The undersigned understands that the Company and the Underwriters are relying upon this Lock-Up Agreement in proceeding toward consummation of the Public Offering. The undersigned further understands that this Lock-Up Agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors, and assigns. This Lock-Up Agreement may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docusign.com or www.echosign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

This Lock-Up Agreement shall be governed by and construed in accordance with the laws of the State of New York.

[Remainder of page intentionally left blank]

Very truly yours,

IF AN INDIVIDUAL:

By: _____
(duly authorized signature)

Name: _____
(please print full name)

IF AN ENTITY:

_____
(please print complete name of entity)

By: _____
(duly authorized signature)

Name: _____
(please print full name)

Title: _____
(please print full title)

Exhibit 3.1

DUOLINGO, INC.

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

Duolingo, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, hereby certifies as follows:

FIRST: The name of this corporation is Duolingo, Inc. and the original Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on August 18, 2011.

SECOND: The Amended and Restated Certificate of Incorporation in the form of Exhibit A attached hereto has been duly adopted in accordance with the provisions of Sections 242, 245 and 228 of the General Corporation Law of the State of Delaware.

The text of the Amended and Restated Certificate of Incorporation as heretofore amended or supplemented is hereby restated and further amended to read in its entirety as set forth in EXHIBIT A attached hereto.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been signed as of July 15, 2021.

DUOLINGO, INC.

By: /s/ Luis von Ahn

Luis von Ahn, Chief Executive Officer

EXHIBIT A

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

DUOLINGO, INC.

ARTICLE I

The name of this corporation is Duolingo, Inc. (the "**Company**").

ARTICLE II

The address of the Company's registered office in the State of Delaware is 1209 Orange Street in the City of Wilmington, 19801-1120 County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE III

The purpose of this Company is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of Delaware.

ARTICLE IV

A. The aggregate number of shares that the Company shall have authority to issue is 91,874,276, consisting of 72,800,000 shares of Common Stock, $0.0001 par value per share (the "**Common Stock**") and 19,074,276 shares of Preferred Stock, $0.0001 par value per share (the "**Preferred Stock**"). The Common Stock may be issued in one or more classes, of which one such class shall be denominated the "**Class A Common Stock**" and one such class shall be denominated "**Class B Common Stock**." The Class A Common shall consist of 42,800,000 shares and the Class B Common shall consist of 30,000,000 shares. The Preferred Stock may be issued in one or more series, of which one such series shall be denominated the "**Series A Preferred**," one such series shall be denominated the "**Series B Preferred**," one such series shall be denominated the "**Series C Preferred**," one such series shall be denominated the "**Series D Preferred**," one such series shall be denominated "**Series E Preferred**," one such series shall be denominated the "**Series F Preferred**," one such series shall be denominated the "**Series G Preferred**," and one such series shall be denominated the "**Series H Preferred**." The Series A Preferred shall consist of 3,865,073 shares, the Series B Preferred shall consist of 6,298,550 shares, the Series C Preferred shall consist of 2,947,720 shares, the Series D Preferred shall consist of 3,153,798 shares, the Series E Preferred shall consist of 1,223,708 shares, the Series F Preferred shall consist of 758,146 shares, the Series G Preferred shall consist of 241,658 shares, and the Series H Preferred shall consist of 585,623 shares.

Immediately upon the filing and effectiveness of this Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware (the "**Effective Time**"), automatically and without further action on the part of holders of capital stock of the Company, each share of Common Stock outstanding or held by the Company as treasury stock as of immediately prior to the Effective Time shall be reclassified as, and become, one (1) validly issued, fully paid and non-assessable share of Class A Common Stock. Each certificate previously representing such shares of Common Stock shall from and after the Effective Time, represent the number of shares of Class A Common Stock into which such shares of Common Stock previously represented thereby were reclassified pursuant hereto.

Except as otherwise provided in this Article IV or required by law, shares of Class A Common Stock and Class B Common Stock shall have the same rights, privileges, preferences and powers, rank equally (including as to dividends and distributions, and upon any liquidation, dissolution, distribution of assets or winding up of the Company), share ratably and be identical in all respects and as to all matters.

B. The terms and provisions of the Preferred Stock and Common Stock are as follows:

1. Dividends and Distributions.

(a) Dividends. The Company shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Company (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in this Amended and Restated Certificate of Incorporation) a dividend is paid with respect to all outstanding shares of Preferred Stock in an amount equal to the aggregate amount of dividends which would be payable to the holder of Preferred Stock if, immediately prior to the record date set for such dividend payment on Class B Common Stock, such share of Preferred Stock had been converted into Class B Common Stock at the then-effective conversion rate. The Company shall make no Distribution (as defined below) to the holders of shares of Common Stock except in accordance with this Section B.1(a) or Section B.2.

(b) Distribution. "**Distribution**" means the transfer of cash, property or securities without consideration, whether by way of dividend or otherwise, or the purchase of shares of the Company (other than in connection with the repurchase of shares of Common Stock issued to or held by employees, consultants, officers or directors at a price not greater than the amount paid by such persons for such shares upon termination of their employment or services pursuant to agreements providing for the right of said repurchase or upon exercise of a right of first refusal approved by the Company's Board of Directors (the "**Board of Directors**")) for cash or property.

2. Liquidation Rights.

(a) Distribution of Assets on Liquidation. In the event of any Liquidation Event (as defined below), either voluntary or involuntary, the holders of the Preferred Stock shall be entitled to receive, on a *pari passu* basis, out of the assets of the Company, the Liquidation Preference specified for each share of Preferred Stock then held by them before any payment shall be made or any assets distributed to the holders of Common Stock. "**Liquidation Preference**" shall mean, with respect to each series of Preferred Stock, an amount per share of such series of Preferred Stock equal to the applicable Original Issue Price, plus declared but unpaid dividends on such share. If upon the Liquidation Event, the assets to be distributed among the holders of the Preferred Stock are insufficient to permit the payment to such holders of the full Liquidation Preference for their shares of Preferred Stock, then the holders of shares of Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares of Preferred Stock held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full under this Section B.2(a). As used in this Amended and Restated Certificate of Incorporation, "**Original Issue Price**" shall mean $0.8538 for each outstanding share of Series A Preferred (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series A Preferred), $2.3815 for each outstanding share of Series B Preferred (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series B Preferred), $6.7849 for each outstanding share of Series C Preferred (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series C Preferred), $14.2685 for each outstanding share of Series D Preferred (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series D Preferred), $20.4297 for each outstanding share of Series E Preferred (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series E Preferred), $39.5702 for each outstanding share of Series F Preferred (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series F Preferred), $41.3807 for each outstanding share of Series G Preferred (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series G Preferred), and $59.7653 for each outstanding share of Series H Preferred (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series H Preferred).

(b) Remaining Assets. After the payment to the holders of Preferred Stock of the full preferential amount specified above, any remaining assets of the Company shall be distributed with equal priority and pro rata among the holders of the Common Stock according to the number of shares of Common Stock held by each such holder.

(c) Notwithstanding the above, for purposes of determining the amount each holder of shares of Preferred Stock is entitled to receive with respect to a Liquidation Event, each such holder of shares of a series of Preferred Stock shall be deemed to have converted (regardless of whether such holder actually converted) such holder's shares of such series into shares of Class B Common Stock immediately prior to the Liquidation Event if, as a result of an

actual conversion, such holder would receive, in the aggregate, an amount greater than the amount that would be distributed to such holder if such holder did not convert such series of Preferred Stock into shares of Class B Common Stock. If any such holder shall be deemed to have converted shares of one or more series of Preferred Stock into Class B Common Stock pursuant to this paragraph, then such holder shall not be entitled to receive any distribution that would otherwise be made to holders of such series of Preferred Stock that have not converted (or have not been deemed to have converted) into shares of Class B Common Stock and shall forgo all other rights, privileges and preferences of such series of Preferred Stock to the extent that holders of Class B Common Stock are not entitled to such rights, privileges and preferences.

(d) Liquidation Event. A "**Liquidation Event**" shall be deemed to be occasioned by, or to include each of the following: (i) the liquidation, dissolution or winding up of the Company; (ii) the merger, acquisition or consolidation of the Company by means of any transaction or series of related transactions, provided that the applicable transaction shall not be deemed a Liquidation Event if the Company's shares of capital stock outstanding immediately prior to such transaction continue to represent, or are converted into or exchanged for shares of capital stock that represent, more than fifty percent (50%) of the voting power of the surviving or acquiring entity (or its parent) immediately following such transaction or series of related transactions; (iii) any transaction or series of related transactions to which the Company is a party in which more than fifty percent (50%) of the Company's voting power is transferred (taking into account only voting power resulting from stock held by such stockholders prior to such transaction or series of related transactions) and (iv) a sale, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, of all or substantially all of the assets of the Company and its subsidiaries taken as a whole (including, without limitation, the sale or disposition (by merger or otherwise) or of one or more subsidiaries of the Company if substantially all of the assets of the Company and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, transfer or other disposition is to a wholly-owned subsidiary of the Company); provided that a Liquidation Event shall not include (x) a merger or consolidation of the Company with a wholly-owned subsidiary of the Company, (y) a merger effected exclusively for the purpose of changing the domicile of the Company or (z) any sale of Preferred Stock or Common Stock for bona fide equity financing purposes. The treatment of any particular transaction or series of related transactions as a Liquidation Event may be waived by the vote or written consent of the Requisite Preferred Holders (as defined below); provided that such waiver shall not apply to the Series H Preferred without the affirmative vote or written consent of the holders of a majority of the then-outstanding shares of Series H Preferred, voting exclusively as a separate series (the "**Series H Majority**"). As used herein "**Requisite Preferred Holders**" means the holders of at least 55% of the then-outstanding Preferred Stock (voting together as a single class and not as separate series, and on an as-converted basis) including the approval of the Requisite Significant Stockholders (as defined below). "**Significant Stockholders**" means, collectively, KPCB Holdings, Inc. ("**KPCB**"), Union Square Ventures 2012 Fund, L.P. ("**USV**"), CapitalG (as defined below) and Drive Capital (as defined below); provided, however, that if, after April 9, 2020, any of KPCB, USV,

CapitalG or Drive Capital ceases to hold at least 50% of the number of shares of Class B Common Stock issued or issuable upon conversion of shares of Preferred Stock held by such stockholder (together with its affiliates) as of such date, then such stockholder shall no longer be deemed a Significant Stockholder hereunder. "**CapitalG**" means, collectively, CapitalG 2014 LP, CapitalG 2015 LP, and CapitalG II LP ("**CapitalG II**") and/or one or more of their affiliates. "**Drive Capital**" means, collectively, Drive Capital Fund II, L.P., Drive Capital Fund II (TE), L.P. and Drive Capital Ignition Fund II, L.P. "**Requisite Significant Stockholders**" means (i) at least three of the Significant Stockholders at any time when there are a total of four Significant Stockholders; (ii) at least two Significant Stockholders at any time when there are a total of three Significant Stockholders; and (iii) all of the Significant Stockholders at any time when there are fewer than three Significant Stockholders in total.

(e) Determination of Value if Proceeds Other than Cash. In any Liquidation Event, if the proceeds received by the Company or its stockholders are other than cash, its value will be deemed its fair market value. Any securities shall be valued as follows:

(i) Securities not subject to investment letter or other similar restrictions on free marketability covered by (ii) below:

(A) If traded on a securities exchange, the value shall be deemed to be the average of the closing prices of the securities on such exchange over the twenty (20) trading-day period ending three (3) trading days prior to the closing of the Liquidation Event;

(B) If actively traded over-the-counter, the value shall be deemed to be the average of the closing bid or sale prices (whichever is applicable) over the twenty (20) trading-day period ending three (3) trading days prior to the closing of the Liquidation Event; and

(C) If there is no active public market, the value shall be the fair market value thereof, as determined in good faith by the Board of Directors.

(ii) The method of valuation of securities subject to investment letter or other restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall be to make an appropriate discount from the market value determined as above in (i) (A), (B) or (C) to reflect the approximate fair market value thereof, as determined in good faith by the Board of Directors.

3. Preferred Stock Conversion. The Preferred Stock shall have conversion rights as follows:

(a) Right to Convert. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share at the office of the Company or any transfer agent for the Preferred Stock. Each share of Preferred Stock shall be

convertible into that number of fully paid and non-assessable shares of Class B Common Stock that is equal to the Original Issue Price for such series divided by the Conversion Price (as hereinafter defined) for such series, determined as hereafter provided, in effect on the date the certificate is surrendered for conversion. The applicable "**Conversion Price**" shall initially be the applicable Original Issue Price, and shall be subject to adjustment as provided herein.

(b) Automatic Conversion.

(i) Each share of Preferred Stock shall automatically be converted into shares of Class B Common Stock at the then effective applicable Conversion Price for such share at the date and time, or the occurrence of an event, specified by the affirmative vote or written consent of the Requisite Preferred Holders; provided that: if (x) (A) such affirmative vote or written consent occurs in connection with a Liquidation Event and (B) the amount the holders of a series of Preferred Stock would receive per share on an as-converted basis is less than the Liquidation Preference such series of Preferred Stock would receive per share in the absence of such affirmative vote or written consent, the affirmative vote or written consent of the holders of a majority of the then outstanding shares of such series of Preferred Stock (voting as a separate class) shall be required; and (y) in addition to the affirmative vote or written consent of the Requisite Preferred Holders, the automatic conversion of the Series H Preferred pursuant to this Section 3(b)(i) shall require the affirmative vote or written consent of the Series H Majority, except in connection with a Series H Automatic Conversion Event (as defined in that certain Amended and Restated Investors' Rights Agreement, dated on or about the Filing Date, by and among the Company and the stockholders of the Company named therein, as such agreement is amended and/or restated from time to time in accordance with its terms (the "**Rights Agreement**")), or except if such affirmative vote or written consent of the Series H Majority is not required pursuant to Section 3(b)(i)(x) in connection with a Liquidation Event.

(ii) Each share of Preferred Stock shall automatically be converted into shares of Class B Common Stock at the then effective applicable Conversion Price for such share immediately prior to the consummation of a firmly underwritten initial public offering pursuant to the Securities Act of 1933, as amended (the "**Securities Act**"), on Form S-1 (as defined in the Securities Act) or any successor form; provided, however, that the aggregate gross proceeds to the Company in such offering exceed $50,000,000 (before deduction of underwriters' discounts and commissions) and such offering results in the Class A Common Stock being listed on the New York Stock Exchange or the Nasdaq Stock Market (a "**Qualified IPO**").

(c) Mechanics of Conversion. No fractional shares of Class B Common Stock shall be issued upon conversion of any shares of Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Company shall pay the fair market value cash equivalent of such fractional share as determined in good faith by the Board of Directors. For such purpose, all shares of Preferred Stock held by each holder shall be aggregated, and any resulting fractional share of Class B Common Stock shall be paid in cash. Before any holder of Preferred Stock shall be entitled to convert the same into full shares of Class B Common Stock,

and to receive certificate(s) therefor, such holder shall surrender such holder's Preferred Stock certificate or certificates, duly endorsed, at the principal corporate office of the Company or of any transfer agent for the Preferred Stock, and shall give written notice to the Company at such office that such holder elects to convert such shares and, if applicable, any event on which such conversion is contingent; provided, however, that in the event of an automatic conversion pursuant to Section B.3(b) above, the outstanding shares of Preferred Stock shall be converted automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Company or its transfer agent; provided further, however, that the Company shall not be obligated to issue certificates evidencing the shares of Class B Common Stock issuable upon such automatic conversion unless either the certificates evidencing such shares of Preferred Stock are delivered to the Company or its transfer agent as provided above, or the holder notifies the Company or its transfer agent that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Company to indemnify the Company from any loss incurred by it in connection with such lost, stolen or destroyed certificates.

The Company shall, as soon as practicable after delivery of the Preferred Stock certificate(s), (i) issue and deliver to such holder of Preferred Stock, a certificate or certificates for the number of shares of Class B Common Stock to which such holder shall be entitled and a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate that were not converted into Class B Common Stock and (ii) a check payable to the holder in the amount of any cash amounts payable as the result of a conversion into fractional shares of Class B Common Stock, plus any declared and unpaid dividends on the converted Preferred Stock. Except as otherwise provided herein, such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the shares of Preferred Stock to be converted, and the person or persons entitled to receive the shares of Class B Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Class B Common Stock on such date; provided, however, that if the conversion is in connection with an underwritten offer of securities registered pursuant to the Securities Act, the conversion may, at the option of any holder tendering Preferred Stock for conversion, be conditioned upon the closing of the sale of securities pursuant to such offering, in which event the person(s) entitled to receive the Class B Common Stock issuable upon such conversion of the Preferred Stock shall not be deemed to have converted such Preferred Stock until immediately prior to the closing of the sale of such securities.

All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares, including the rights, if any, to receive notices and to vote, shall immediately cease and terminate, except only the right of the holders thereof to receive shares of Class B Common Stock in exchange therefor and to receive payment of any dividends declared but unpaid thereon. Any shares of Preferred Stock so converted shall be retired and cancelled and shall not be reissued as shares of such series, and the Company (without the need for stockholder action) may from time

to time take such appropriate action as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

Upon any such conversion, no adjustment to the applicable Conversion Price shall be made for any declared but unpaid dividends on the Preferred Stock surrendered for conversion or on the Class B Common Stock delivered upon conversion.

(d) Adjustments for Subdivisions or Combinations of Class B Common Stock. If at any time or from time to time on or after the Original Issue Date (as hereinafter defined), the outstanding shares of Class B Common Stock shall be subdivided (by stock split, stock dividend or otherwise), into a greater number of shares of Class B Common Stock without a corresponding subdivision of the applicable series of Preferred Stock, the applicable Conversion Price in effect immediately prior to such subdivision shall, concurrently with the effectiveness of such subdivision, be proportionately decreased. If at any time or from time to time on or after the Original Issue Date, the outstanding shares of Class B Common Stock shall be combined (by reclassification or otherwise) into a lesser number of shares of Class B Common Stock without a corresponding combination of the applicable series of Preferred Stock, the applicable Conversion Price in effect immediately prior to such combination shall, concurrently with the effectiveness of such combination, be proportionately increased. The "**Original Issue Date**" shall be the date on which the first share of Series H Preferred is issued.

(e) Adjustments for Reclassification, Exchange and Substitution. If at any time or from time to time on or after the Original Issue Date, the Class B Common Stock issuable upon conversion of the Preferred Stock shall be changed into the same or a different number of shares of any other class or classes of securities, whether by capital reorganization, recapitalization, reclassification or other event (other than a subdivision or combination of shares pursuant to Section B.3(d) above), concurrently with the effectiveness of such capital reorganization, recapitalization, reclassification or other event, the Preferred Stock shall be convertible into, in lieu of the number of shares of Class B Common Stock which the holders would otherwise have been entitled to receive, a number of shares of such other class or classes of securities equivalent to the number of such shares or securities that would have been received by the holder of a number of shares of Class B Common Stock issuable upon conversion of the Preferred Stock immediately prior to such capital reorganization, recapitalization, reclassification or other event. In any such case, appropriate adjustment shall be made in the application of the provisions of this Section B.3 with respect to the rights of the holders of Preferred Stock after the capital reorganization, recapitalization, reclassification or other event to the end that the provisions of this Section B.3 (including adjustment of each Conversion Price then in effect and the number and type of shares or other securities issuable upon conversion of the Preferred Stock) shall be applicable after that event and be as nearly equivalent as practicable.

(f) Adjustment for Class B Common Stock Dividends and Distributions. If at any time or from time to time on or after the Original Issue Date, the Company shall make or issue, or fix a record date for the determination of holders of Class B Common Stock entitled to

receive, a dividend or other distribution payable on the Class B Common Stock in additional shares of Class B Common Stock, then and in each such event the each Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the applicable Conversion Price then in effect by a fraction:

(i) the numerator of which shall be the total number of shares of Class B Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(ii) the denominator of which shall be the total number of shares of Class B Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Class B Common Stock issuable in payment of such dividend or distribution;

provided, however, that if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the applicable Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter the applicable Conversion Price shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and provided further, however, that no such adjustment shall be made if the holders of the applicable series of Preferred Stock simultaneously receive (i) a dividend or other distribution of shares of Class B Common Stock in a number equal to the number of shares of Class B Common Stock as they would have received if all outstanding shares of such series of Preferred Stock had been converted into Class B Common Stock on the date of such event or (ii) a dividend or other distribution of shares of such series of Preferred Stock which are convertible, as of the date of such event, into such number of shares of Class B Common Stock as is equal to the number of additional shares of Class B Common Stock being issued with respect to each share of Class B Common Stock in such dividend or distribution.

(g) Adjustments for Other Dividends and Distributions. If at any time or from time to time on or after the Original Issue Date, the Company shall make or issue, or fix a record date for the determination of holders of capital stock of the Company entitled to receive, a dividend or other distribution payable in securities of the Company (other than a distribution of shares of Class B Common Stock in respect of outstanding shares of Class B Common Stock) or in other property and the provisions of Section B.3(f) above do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of such capital stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Preferred Stock had been converted into Class B Common Stock on the date of such event.

(h) Adjustments for Reorganization, Merger, Consolidation or Sale of Assets. If at any time or from time to time on or after the Original Issue Date, the Class B Common Stock issuable upon conversion of the Preferred Stock shall be changed into the same or a different number of shares of any other class or classes of stock, whether by a reorganization, merger or consolidation of the Company with or into another entity, or the sale of all or substantially all of the Company's properties and assets to any other person or entity (other than as provided for elsewhere in this Section B.3 or a transaction subject to Section B.2 above) then, as a part of such reorganization, merger, consolidation or sale, provision shall be made so that the holders of Preferred Stock shall thereafter be entitled to receive upon conversion of the then outstanding Preferred Stock, the number of shares of stock or other securities or property of the Company, or of the successor entity resulting from such merger or consolidation or sale, to which a holder of Class B Common Stock deliverable upon conversion of the Preferred Stock would have been entitled to receive upon such capital reorganization, merger consolidation or sale. In any such case, appropriate adjustment shall be made in the application of the provisions of this Section B.3 with respect to the rights and interests of the holders of the then outstanding Preferred Stock after the reorganization, merger, consolidation or sale to the end that the provisions of this Section B.3 (including adjustments of the applicable Conversion Price then in effect and the number of shares purchasable upon conversion of the Preferred Stock) shall be applicable after that event as nearly equivalent as may be practicable.

(i) Adjustments for Dilutive Issuances.

(i) If at any time or from time to time on or after the Original Issue Date, the Company shall issue or sell any shares of Common Stock (as actually issued or, pursuant to paragraph (iii) below, deemed to be issued) for a consideration per share less than the applicable Conversion Price for a series of Preferred Stock in effect immediately prior to such issue or sale (the "**Prior CP**"), then immediately upon such issue or sale the applicable Conversion Price for such series of Preferred Stock shall be reduced to a price (calculated and rounded upward to the nearest tenth of a cent) determined by multiplying the Prior CP by a fraction, the numerator of which shall be the number of shares of Calculated Securities (as defined below) outstanding immediately prior to such issue or sale plus the number of shares of Common Stock which the aggregate consideration received by the Company for the total number of shares of Common Stock so issued or sold (or deemed to be issued or sold) would purchase at the Prior CP (the "**New Investment Shares**"), and the denominator of which shall be the number of shares of Calculated Securities outstanding immediately prior to such issue or sale plus the number of shares of Common Stock so issued or sold (the "**New Shares**"). "**Calculated Securities**" means (A) all shares of Common Stock actually outstanding and (B) all shares of

Common Stock issuable upon exercise, conversion or exchange of all Convertible Securities (as defined below):

New CP = Prior CP x (Calculated Securities + New Investment Shares)
(Calculated Securities + New Shares)

(ii) For the purposes of paragraph (i) immediately above, none of the following issuances (or deemed issuances) (collectively, "**Exempt Issuances**") shall be considered the issuance (or deemed issuance) or sale of Common Stock and no reduction of the applicable Conversion Price shall be made as a result thereof:

(A) The issuance of Common Stock upon the conversion of any outstanding Convertible Securities pursuant to the terms of such securities as of the date of the filing of this Amended and Restated Certificate of Incorporation (the "**Filing Date**") or upon the conversion of the Preferred Stock. "**Convertible Securities**" shall mean any bonds, debentures, notes or other evidences of indebtedness, and any options, warrants, purchase rights or any other securities convertible into, exercisable for, or exchangeable for Common Stock.

(B) The issuance of Convertible Securities or shares of Common Stock issued or issuable by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Section B.3(f) or Section B.3(g) above and shares of Common Stock issued or deemed issued as a dividend or Distribution on all shares of Preferred Stock on a pro rata, as-converted to Common Stock basis.

(C) The issuance of shares of Common Stock and/or options, warrants or rights to purchase Common Stock and the Common Stock issued pursuant to such options, warrants or other rights to employees, consultants, officers or directors pursuant to any stock plans, equity incentive plans, restricted stock plans or other similar arrangements designated and approved by the Board of Directors.

(D) The issuance of shares of Common Stock or Convertible Securities to lenders, financial institutions, equipment lessors or similar entities in connection with commercial credit arrangements, equipment financings or similar transactions, in each case, the terms of which are approved by the Requisite Preferred Holders.

(E) The issuance of shares of Common Stock or Convertible Securities as consideration for bona fide acquisitions, mergers, business combinations or similar transactions, in each case, the terms of which are approved by the Requisite Preferred Holders.

(F) The issuance of any shares of Series H Preferred sold pursuant to that certain Series H Preferred Stock Purchase Agreement, dated on or about the Filing Date, by and among the Company and the purchasers of Series H Preferred named therein, as such agreement is amended and/or restated from time to time (the "**Purchase Agreement**").

(G) Shares of Common Stock issued or issuable pursuant to a Qualified IPO.

(H) The issuance of shares of Common Stock or Convertible Securities to persons or entities with which the Company has business relationships, the principal purpose of which the Board of Directors has determined in good faith is other than the raising of capital through the sale of equity securities of the Company and, in each case, which terms are approved by the Requisite Preferred Holders.

(I) Shares of Common Stock issued or issuable pursuant to Section B.3(i)(i) as a result of a decrease in the Conversion Price of any series of Preferred Stock resulting from the operation of Section B.3(i).

(J) The issuance of shares of Common Stock or Convertible Securities in any other transaction in which exemption from Section B.3(i)(i) is approved by the Requisite Preferred Holders, provided that approval shall expressly refer to this Section B.3(i)(ii)(J) and the issuance approved.

(K) The issuance of Common Stock upon the exercise, conversion or exchange of Convertible Securities issued in accordance with this Section B.3(i)(ii).

(iii) For the purposes of paragraph (i) above, the following subparagraphs (A) to (E), inclusive, shall also be applicable:

(A) In case at any time the Company shall grant any warrants, rights or options to subscribe for, purchase or otherwise acquire Convertible Securities or Common Stock (excluding Convertible Securities and Common Stock issued in accordance with Section B.3(i)(ii) of this Article IV) (collectively "**Options**") or shall fix a record date for the determination of holders entitled to receive such Options, whether or not such Options are immediately exercisable, and the price per share for which Common Stock is issuable upon the exercise of such Options (determined by dividing (x) the total amount, if any, received or receivable by the Company as consideration for the granting of such Options, plus the minimum aggregate amount of additional consideration payable to the Company upon the exercise of such Options, plus, in the case of any such Options which relate to such Convertible Securities, the minimum aggregate amount of additional consideration, if any, payable upon the issue or sale of such Convertible Securities and upon the conversion or exchange thereof, by (y) the total maximum number of shares of Common Stock issuable upon the exercise of such Options or upon the conversion or exchange of all such Convertible Securities issuable upon the exercise of such Options as set forth in the instrument relating thereto assuming the satisfaction of any conditions to the exercisability, convertibility or exchangeability) shall be less than the applicable Conversion Price in effect immediately prior to the time of the granting of such Options, then the total maximum number of shares of Common Stock issuable upon the exercise

of such Options or upon conversion or exchange of the total maximum amount of such Convertible Securities issuable upon the exercise of such Options shall (as of the date of granting of such Options) be deemed to be outstanding and to have been issued for such price per share.

(B) In case at any time the Company shall issue or sell any Convertible Securities (excluding Common Stock and Convertible Securities issued in accordance with Section B.3(i)(ii) above), whether or not the rights to exchange or convert thereunder are immediately exercisable, and the price per share for which Common Stock is issuable upon such exercise, conversion or exchange (determined by dividing (x) the total amount received or receivable by the Company as consideration for the issue or sale of such Convertible Securities, plus the minimum aggregate amount of additional consideration, if any, payable to the Company upon the exercise, conversion or exchange thereof, by (y) the total maximum number of shares of Common Stock issuable upon the exercise, conversion or exchange of all such Convertible Securities as set forth in the instrument relating thereto assuming the satisfaction of any conditions to the exercisability, convertibility or exchangeability) shall be less than the applicable Conversion Price in effect immediately prior to the time of such issue or sale, then the total maximum number of shares of Common Stock issuable upon exercise, conversion or exchange of such Convertible Securities shall (as of the date of the issue or sale of such Convertible Securities) be deemed to be outstanding and to have been issued for such price per share, provided that if any such issue or sale of such Convertible Securities is made upon exercise of any rights to subscribe for or to purchase or any option to purchase any such Convertible Securities for which adjustments of the applicable Conversion Price have been or are to be made pursuant to other provisions of this paragraph (iii), no further adjustment of the applicable Conversion Price shall be made by reason of such issue or sale.

(C) In case at any time any shares of Common Stock, Convertible Securities or Options shall be issued or sold for cash, the consideration received therefor shall be deemed to be the amount received by the Company therefor. In case any shares of Common Stock, Convertible Securities or Options shall be issued or sold for a consideration other than cash, the amount of the consideration other than cash received by the Company shall be deemed to be the fair value of such consideration as determined by the Board of Directors in good faith. In case any shares of Common Stock, Convertible Securities or Options shall be issued in connection with any merger of another entity into the Company, the amount of consideration therefor shall be deemed to be the fair value of the assets of such merged corporation as determined by the Board of Directors in good faith after deducting therefrom all cash and other consideration (if any) paid by the Company in connection with such merger.

(D) If the terms of any Convertible Security or Option (excluding Convertible Securities or Options issued in accordance with Section B.3(i)(ii) above), the issuance of which resulted in an adjustment to the applicable Conversion Price pursuant to the terms of this Section B.3(i), are revised (either automatically pursuant to the provisions contained therein or as a result of an amendment to such terms) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise,

conversion or exchange of any such Convertible Security or Option or (2) any increase or decrease in the consideration payable to the Company upon such exercise, conversion or exchange, then, effective upon such increase or decrease becoming effective, the applicable Conversion Price computed upon the original issue of such Convertible Security or Option (or upon the occurrence of a record date with respect thereto) shall be readjusted to such applicable Conversion Price as would have been obtained had such revised terms been in effect upon the original date of issuance of such Convertible Security or Option. Notwithstanding the foregoing, no adjustment pursuant to this paragraph (D) shall have the effect of increasing the applicable Conversion Price to an amount which exceeds the lower of (i) the applicable Conversion Price on the original adjustment date, or (ii) the applicable Conversion Price that would have resulted from any issuances of shares of Common Stock without consideration or for a consideration per share less than the applicable Conversion Price in effect immediately prior to such issue or sale between the original adjustment date and such readjustment date.

(E) If the terms of any Convertible Security or Option (excluding Convertible Securities or Options which, upon exercise, conversion or exchange thereof, would entitle the holder thereof to receive securities set forth in Section B.3(i)(ii), the issuance of which did not result in an adjustment to the applicable Conversion Price pursuant to the terms of Section B.3(i)) (either because the consideration per share (determined pursuant to Section B.3(i)(iii)(C) hereof) of the Common Stock was equal to or greater than the applicable Conversion Price then in effect, or because such Convertible Security or Option was issued before the Filing Date)) are revised after the Filing Date (either automatically pursuant to the provisions contained therein or as a result of an amendment to such terms) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Convertible Security or Option or (2) any increase or decrease in the consideration payable to the Company upon such exercise, conversion or exchange, then such Convertible Security or Option, as so amended, and the Common Stock subject thereto (determined in the manner provided in Section B.3(i)(iii)(A) or (B) above, as applicable) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(j) Certificate of Adjustments. Upon the occurrence of each adjustment of the applicable Conversion Price pursuant to this Section B.3, the Company at its expense shall promptly compute such adjustment and furnish to each holder of the applicable series of Preferred Stock a certificate setting forth such adjustment and showing in detail the facts upon which such adjustment is based. The Company shall, as promptly as practicable, upon the written request at any time of any holder of Preferred Stock, furnish to such holder a like certificate setting forth (i) any and all adjustments made to such series of Preferred Stock since the date of the first issuance of such series, (ii) the applicable Conversion Price at the time in effect and (iii) the number of shares of Class B Common Stock and the amount, if any, of other property which at the time would be received upon the conversion of such series of Preferred Stock.

(k) Notices of Record Date. In the event that the Company shall propose at any time (i) to declare any dividend or distribution; (ii) to effect any reclassification or recapitalization; or (iii) to effect a Liquidation Event; then, in connection with each such event, the Company shall send to the holders of the Preferred Stock written notice at least 20 days prior to the record date or effective date for such event. The notice shall specify, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reclassification, recapitalization or Liquidation Event is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Class B Common Stock (or such other stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Class B Common Stock (or such other stock or securities) for securities or other property deliverable upon such reclassification, recapitalization or Liquidation Event, and the amount per share and character of such exchange applicable to the Preferred Stock and the Class B Common Stock. Any notice required by the provisions hereof to be given to a holder of shares of Preferred Stock shall be deemed sent to such holder if deposited in the United States mail, postage prepaid, and addressed to such holder at such holder's address appearing on the books of the Company.

(l) Reservation of Stock Issuable Upon Conversion. The Company shall at all times reserve and keep available out of its authorized but unissued shares of Class B Common Stock, solely for the purpose of effecting the conversion of the shares of the Preferred Stock, such number of its shares of Class B Common Stock as shall from time to time be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock; and if at any time the number of authorized but unissued shares of Class B Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, the Company will take such corporate action as may, in the opinion of its counsel, be necessary (including, without limitation, engaging in reasonable best efforts to obtain the requisite stockholder approval of any amendment to this Amended and Restated Certificate of Incorporation) to increase its authorized but unissued shares of Class B Common Stock to such number of shares as shall be sufficient for such purpose.

(m) Waiver of Adjustment to Conversion Price. Notwithstanding anything herein to the contrary, any downward adjustment of the Conversion Price of any series of Preferred Stock (other than Series E Preferred, Series F Preferred, Series G Preferred or Series H Preferred) may be waived, either prospectively or retroactively and either generally or in a particular instance, by the Requisite Preferred Holders. Any such waiver shall bind all future holders of shares of such series of Preferred Stock. Any downward adjustment of the Conversion Price of the Series E Preferred may be waived, either prospectively or retroactively and either generally or in a particular instance, by the holders of a majority of the then-outstanding shares of Series E Preferred. Any downward adjustment of the Conversion Price of the Series F Preferred may be waived, either prospectively or retroactively and either generally or in a particular instance, by the holders of a majority of the then-outstanding shares of Series F Preferred. Any downward adjustment of the Conversion Price of the Series G Preferred may be

waived, either prospectively or retroactively and either generally or in a particular instance, by the holders of a majority of the then-outstanding shares of Series G Preferred. Any downward adjustment of the Conversion Price of the Series H Preferred may be waived, either prospectively or retroactively and either generally or in a particular instance, by the Series H Majority.

4. Voting.

(a) General. Except as otherwise expressly provided herein or as required by law, the holders of Preferred Stock and the holders of Common Stock shall vote together and not as separate classes, including, but not limited to, with respect to any increase or decrease of the authorized shares of Class A Common Stock or Class B Common Stock. Subject to the provisions of Section B.5 of this Article IV, the number of authorized shares of Class A Common Stock and Class B Common Stock may be increased or decreased (but not below the number of shares of Class A Common Stock and Class B Common Stock, respectively, then outstanding) by the affirmative vote or written consent of the holders of at least a majority of the stock of the Company entitled to vote (voting together as a single class on an as-converted basis) irrespective of the provisions of Section 242(b)(2) of the General Corporation Law of the State of Delaware.

(b) Preferred Stock. Except as otherwise expressly provided herein or as required by law, each holder of shares of Preferred Stock shall be entitled to the number of votes equal to the number of shares of Class B Common Stock into which such shares of Preferred Stock held as of the applicable date by such holder could then be converted on any matter that is submitted to a vote or for the consent of the stockholders of the Company. Except as otherwise expressly provided herein, the holders of shares of Preferred Stock shall be entitled to vote on all matters on which the holders of Class B Common Stock shall be entitled to vote other than those matters upon which, pursuant to applicable law or this Amended and Restated Certificate of Incorporation, the holders of Class B Common Stock are entitled to vote separately as a class. The holders of the Preferred Stock shall be entitled to notice of any stockholders' meeting in accordance with the Bylaws of the Company. Fractional votes shall not, however, be permitted and any fractional voting rights resulting from the above formula (after aggregating all shares of Class B Common Stock into which shares of Preferred Stock held by each holder could be converted), shall be disregarded.

(c) Common Stock. Each holder of shares of Class A Common Stock shall be entitled to one vote for each share thereof held and each holder of shares of Class B Common Stock shall be entitled to 20 for each share thereof held.

(d) Election of Directors. Subject to any additional vote required by the Certificate of Incorporation, the authorized number of directors of the Company shall be determined in the manner set forth in the Company's Bylaws. As long as at least 878,425 shares of Series A Preferred remain outstanding (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series A Preferred), the holders of the

outstanding shares of Series A Preferred, voting separately as a single class, shall be entitled to elect one director (the "**Series A Director**"). As long as at least 1,574,638 shares of Series B Preferred remain outstanding (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series B Preferred), the holders of the outstanding shares of Series B Preferred, voting separately as a single class, shall be entitled to elect one director (the "**Series B Director**," and together with the Series A Director, the "**Preferred Directors**"). The holders of the outstanding shares of Common Stock, voting separately as a single class, shall be entitled to elect two directors. All other directors of the Company shall be elected by the holders of Preferred Stock and Common Stock voting together as a single class and not as separate series, and on an as-converted basis. Any director elected pursuant to this Section B.4(d) may be removed with or without cause only by the affirmative vote or written consent of the holders of the shares of the class, series or classes of stock entitled to elect such director or directors. There shall be no cumulative voting. If a vacancy on the Board of Directors is to be filled by the Board of Directors, only directors elected by the same class, series or classes of stockholders as those who would be entitled to vote to fill such vacancy shall vote to fill such vacancy. Each director shall be entitled to one vote on each matter presented to the Board of Directors; provided, however, that, so long as the holders of Preferred Stock, voting as a separate class, are entitled to elect one or more members of the Board of Director, the affirmative vote of the Board of Directors shall be required for any of the matters set forth in Section 3.9 of the Rights Agreement.

5. Amendments and Changes.

(a) Approval by the Preferred Stock. Notwithstanding Section B.4 of this Article IV, for so long as at least 1,626,514 shares of Preferred Stock remain outstanding (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Preferred Stock), the Company shall not (whether by amendment, merger, consolidation, recapitalization or otherwise), directly or indirectly, without first obtaining the approval (by vote or written consent as provided by law) of the Requisite Preferred Holders, take any of the following actions and any such act or transaction entered into without such consent or vote shall be null and void ab initio, and of no force or effect:

(i) effect any alteration, repeal, change or amendment of the rights, privileges or preferences of the Preferred Stock (or any series thereof);

(ii) effect any increase or decrease of the authorized number of shares Preferred Stock (or any series thereof) or Common Stock;

(iii) effect any authorization, creation or issuance of (or any obligation to authorize, create or issue) any securities of the Company having rights, preferences or privileges senior to or *pari passu* with the rights, preferences or privileges of the Preferred Stock (or any series thereof);

(iv) redeem or repurchase shares of the Company's stock or securities, except (A) in connection with the repurchase of shares of Common Stock issued to or held by employees, consultants, officers or directors upon termination of their employment or services pursuant to agreements under which the Company has the option to repurchase such shares at no greater than cost upon the occurrence of certain events, such as the termination of employment, or through the exercise of any right of first refusal; or (B) pursuant to agreements providing for the right of repurchase or the exercise of a contractual right of first refusal in favor of the Company;

(v) declare or pay dividends on or make any distributions with respect to any capital stock of the Company;

(vi) consummate a Liquidation Event;

(vii) amend, modify or repeal any provision of the Company's Certificate of Incorporation or Bylaws in a manner adverse to the Preferred Stock (or any series thereof);

(viii) effect any change in the authorized number of directors of the Company;

(ix) enter into or be a party to any transaction with any director, officer, or employee of the Company or any affiliate (as such term in defined in Rule 12b-2 of the General Rules and Regulations under the Securities Exchange Act of 1934, as amended, or any similar successor federal statute, and the rules and regulations thereunder, all as the same shall be in effect from time to time) of any such person, except for transactions that are approved by a majority of the disinterested members of the Board of Directors; or

(x) amend this Section B.5(a).

(b) Approval by the Series A Preferred. Notwithstanding Section B.4 of this Article IV, for so long as at least 878,425 shares of Series A Preferred remain outstanding (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series A Preferred), the Company shall not (whether by amendment, merger, consolidation, recapitalization or otherwise), without first obtaining the approval (by vote or written consent as provided by law) of the holders of a majority of the shares of the Series A Preferred then outstanding (voting as a separate class on an as-converted basis) take any of the following actions, and any such act or transaction entered into without such consent or vote shall be null and void ab initio, and of no force or effect:

(i) alter, amend or repeal any provision of this Amended and Restated Certificate of Incorporation or the Company's Bylaws if such alteration, amendment or repeal would adversely affect the rights, preferences, privileges or powers of or restrictions on the Series A Preferred in a manner different than any other series of Preferred Stock; provided,

however, that (i) a series of Preferred Stock shall not for purposes of this Section B.5(b) be deemed to be affected in a manner different than any other series of Preferred Stock because of proportional differences in the amounts of respective issue prices and liquidation preferences that arise out of differences in the original issue price vis-à-vis other series of Preferred Stock; and (ii) the authorization and issuance of a new series of Preferred Stock that is *pari passu* with or senior to the Series A Preferred shall not require the approval of holders of the Series A Preferred as a separate series pursuant to this Section B.5(b); or

(ii) amend this Section B.5(b).

(c) Approval by the Series B Preferred. Notwithstanding Section B.4 of this Article IV, for so long as at least 1,574,638 shares of Series B Preferred remain outstanding (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series B Preferred), the Company shall not (whether by amendment, merger, consolidation, recapitalization or otherwise), without first obtaining the approval (by vote or written consent as provided by law) of the holders of a majority of the shares of the Series B Preferred then outstanding (voting as a separate class on an as-converted basis) take any of the following actions, and any such act or transaction entered into without such consent or vote shall be null and void ab initio, and of no force or effect:

(i) alter, amend or repeal any provision of this Amended and Restated Certificate of Incorporation or the Company's Bylaws if such alteration, amendment or repeal would adversely affect the rights, preferences, privileges or powers of or restrictions on the Series B Preferred in a manner different than any other series of Preferred Stock; provided, however, that (i) a series of Preferred Stock shall not for purposes of this Section B.5(c) be deemed to be affected in a manner different than any other series of Preferred Stock because of proportional differences in the amounts of respective issue prices and liquidation preferences that arise out of differences in the original issue price vis-à-vis other series of Preferred Stock; and (ii) the authorization and issuance of a new series of Preferred Stock that is *pari passu* with or senior to the Series B Preferred shall not require the approval of holders of the Series B Preferred as a separate series pursuant to this Section B.5(c);

(ii) effect any increase or decrease of the authorized number of shares of Series B Preferred Stock;

(iii) apply any of its assets to the redemption, retirement, purchase or other acquisition of any series of Preferred Stock, directly or indirectly, through subsidiaries or otherwise, unless (x) such redemption, retirement, purchase or other acquisition is pursuant to the Company's exercise of a right of first refusal in connection with a proposed transfer of shares of Preferred Stock or (y) shares of Series B Preferred Stock are redeemed, retired, purchased or otherwise acquired on a *pari passu* pro rata basis (based on the respective liquidation preferences of all series of Preferred Stock to be redeemed, retired, purchased or otherwise acquired); or

(iv) amend this Section 5(c).

(d) Approval by the Series C Preferred. Notwithstanding anything to the contrary herein, for so long as at least 736,929 shares of Series C Preferred remain outstanding (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series C Preferred), the Company shall not (whether by amendment, merger, consolidation, recapitalization or otherwise), directly or indirectly, without first obtaining the approval (by vote or written consent as provided by law) of the holders of a majority of the shares of the Series C Preferred then outstanding (voting as a separate class on an as-converted basis) take any of the following actions, and any such act or transaction entered into without such consent or vote shall be null and void ab initio, and of no force or effect:

(i) alter, amend, repeal or waive any provision of this Amended and Restated Certificate of Incorporation or the Company's Bylaws if such alteration, amendment, repeal or waiver would adversely affect the rights, preferences, privileges or powers of or restrictions on the Series C Preferred in a manner different than any other series of Preferred Stock; provided, however, that (x) a series of Preferred Stock shall not for purposes of this Section B.5(d) be deemed to be affected in a manner different than any other series of Preferred Stock solely because of proportional differences in the amounts of respective issue prices and liquidation preferences that arise out of differences in the original issue price vis-à-vis other series of Preferred Stock; and (y) the authorization and issuance of a new series of Preferred Stock that is *pari passu* with or senior to the Series C Preferred shall not require the approval of holders of the Series C Preferred as a separate series pursuant to this Section B.5(d);

(ii) effect any increase or decrease of the authorized number of shares of Series C Preferred Stock;

(iii) apply any of its assets to the redemption, retirement, purchase or other acquisition of any series of Preferred Stock, directly or indirectly, through subsidiaries or otherwise, unless (x) such redemption, retirement, purchase or other acquisition is pursuant to the Company's exercise of a right of first refusal in connection with a proposed transfer of shares of Preferred Stock or (y) shares of Series C Preferred Stock are redeemed, retired, purchased or otherwise acquired on a *pari passu* pro rata basis (based on the respective liquidation preferences of all series of Preferred Stock to be redeemed, retired, purchased or otherwise acquired); or

(iv) amend this Section B.5(d).

(e) Approval by the Series D Preferred. Notwithstanding anything to the contrary herein, for so long as at least 788,450 shares of Series D Preferred remain outstanding (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series D Preferred), the Company shall not (whether by amendment, merger, consolidation, recapitalization or otherwise), directly or indirectly, without first obtaining the approval (by vote or written consent as provided by law) of the holders of a majority of the shares of the Series D

Preferred then outstanding (voting as a separate class on an as-converted basis) take any of the following actions, and any such act or transaction entered into without such consent or vote shall be null and void ab initio, and of no force or effect:

(i) alter, amend, repeal or waive any provision of this Amended and Restated Certificate of Incorporation or the Company's Bylaws if such alteration, amendment, repeal or waiver would adversely affect the rights, preferences, privileges or powers of or restrictions on the Series D Preferred in a manner different than any other series of Preferred Stock; provided, however, that (x) a series of Preferred Stock shall not for purposes of this Section B.5(e) be deemed to be affected in a manner different than any other series of Preferred Stock solely because of proportional differences in the amounts of respective issue prices and liquidation preferences that arise out of differences in the original issue price vis-à-vis other series of Preferred Stock; and (y) the authorization and issuance of a new series of Preferred Stock that is *pari passu* with or senior to the Series D Preferred shall not require the approval of holders of the Series D Preferred as a separate series pursuant to this Section B.5(e);

(ii) effect any increase or decrease of the authorized number of shares of Series D Preferred Stock;

(iii) apply any of its assets to the redemption, retirement, purchase or other acquisition of any series of Preferred Stock, directly or indirectly, through subsidiaries or otherwise, unless (x) such redemption, retirement, purchase or other acquisition is pursuant to the Company's exercise of a right of first refusal in connection with a proposed transfer of shares of Preferred Stock or (y) shares of Series D Preferred Stock are redeemed, retired, purchased or otherwise acquired on a *pari passu* pro rata basis (based on the respective liquidation preferences of all series of Preferred Stock to be redeemed, retired, purchased or otherwise acquired);

(iv) amend or waive Section B.3(b)(i); or

(v) amend this Section B.5(e).

(f) Approval by the Series E Preferred. Notwithstanding anything to the contrary herein, for so long as at least 200,000 shares of Series E Preferred remain outstanding (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series E Preferred), the Company shall not (whether by amendment, merger, consolidation, recapitalization or otherwise), directly or indirectly, without first obtaining the approval (by vote or written consent as provided by law) of the holders of a majority of the shares of the Series E Preferred then outstanding (voting as a separate class on an as-converted basis) take any of the following actions, and any such act or transaction entered into without such consent or vote shall be null and void ab initio, and of no force or effect:

(i) alter, amend, repeal or waive any provision of this Amended and Restated Certificate of Incorporation or the Company's Bylaws if such alteration, amendment,

repeal or waiver would adversely affect the rights, preferences, privileges or powers of or restrictions on the Series E Preferred in a manner different than any other series of Preferred Stock; provided, however, that (x) a series of Preferred Stock shall not for purposes of this Section B.5(f) be deemed to be affected in a manner different than any other series of Preferred Stock solely because of proportional differences in the amounts of respective issue prices and liquidation preferences that arise out of differences in the original issue price vis-à-vis other series of Preferred Stock; and (y) the authorization and issuance of a new series of Preferred Stock that is *pari passu* with or senior to the Series E Preferred shall not require the approval of holders of the Series E Preferred as a separate series pursuant to this Section B.5(f);

(ii) effect any increase or decrease of the authorized number of shares of Series E Preferred Stock;

(iii) apply any of its assets to the redemption, retirement, purchase or other acquisition of any series of Preferred Stock, directly or indirectly, through subsidiaries or otherwise, unless (x) such redemption, retirement, purchase or other acquisition is pursuant to the Company's exercise of a right of first refusal in connection with a proposed transfer of shares of Preferred Stock or (y) shares of Series E Preferred Stock are redeemed, retired, purchased or otherwise acquired on a *pari passu* pro rata basis (based on the respective liquidation preferences of all series of Preferred Stock to be redeemed, retired, purchased or otherwise acquired);

(iv) amend or waive Section B.3(b)(i); or

(v) amend this Section B.5(f).

(g) Approval by the Series F Preferred. Notwithstanding anything to the contrary herein, at any time that at least 150,000 shares of Series F Preferred are outstanding (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series F Preferred), the Company shall not (whether by amendment, merger, consolidation, recapitalization or otherwise), directly or indirectly, without first obtaining the approval (by vote or written consent as provided by law) of the holders of a majority of the shares of the Series F Preferred then outstanding (voting as a separate class on an as-converted basis) take any of the following actions, and any such act or transaction entered into without such consent or vote shall be null and void ab initio, and of no force or effect:

(i) alter, amend, repeal or waive any provision of this Amended and Restated Certificate of Incorporation or the Company's Bylaws if such alteration, amendment, repeal or waiver would adversely affect the rights, preferences, privileges or powers of or restrictions on the Series F Preferred in a manner different than any other series of Preferred Stock; provided, however, that (x) a series of Preferred Stock shall not for purposes of this Section B.5(g) be deemed to be affected in a manner different than any other series of Preferred Stock solely because of proportional differences in the amounts of respective issue prices and liquidation preferences that arise out of differences in the original issue price vis-à-vis other

series of Preferred Stock; and (y) the authorization and issuance of a new series of Preferred Stock that is *pari passu* with or senior to the Series F Preferred shall not require the approval of holders of the Series F Preferred as a separate series pursuant to this Section B.5(g);

(ii) effect any increase or decrease of the authorized number of shares of Series F Preferred Stock;

(iii) apply any of its assets to the redemption, retirement, purchase or other acquisition of any series of Preferred Stock, directly or indirectly, through subsidiaries or otherwise, unless (x) such redemption, retirement, purchase or other acquisition is pursuant to the Company's exercise of a right of first refusal in connection with a proposed transfer of shares of Preferred Stock or (y) shares of Series F Preferred Stock are redeemed, retired, purchased or otherwise acquired on a *pari passu* pro rata basis (based on the respective liquidation preferences of all series of Preferred Stock to be redeemed, retired, purchased or otherwise acquired);

(iv) amend or waive Section B.3(b)(i); or

(v) amend this Section B.5(g).

(h) Approval by the Series G Preferred. Notwithstanding anything to the contrary herein, for so long as at least 48,000 shares of Series G Preferred remain outstanding (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series G Preferred), the Company shall not (whether by amendment, merger, consolidation, recapitalization or otherwise), directly or indirectly, without first obtaining the approval (by vote or written consent as provided by law) of the holders of a majority of the shares of the Series G Preferred then outstanding (voting as a separate class on an as-converted basis) take any of the following actions, and any such act or transaction entered into without such consent or vote shall be null and void ab initio, and of no force or effect:

(i) alter, amend, repeal or waive any provision of this Amended and Restated Certificate of Incorporation or the Company's Bylaws if such alteration, amendment, repeal or waiver would adversely affect the rights, preferences, privileges or powers of or restrictions on the Series G Preferred in a manner different than any other series of Preferred Stock; provided, however, that (x) a series of Preferred Stock shall not for purposes of this Section B.5(h) be deemed to be affected in a manner different than any other series of Preferred Stock solely because of proportional differences in the amounts of respective issue prices and liquidation preferences that arise out of differences in the original issue price vis-à-vis other series of Preferred Stock; and (y) the authorization and issuance of a new series of Preferred Stock that is *pari passu* with or senior to the Series G Preferred shall not require the approval of holders of the Series G Preferred as a separate series pursuant to this Section B.5(h);

(ii) effect any increase or decrease of the authorized number of shares of Series G Preferred Stock;

(iii) apply any of its assets to the redemption, retirement, purchase or other acquisition of any series of Preferred Stock, directly or indirectly, through subsidiaries or otherwise, unless (x) such redemption, retirement, purchase or other acquisition is pursuant to the Company's exercise of a right of first refusal in connection with a proposed transfer of shares of Preferred Stock or (y) shares of Series G Preferred Stock are redeemed, retired, purchased or otherwise acquired on a *pari passu* pro rata basis (based on the respective liquidation preferences of all series of Preferred Stock to be redeemed, retired, purchased or otherwise acquired); or

(iv) amend this Section B.5(h).

(i) Approval by the Series H Preferred. Notwithstanding anything to the contrary herein, for so long as at least 115,000 shares of Series H Preferred remain outstanding (as adjusted for stock splits, combinations, reorganizations and the like with respect to the Series H Preferred), the Company shall not (whether by amendment, merger, consolidation, recapitalization or otherwise), directly or indirectly, without first obtaining the approval (by vote or written consent as provided by law) of the Series H Majority take any of the following actions, and any such act or transaction entered into without such consent or vote shall be null and void ab initio, and of no force or effect:

(i) alter, amend, repeal or waive any provision of this Amended and Restated Certificate of Incorporation or the Company's Bylaws if such alteration, amendment, repeal or waiver would adversely affect the rights, preferences, privileges or powers of or restrictions on the Series H Preferred in a manner different than any other series of Preferred Stock; provided, however, that (x) a series of Preferred Stock shall not for purposes of this Section B.5(i) be deemed to be affected in a manner different than any other series of Preferred Stock solely because of proportional differences in the amounts of respective issue prices and liquidation preferences that arise out of differences in the original issue price vis-à-vis other series of Preferred Stock; and (y) the authorization and issuance of a new series of Preferred Stock that is *pari passu* with or senior to the Series H Preferred shall not require the approval of holders of the Series H Preferred as a separate series pursuant to this Section B.5(i);

(ii) effect any increase or decrease of the authorized number of shares of Series H Preferred Stock;

(iii) apply any of its assets to the redemption, retirement, purchase or other acquisition of any series of Preferred Stock, directly or indirectly, through subsidiaries or otherwise, unless (x) such redemption, retirement, purchase or other acquisition is pursuant to the Company's exercise of a right of first refusal in connection with a proposed transfer of shares of Preferred Stock or (y) shares of Series H Preferred Stock are redeemed, retired, purchased or otherwise acquired on a *pari passu* pro rata basis (based on the respective liquidation preferences of all series of Preferred Stock to be redeemed, retired, purchased or otherwise acquired);

(iv) amend or waive Section B.3(b)(i) or Section B.3(m);

(v) amend or waive the Liquidation Preference or Original Issue Price of the Series H Preferred or the Original Issue Date, or the proviso of the second sentence of Section B.2(d); or

(vi) amend this Section B.5(h).

6. Redemption. The Preferred Stock is not redeemable at the option of the holder.

7. Notices. Any notice required by the provisions of this Article IV to be given to the holders of Preferred Stock shall be in writing and shall be deemed effectively given: (a) upon personal delivery; (b) when sent by facsimile with confirmed transmission or electronic mail, on the day sent if sent during normal business hours of the recipient of such day, or if not sent during such normal business hours, then on the next Business Day (as defined below); or (c) two (2) Business Days after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification from such courier of delivery to such recipient, in each case addressed to each holder of record at such holder's address appearing on the books of the Company. For the purposes of this Section B.7, "**Business Day**" shall mean any day other than (1) a Saturday or a Sunday or (2) other day on which banks are not required to be open or are authorized to close in New York, New York.

8. Conversion of Class B Common Stock.

(a) Right to Convert. At any time, any holder of shares of Class B Common Stock, at the option of such holder, may convert any share of Class B Common Stock held by such holder at any time after the date of issuance of such share, at the office of the Company or any transfer agent for such stock, into one (1) validly issued, fully paid and nonassessable share of Class A Common Stock.

(b) Automatic Conversion. Each outstanding share of Class B Common Stock shall automatically, without further action by the Company or the holder thereof, convert into one (1) validly issued, fully paid and nonassessable share of Class A Common Stock at 5:00 p.m. New York City time on a date fixed by the Board of Directors that is not less than 60 nor more than 180 days following the date the aggregate number of shares of Class B Common Stock then outstanding ceases to represent at least 5% of the aggregate number of all shares of Common Stock then outstanding (such date, the "**Class B Mandatory Conversion Time**").

(c) Conversion Upon Death or Disability. Each outstanding share of Class B Common Stock held by a Founder (as defined below) (or by any of such Founder's Affiliates (as defined below)) shall automatically convert into one (1) share of Class A Common Stock at 5:00 p.m. New York City time on a date fixed by the Board of Directors that is not less than 60 nor more than 180 days following the death or Disability of such Founder (such date, the "**Founder Conversion Time**"). "**Disability**" shall mean permanent and total disability such that the natural person who is the holder of shares of Class B Common Stock is unable to engage in any

substantial gainful activity by reason of any medically determinable mental impairment which would reasonably be expected to result in death or which has lasted or would reasonably be expected to last for a continuous period of not less than twelve (12) months as determined by a licensed medical practitioner. In the event of a dispute whether the natural person who is the holder of shares of Class B Common Stock has suffered a Disability, no Disability of the natural person who is the holder of shares of Class B Common Stock shall be deemed to have occurred unless and until an affirmative ruling regarding such Disability has been made by a court of competent jurisdiction, and such ruling has become final and nonappealable.

(d) Transfers to Non-Affiliates. Any share of Class B Common Stock shall automatically convert into one (1) share of Class A Common Stock upon the Transfer (as defined below) of such share by the holder of such Class B Common Stock as of immediately prior to the Effective Time (or in the case of any share of Class B Common Stock issued following the Effective Time, by the holder of such Class B Common Stock as of the time of original issuance of such share) (any such holder, the "**Operative Holder**") or by any of such Operative Holder's Permitted Transferees (as defined below) to a natural person or entity other than (A) the holder of such share of Class B Common Stock on the date of initial issuance of such share by the Company (any such holder, the "**Initial Holder**"), (B) an Affiliate of such Initial Holder (each of (A) and (B), a "**Permitted Transferee**" of such Operative Holder) or (C) the Operative Holder; provided, however, that, any Transfer by a Founder (or such Founder's Affiliates) to the other Founder (or any such Founder's Affiliates) shall not result in the automatic conversion of such Founder's (or such Founder's Affiliates') shares of Class B Common Stock. "**Transfer**" shall mean (i) the direct or indirect sale, transfer, pledge, assignment, gift, contribution, grant of a lien, or other disposal of any share of Class B Common Stock or any beneficial interest in such share or (ii) the deposit of any share of Class B Common Stock into a voting trust or entry into a voting agreement or arrangement with respect to any share of Class B Common Stock or the granting of any proxy or power of attorney with respect thereto. A "**Transfer**" will also be deemed to have occurred with respect to any share of Class B Common Stock beneficially held by an Operative Holder (or by any of such Operative Holder's Permitted Transferees) if there is a transaction or other event such that the Operative Holder (or such Operative Holder's Permitted Transferees, as the case may be) no longer retains sole dispositive power (as among the Operative Holder of such share of Class B Common Stock and such Operative Holder's Permitted Transferees) and exclusive power to vote or direct the voting of such security, including by proxy, voting agreement or otherwise, in each case with respect to such share of Class B Common Stock. Notwithstanding the foregoing none of the following shall be considered a Transfer:

(A) the granting of a revocable proxy to an officer or director of the Company at the request of the Board of Directors in connection with actions to be taken at an annual or special meeting of stockholders or any other action of the stockholders permitted by this Amended and Restated Certificate of Incorporation;

(B) the pledge of shares of Class B Common Stock or granting a lien with respect thereto by a stockholder that creates a mere security interest in such shares pursuant to a bona

fide loan or indebtedness transaction with a financial institution for so long as such stockholder continues to exercise voting control over such shares; provided, however, that a foreclosure on such shares or other similar action by the pledgee shall constitute a Transfer;

(C) the entering into, or reaching an agreement, arrangement or understanding regarding, a support, voting, tender or similar agreement or arrangement (with or without a proxy) in connection with a merger, asset transfer, asset acquisition or similar transaction approved by the Board of Directors;

(D) the entering into a trading plan pursuant to Rule 10b5-1 under the Securities Exchange Act of 1934, as amended, with a broker or other nominee where the holder entering into the plan retains all voting control over the shares; provided, however, that a Transfer of such shares of Class B Common Stock by such broker or other nominee shall constitute a "Transfer" at the time of such Transfer;

(E) the entering into or amending a voting trust, agreement or arrangement (with or without granting a proxy) solely with holders of Class B Common Stock that (i) is disclosed either in a Schedule 13D filed with the Securities and Exchange Commission or in writing to the Secretary of the Company, (ii) either has a term not exceeding one year or is terminable by the holder of the shares subject thereto at any time and (iii) does not involve any payment of cash, securities, property or other consideration to the holder of the shares subject thereto other than the mutual promise to vote shares in a designated manner;

(F) the granting of a proxy by the Founder or the Founder's Affiliates to a natural person or entity designated by the Founder or the Founder's Affiliates and approved, in advance, by a majority of the Independent Directors then in office to exercise dispositive power and/or voting control of shares of Class B Common Stock owned directly or indirectly, beneficially and of record, by the Founder or the Founder's Affiliates; and

(G) the fact that, as of the Effective Time or at any time after the Effective Time, the spouse of any holder of Class B Common Stock possesses or obtains an interest in such holder's shares of Class B Common Stock arising solely by reason of the application of the community property laws of any jurisdiction, so long as no other event or circumstance shall exist or have occurred that constitutes a Transfer of such shares of Class B Common Stock; provided that, any transfer of shares by any holder of shares of Class B Common Stock to such holder's spouse, including a transfer in connection with a divorce proceeding, domestic relations order or similar legal requirement, shall constitute a "Transfer" of such shares of Class B Common Stock, unless otherwise exempt from the definition of Transfer.

"**Affiliate**" for purposes of this Section B.8 shall mean, (i) in the case of a holder who is a natural person or an entity held solely by a natural person or a trust created by a natural person, (A) (I) such natural person and (II) any spouse, registered domestic partner, descendant (including any adopted descendant), parent, parent of the spouse or domestic partner of such natural person or any lineal descendants of any of the foregoing (including any adopted descendant) (each a "Family Member" and, more than one such Family Member, "**Family Members**"), (B) any custodian, trustee (including a trustee of a voting trust), executor or other fiduciary for the account of (I) such natural person or any one or more Family Members of such natural person or (II) any trust contemplated by clause (C), (C) any trust of which such natural person and/or any one or more Family Members of such natural person and/or any organization that is tax-exempt under Section 501(c)(3) of the Internal Revenue Code are current beneficiaries, (D) an entity in which all of the beneficial and economic interests are held, directly or indirectly, by any one or more of such natural person, any one or more Family Members of such natural person, or any natural person, entity, or trust referred to in clause (B) or (C), or (E) an organization that is tax-exempt under Section 501(c)(3) of the Internal Revenue Code so long as the transfer, assignment, sale or other disposition to such organization does not involve any payment of cash, securities, property or other consideration to such natural person; provided that, in the case of each of clauses (A), (B), (C), (D) and (E), such natural person holds exclusive voting control with respect to such shares of Class B common stock; (ii) in the case of an institutional, private equity, hedge, venture capital or other private investment fund, any partner, limited partner, retired partner, member or retired member of such holder, any affiliated fund, any fund which is controlled by or under common control with one or more general partners of such holder, any fund that is managed and governed by the same management company as such holder, any fund that controls such holder or any fund that is controlled by, under common control with, managed or advised by the same management company or registered investment advisor that controls, is under common control with, manages or advises the fund that controls such holder; and (iii) in the case of a mutual fund, pension fund, other pooled investment vehicle or an institutional client, to another mutual fund, pension fund, other pooled investment vehicle or an institutional client in connection with a merger, fund reorganization or otherwise for regulatory or fund management purposes.

"**Founder**" shall mean any of Luis von Ahn and Severin Hacker, each as a natural living person, and "Founders" shall mean both of them.

"**Independent Directors**" means members of the Board of Directors that are not a Founder or an officer or other employee of the Company or its subsidiaries (provided that a director shall not be considered an officer or employee of the Company solely due to such director's position as a member of the Board of Directors or the board of directors or similar governing body of one or more subsidiaries of the Company).

(e) Mechanics of Conversion. In the event of an optional conversion pursuant to Section B.8(a), before any holder of Class B Common Stock shall be entitled voluntarily to convert the same into shares of Class A Common Stock, such holder shall surrender the

certificate or certificates therefor, duly endorsed, at the office of the Company or of any transfer agent for such stock, and shall give written notice to the Company at such office that such holder elects to convert the same and shall state therein the name or names in which such holder wishes the certificate or certificates for shares of Class A Common Stock to be issued. The Company shall, as soon as practicable thereafter, issue and deliver at such office to such holder, or to the nominee or nominees of such holder, a certificate or certificates for the number of shares of Class A Common Stock to which such holder shall be entitled as aforesaid. Such optional conversion shall be deemed to have been made immediately prior to the close of business on the date of surrender of the shares of Class B Common Stock to be converted, and the person or persons entitled to receive the shares of Class A Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Class A Common Stock on such date. If the conversion is in connection with the automatic conversion provisions set forth in Section B.8(a), (b) or (c), such conversion shall be deemed to have been made (i) in the case of Section B.8(b), at the Class B Mandatory Conversion Time, (ii) in the case of Section B.8(c), at the Founder Conversion Time, or (iii) in the case of Section B.8(d), on the applicable date of Transfer, the persons entitled to receive shares of Class A Common Stock issuable upon such conversion shall be treated for all purposes as the record holders of such shares of Class A Common Stock as of the applicable date, and, until presented for transfer, certificates previously evidencing shares of Class B Common Stock shall represent the number of shares of Class A Common Stock into which such shares were automatically converted. Shares of Class B Common Stock converted pursuant to Section B.8(a), (b), (c) or (d) shall be automatically retired and cancelled and may not be reissued, and the Company may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Class B Common Stock accordingly.

(f) Policies and Procedures. The Board of Directors, or a committee thereof, may, from time to time, establish such policies and procedures, not in violation of applicable law or this Amended and Restated Certificate of Incorporation, relating to the conversion of shares of Class B Common Stock into shares of Class A Common Stock as it may deem necessary or advisable. The Company may, from time to time, require that a holder of shares of Class B Common Stock furnish affidavits or other proof to the Company as it deems necessary to verify the ownership of shares of Class B Common Stock and to confirm that a conversion to shares of Class A Common Stock has not occurred. Without limiting the discretion of the Board of Directors (or a committee of the Board of Directors), the Board of Directors (or such committee) may determine (and such determination shall be conclusive) that a holder of shares of Class B Common Stock has failed to furnish sufficient evidence to the Company (in the manner and time frame provided in the request) to enable the Company to determine that no conversion of shares of Class B Common Stock into shares of Class A Common Stock in accordance with this Section 3.1 has occurred with respect to such holder of shares of Class B Common Stock (and its Affiliates), and therefore such shares of Class B Common Stock, to the extent not previously converted, shall be converted into shares of Class A Common Stock and such conversion shall thereupon be registered on the books and records of the Company. A determination by the Board

of Directors (or such committee of the Board of Directors), acting reasonably and in good faith, that shares of Class B Common Stock have been converted into shares of Class A Common Stock pursuant to this Section B.8 shall be conclusive.

(g) Reservation of Shares. The Company shall at all times reserve and keep available out of its authorized but unissued shares of Class A Common Stock, solely for the purpose of effecting the conversion of the shares of Class B Common Stock, such number of shares of Class A Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of Class B Common Stock into shares of Class A Common Stock.

ARTICLE V

Subject to any additional vote required by this Amended and Restated Certificate of Incorporation, the Board of Directors shall have the power to adopt, amend and repeal the bylaws of the Company (except insofar as the bylaws of the Company as adopted by action of the stockholders of the Company shall otherwise provide). Any bylaws made by the directors under the powers conferred hereby may be amended or repealed by the directors or by the stockholders, and the powers conferred in this Article V shall not abrogate the right of the stockholders to adopt, amend and repeal bylaws.

ARTICLE VI

Election of directors need not be by written ballot unless the bylaws of the Company shall so provide.

ARTICLE VII

Subject to the provisions set forth in this Amended and Restated Certificate of Incorporation, the Company reserves the right to amend the provisions in this Amended and Restated Certificate of Incorporation and in any certificate amendatory hereof in the manner now or hereafter prescribed by law and this Amended and Restated Certificate of Incorporation, and all rights conferred on stockholders or others hereunder or thereunder are granted subject to such reservation.

ARTICLE VIII

A. Right to Indemnification of Directors and Officers. The Company shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (an "**Indemnified Person**") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "**Proceeding**"), by reason of the fact that such person, or a person for whom such person is the legal representative, is or was a director or officer of the Company or, while a director or officer of the Company, is or was serving at the request of the Company as a director, officer, employee or agent of another corporation or of a

partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including "attorneys" fees) reasonably incurred by such Indemnified Person in such Proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section C of this Article VIII the Company shall be required to indemnify an Indemnified Person in connection with a Proceeding (or part thereof) commenced by such Indemnified Person only if the commencement of such Proceeding (or part thereof) by the Indemnified Person was authorized in advance by the Board of Directors.

B. Prepayment of Expenses of Directors and Officers. The Company shall pay the expenses (including attorneys' fees) incurred by an Indemnified Person in defending any Proceeding in advance of its final disposition, provided, however, that, to the extent required by law, such payment of expenses in advance of the final disposition of the Proceeding shall be made only upon receipt of an undertaking by the Indemnified Person to repay all amounts advanced if it should be ultimately determined that the Indemnified Person is not entitled to be indemnified under this Article VIII or otherwise.

C. Claims by Directors and Officers. If a claim for indemnification or advancement of expenses under this Article VIII is not paid in full within thirty (30) days after a written claim therefor by the Indemnified Person has been received by the Company, the Indemnified Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action the Company shall have the burden of proving that the Indemnified Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

D. Indemnification of Employees and Agents. The Company may indemnify and advance expenses to any person who was or is made or is threatened to be made or is otherwise involved in any Proceeding by reason of the fact that such person, or a person for whom such person is the legal representative, is or was an employee or agent of the Company or, while an employee or agent of the Company, is or was serving at the request of the Company as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such person in connection with such Proceeding. The ultimate determination of entitlement to indemnification of persons who are non-director or officer employees or agents shall be made in such manner as is determined by the Board of Directors in its sole discretion. Notwithstanding the foregoing sentence, the Company shall not be required to indemnify a person in connection with a Proceeding initiated by such person if the Proceeding was not authorized in advance by the Board of Directors.

E. Advancement of Expenses of Employees and Agents. The Company may pay the expenses (including attorneys' fees) incurred by an employee or agent in defending any

Proceeding in advance of its final disposition on such terms and conditions as may be determined by the Board of Directors.

F. Non-Exclusivity of Rights. The rights conferred on any person by this Article VIII shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of this Amended and Restated Certificate of Incorporation, the Bylaws of the Company, or any agreement, or pursuant to any vote of stockholders or disinterested directors or otherwise.

G. Other Indemnification. The Company's obligation, if any, to indemnify any person who was or is serving at its request as a director, officer or employee of another corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise shall be reduced by any amount such person may collect as indemnification from such other Company, partnership, limited liability company, joint venture, trust, organization or other enterprise.

H. Insurance. The Board of Directors may, to the full extent permitted by applicable law as it presently exists, or may hereafter be amended from time to time, authorize an appropriate officer or officers to purchase and maintain at the Company's expense insurance: (a) to indemnify the Company for any obligation which it incurs as a result of the indemnification of directors, officers and employees under the provisions of this Article VIII; and (b) to indemnify or insure directors, officers and employees against liability in instances in which they may not otherwise be indemnified by the Company under the provisions of this Article VIII.

I. Amendment or Repeal. Any repeal or modification of the foregoing provisions of this Article VIII shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification. The rights provided hereunder shall inure to the benefit of any Indemnified Person and such person's heirs, executors and administrators.

ARTICLE IX

A. The Company renounces any interest or expectancy of the Company in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "**Excluded Opportunity**" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of, (i) any director of the Company who is not an employee of the Company or any of its subsidiaries, or (ii) any holder of Preferred Stock or any partner, member, director, stockholder, employee or agent of any such holder, if such holder is not an employee of the Company or of any of its subsidiaries (collectively, "**Covered Persons**"), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Company.

ARTICLE X

A. Unless the Company consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of the Company, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the Company to the Company or the Company's stockholders, (iii) any action asserting a claim against the Company, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or the Company's Certificate of Incorporation or Bylaws or (iv) any action asserting a claim against the Company, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within ten (10) days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article X shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article X (including, without limitation, each portion of any sentence of this Article X containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

Exhibit 3.2

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
DUOLINGO, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Duolingo, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "***General Corporation Law***"), hereby certifies as follows:

1. The name of this corporation is Duolingo, Inc. and the original Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on August 18, 2011.

2. The Certificate of Incorporation of this corporation is hereby amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Duolingo, Inc. (the "***Corporation***").

SECOND: The address of the registered office of the Corporation in the State of Delaware is 1209 N. Orange Street, Wilmington, County of New Castle, Delaware 19801. The name of its registered agent at that address is The Corporation Trust Company.

THIRD: The purpose of this Corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation is authorized to issue is 2,050,000,000 comprised of (i) 2,030,000,000 shares of Common Stock, $0.0001 par value per share (the "***Common Stock***"), of which (a) 2,000,000,000 shares shall be a series designated as Class A Common Stock (the "***Class A Common Stock***"), (b) 30,000,000 shares shall be a series designated as Class B Common Stock (the "***Class B Common Stock***"), and (ii) 20,000,000 shares of Preferred Stock, $0.0001 par value per share (the "***Preferred Stock***").

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class or series of capital stock of the Corporation. All references in this Amended and Restated Certificate of Incorporation (this "***Amended and Restated Certificate of Incorporation***") to a "certificate" or "certificates" representing shares of the Corporation's capital stock include a notice or notices of issuance of uncertificated shares.

A. COMMON STOCK

The Common Stock shall have such terms, rights, powers and privileges, and the qualifications, limitations and restrictions with respect thereto, as stated or expressed herein. Unless otherwise indicated, references to "Sections" or "Subsections" in this Part A of this Article Fourth refer to sections and subsections of Part A of this Article Fourth.

1. General; Equal Status. Except as otherwise provided in this Article Fourth or required by law, shares of Class A Common Stock and Class B Common Stock shall have the same rights, privileges, preferences and powers, rank equally (including as to dividends and distributions, and upon any liquidation, dissolution, distribution of assets or winding up of the Corporation), share ratably and be identical in all respects and as to all matters. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and privileges of any series of Preferred Stock as may be designated by the Board of Directors of the Corporation (the "***Board of Directors***") and outstanding at any time.

2. Voting.

2.1 Except as required by law, each share of Class A Common Stock shall entitle the holder to one (1) vote for each share of Class A Common Stock held and each share of Class B Common Stock shall entitle the holder to twenty (20) votes for each share of Class B Common Stock held, in each case, on any matter submitted to the stockholders of the Corporation for a vote or approval.

2.2 Unless required by law, there shall be no cumulative voting. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock entitled to vote thereon) the affirmative vote of the holders of a majority in voting power of the outstanding shares of capital stock of the Corporation entitled to vote thereon, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

2.3 Except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Amended and Restated Certificate of Incorporation (including any certificate of designation relating to any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to this Amended and Restated Certificate of Incorporation (including any certificate of designation relating to any series of Preferred Stock) or pursuant to the General Corporation Law.

3. Conversion.

3.1 Conversion of Class B Common Stock.

3.1.1 Right to Convert. At any time, any holder of shares of Class B Common Stock, at the option of such holder, may convert any share of Class B Common Stock held by such holder at any time after the date of issuance of such share, at the office of the Corporation or any transfer agent for such stock, into one (1) validly issued, fully paid and nonassessable share of Class A Common Stock.

3.1.2 Automatic Conversion. Each outstanding share of Class B Common Stock shall automatically convert into one (1) validly issued, fully paid and nonassessable share of Class A Common Stock at 5:00 p.m. New York City time on a date fixed by the Board of Directors that is not less than 60 nor more than 180 days following the date the aggregate number of shares of Class B Common Stock then outstanding ceases to represent at least 5% of the aggregate number of all shares of Common Stock then outstanding (such date, the "***Class B Mandatory Conversion Time***").

3.1.3 Conversion Upon Death or Disability. Each outstanding share of Class B Common Stock held by a Founder (as defined in Section 3.1.4) (or by any of such Founder's Affiliates (as defined in Section 3.1.4)) shall automatically convert into one (1) share of Class A Common Stock at 5:00 p.m. New York City time on a date fixed by the Board of Directors that is not less than 60 nor more than 180 days following the death or Disability of such Founder (such date, the "***Founder Conversion Time***"), excluding, for the avoidance of doubt, any shares of Class B Common Stock subject to a Transfer by such Founder (or such Founder's Affiliates) to the other Founder (or any such Founder's Affiliates) as contemplated by the proviso set forth in Section 3.1.4.

"***Disability***" shall mean permanent and total disability such that the natural person who is the holder of shares of Class B Common Stock is unable to engage in any substantial gainful activity by reason of any medically determinable mental impairment which would reasonably be expected to result in death or which has lasted or would reasonably be expected to last for a continuous period of not less than twelve (12) months as determined by a licensed medical practitioner. In the event of a dispute whether the natural person who is the holder of shares of Class B Common Stock has suffered a Disability, no Disability of the natural person who is the holder of shares of Class B Common Stock shall be deemed to have occurred unless and until an affirmative ruling regarding such Disability has been made by a court of competent jurisdiction, and such ruling has become final and nonappealable.

3.1.4 Transfers to Non-Affiliates. Any share of Class B Common Stock shall automatically convert into one (1) share of Class A Common Stock upon the Transfer (as defined below) of such share by the holder of such Class B Common Stock as of immediately prior to the Effective Time (or in the case of any share of Class B Common Stock issued following the Effective Time, by the holder of such Class B Common Stock as of the time of original issuance of such share) (any such holder, the "***Operative Holder***") or by any of such Operative Holder's Permitted Transferees (as defined below) to a natural person or entity other than (A) the holder of such share of Class B Common Stock on the date of initial issuance of such share by the Corporation (any such holder, the "***Initial Holder***"), (B) an Affiliate of such Initial Holder (each of (A) and (B), a "***Permitted Transferee***" of such Operative Holder) or (C) the Operative Holder; *provided*, *however*, that, any Transfer by a Founder (or such Founder's Affiliates) to the other Founder (or any such Founder's Affiliates) shall not result in the automatic conversion of such Founder's (or such Founder's Affiliates') shares of Class B Common Stock.

"***Transfer***" shall mean (i) the direct or indirect sale, transfer, pledge, assignment, gift, contribution, grant of a lien, or other disposal of any share of Class B Common Stock or any beneficial interest in such share or (ii) the deposit of any share of Class B Common Stock into a voting trust or entry into a voting agreement or arrangement with respect to any share of Class B Common Stock or the granting of any proxy or power of attorney with respect thereto. A "***Transfer***" will also be deemed to have occurred with respect to any share of Class B Common Stock beneficially held by an Operative Holder (or by any of such Operative Holder's Permitted Transferees) if there is a transaction or other event such that the Operative Holder (or such Operative Holder's Permitted Transferees, as the case may be) no longer retains sole dispositive power (as among the Operative Holder of such share of Class B Common Stock and such Operative Holder's Permitted Transferees) and exclusive power to vote or direct the voting of such security, including by proxy, voting agreement or otherwise, in each case with respect to such share of Class B Common Stock. Notwithstanding the foregoing none of the following shall be considered a Transfer:

(A) the granting of a revocable proxy to an officer or director of the Corporation at the request of the Board of Directors in connection with actions to be taken at an annual or special meeting of stockholders or any other action of the stockholders permitted by this Amended and Restated Certificate of Incorporation;

(B) the pledge of shares of Class B Common Stock or granting a lien with respect thereto by a stockholder that creates a mere security interest in such shares pursuant to a bona fide loan or indebtedness transaction with a financial institution for so long as such stockholder continues to exercise voting control over such shares; *provided*, *however*, that a foreclosure on such shares or other similar action by the pledgee shall constitute a Transfer;

(C) the entering into, or reaching an agreement, arrangement or understanding regarding, a support, voting, tender or similar agreement or arrangement (with or without a proxy) in connection with a merger, asset transfer, asset acquisition or similar transaction approved by the Board of Directors;

(D) the entering into a trading plan pursuant to Rule 10b5-1 under the Securities Exchange Act of 1934, as amended, with a broker or other nominee where the holder entering into the plan retains all voting control over the shares; *provided*, *however*, that a Transfer of such shares of Class B Common Stock by such broker or other nominee shall constitute a "Transfer" at the time of such Transfer;

(E) the entering into or amending a voting trust, agreement or arrangement (with or without granting a proxy) solely with holders of Class B Common Stock that (i) is disclosed either in a Schedule 13D filed with the Securities and Exchange Commission or in writing to the Secretary of the Corporation, (ii) either has a term not exceeding one year or is terminable by the holder of the shares subject thereto at any time and (iii) does not involve any payment of cash, securities, property or other consideration to the holder of the shares subject thereto other than the mutual promise to vote shares in a designated manner;

(F) the granting of a proxy by the Founder or the Founder's Affiliates to a natural person or entity designated by the Founder or the Founder's Affiliates and approved, in advance, by a majority of the Independent Directors then in office to exercise dispositive power and/or voting control of shares of Class B Common Stock owned directly or indirectly, beneficially and of record, by the Founder or the Founder's Affiliates; and

(G) the fact that, as of the Effective Time or at any time after the Effective Time, the spouse of any holder of Class B Common Stock possesses or obtains an interest in such holder's shares of Class B Common Stock arising solely by reason of the application of the community property laws of any jurisdiction, so long as no other event or circumstance shall exist or have occurred that constitutes a Transfer of such shares of Class B Common Stock; *provided* that, any transfer of shares by any holder of shares of Class B Common Stock to such holder's spouse, including a transfer in connection with a divorce proceeding, domestic relations order or similar legal requirement, shall constitute a "Transfer" of such shares of Class B Common Stock, unless otherwise exempt from the definition of Transfer.

"***Affiliate***" shall mean, (i) in the case of a holder who is a natural person or an entity held solely by a natural person or a trust created by a natural person, (A) (I) such natural person and (II) any spouse, registered domestic partner, descendant (including any adopted descendant), parent, parent of the spouse or domestic partner of such natural person or any lineal descendants of any of the foregoing (including any adopted descendant) (each a "***Family Member***" and, more than one such Family Member, "***Family Members***"), (B) any custodian, trustee (including a trustee of a voting trust), executor or other fiduciary for the account of (I) such natural person or any one or more Family Members of such natural person or (II) any trust contemplated by clause (C), (C) any trust of which such natural person and/or any one or more Family Members of such natural person and/or any organization that is tax-exempt under Section 501(c)(3) of the Internal Revenue Code are current beneficiaries, (D) an entity in which all of the beneficial and economic interests are held, directly or indirectly, by any one or more of such natural person, any one or more Family Members of such natural person, or any natural person, entity, or trust referred to in clause (B) or (C), or (E) an organization that is tax-exempt under Section 501(c)(3) of the Internal Revenue Code so long as the transfer, assignment, sale or other disposition to such organization does not involve any payment of cash, securities, property or other consideration to such natural person; *provided* that, in the case of each of clauses (A), (B), (C), (D) and (E), such natural person holds exclusive voting control with respect to such shares of Class B common stock; (ii) in the case of an institutional, private equity, hedge, venture capital or other private investment fund, any partner, limited partner, retired partner, member or retired member of such holder, any affiliated fund, any fund which is controlled by or under common control with one or more general partners of such holder, any fund that is managed and governed by the same management company as such holder, any fund that controls such holder or any fund that is controlled by, under common control with, managed or advised by the same management company or registered investment advisor that controls, is under common control with, manages or advises the fund that controls such holder; and (iii) in the case of a mutual fund, pension fund, other pooled investment vehicle or an institutional client, to another mutual fund, pension fund, other pooled investment vehicle or an institutional client in connection with a merger, fund reorganization or otherwise for regulatory or fund management purposes.

"***Founder***" shall mean any of Luis von Ahn and Severin Hacker, each as a natural living person, and "***Founders***" shall mean both of them.

"***Independent Directors***" means members of the Board of Directors that are not a Founder or an officer or other employee of the Corporation or its subsidiaries (*provided* that a director shall not be considered an officer or employee of the Corporation solely due to such director's position as a member of the Board of Directors or the board of directors or similar governing body of one or more subsidiaries of the Corporation).

3.1.5 Mechanics of Conversion. In the event of an optional conversion pursuant to Section 3.1.1, before any holder of Class B Common Stock shall be entitled voluntarily to convert the same into shares of Class A Common Stock, such holder shall surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or of any transfer agent for such stock, and shall give written notice to the Corporation at such office that such holder elects to convert the same and shall state therein the name or names in which such holder wishes the certificate or certificates for shares of Class A Common Stock to be issued. The Corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder, or to the nominee or nominees of such holder, a certificate or certificates for the number of shares of Class A Common Stock to which such holder shall be entitled as aforesaid. Such optional conversion shall be deemed to have been made immediately prior to the close of business on the date of surrender of the shares of Class B Common Stock to be converted, and the person or persons entitled to receive the shares of Class A Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Class A Common Stock on such date. If the conversion

is in connection with the automatic conversion provisions set forth in Section 3.1.2, Section 3.1.3 or Section 3.1.4, such conversion shall be deemed to have been made (i) in the case of Section 3.1.2, at the Class B Mandatory Conversion Time, (ii) in the case of Section 3.1.3, at the Founder Conversion Time, or (iii) in the case of Section 3.1.4, on the applicable date of Transfer, the persons entitled to receive shares of Class A Common Stock issuable upon such conversion shall be treated for all purposes as the record holders of such shares of Class A Common Stock as of the applicable date, and, until presented for transfer, certificates previously evidencing shares of Class B Common Stock shall represent the number of shares of Class A Common Stock into which such shares were automatically converted. Shares of Class B Common Stock converted pursuant to Section 3.1.1, Section 3.1.2, Section 3.1.3 or Section 3.1.4 shall be automatically retired and cancelled and may not be reissued, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Class B Common Stock accordingly.

3.1.6 Policies and Procedures. The Board of Directors, or a committee thereof, may, from time to time, establish such policies and procedures, not in violation of applicable law or this Amended and Restated Certificate of Incorporation, relating to the conversion of shares of Class B Common Stock into shares of Class A Common Stock as it may deem necessary or advisable. The Corporation may, from time to time, require that a holder of shares of Class B Common Stock furnish affidavits or other proof to the Corporation as it deems necessary to verify the ownership of shares of Class B Common Stock and to confirm that a conversion to shares of Class A Common Stock has not occurred. Without limiting the discretion of the Board of Directors (or a committee of the Board of Directors), the Board of Directors (or such committee) may determine (and such determination shall be conclusive) that a holder of shares of Class B Common Stock has failed to furnish sufficient evidence to the Corporation (in the manner and time frame provided in the request) to enable the Corporation to determine that no conversion of shares of Class B Common Stock into shares of Class A Common Stock in accordance with this Section 3.1 has occurred with respect to such holder of shares of Class B Common Stock (and its Affiliates), and therefore such shares of Class B Common Stock, to the extent not previously converted, shall be converted into shares of Class A Common Stock and such conversion shall thereupon be registered on the books and records of the Corporation. A determination by the Board of Directors (or such committee of the Board of Directors), acting reasonably and in good faith, that shares of Class B Common Stock have been converted into shares of Class A Common Stock pursuant to this Article Third shall be conclusive.

3.1.7 No Further Issuance. Except for the issuance of shares of Class B Common Stock issuable in respect of Rights (as defined below) outstanding immediately prior to the Effective Time, a dividend payable in accordance with Section 6 of Article Fourth, or a reclassification, subdivision or combination in accordance with Section 8 of Article Fourth, the Corporation shall not at any time after the Effective Time issue any additional shares of Class B Common Stock. "***Rights***" means any option, warrant, restricted stock unit, restricted stock award, performance stock award, phantom stock, equity award, conversion right or contractual right of any kind to acquire or obligation of the Corporation to issue shares of the Corporation's authorized but unissued capital stock.

3.1.8 Reservation of Shares. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Class A Common Stock, solely for the purpose of effecting the conversion of the shares of Class B Common Stock, such number of shares of Class A Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of Class B Common Stock into shares of Class A Common Stock.

4. Notices. Except as otherwise provided herein, any notice required or permitted by the provisions of this Part A of Article Fourth to be given to a holder of shares of Common Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation for such holder, given by the holder to the Corporation for the purpose of notice or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission. If no such address appears or is given, notice shall be deemed given at the place where the principal executive office of the Corporation is located.

5. Redemption. The Common Stock is not redeemable at the option of the holder thereof and the Corporation shall have no obligation to redeem the Common Stock.

6. Dividends. Subject to the rights, powers and preferences applicable to any series of Preferred Stock, if any, outstanding at any time, the holders of each series of Common Stock shall be entitled to receive, on a per share basis, the same form and amount of dividends and other distributions of cash, property or shares of stock of the Corporation as may be declared by the Board of Directors from time to time with respect to shares of any other series of Common Stock out of assets or funds of the Corporation legally available therefor; *provided*, *however*, that in the event that such dividend is paid in the form of shares of a series of Common Stock that differs from the series of Common Stock held by any holder or rights to acquire a series of Common Stock that differs from a series of Common Stock held by any holder, as applicable, such holder shall receive the series of Common Stock or rights to acquire the series of Common Stock corresponding to the series of Common Stock held by such holder, as the case may be.

7. Liquidation, Dissolution, etc. In the event of a voluntary or involuntary liquidation, dissolution, distribution of assets or winding up of the Corporation, the holders of each series of Common Stock shall be entitled to share equally, on a per share basis, in all assets of the Corporation of whatever kind available for distribution to the holders of Common Stock.

8. Subdivision or Combination. If the Corporation in any manner subdivides, combines or reclassifies the outstanding shares of Class A Common Stock or Class B Common Stock, the outstanding shares of the other such series shall, concurrently therewith, be subdivided, combined or reclassified in the same proportion and manner such that the same proportionate equity ownership between the holders of outstanding Class A Common Stock and Class B Common Stock on the record date for such subdivision, combination or reclassification is preserved, unless different treatment of the shares of each such series is approved by (i) the holders of a majority of the outstanding Class A Common Stock and (ii) the holders of a majority of the outstanding Class B Common Stock, each of (i) and (ii) voting as separate series.

9. Treatment in a Merger. The consideration received per share by the holders of each series of Common Stock in any merger, consolidation, reorganization or other business combination shall be identical; *provided*, *however*, that if (i) such consideration consists, in whole or in part, of shares of capital stock of, or other equity interests in, the Corporation or any other corporation, partnership, limited liability company or other entity, and (ii) the powers, designations, preferences and relative, optional or other special rights and qualifications, limitations and restrictions of shares of capital stock or other equity interests received in respect of the shares of Class A Common Stock and Class B Common Stock differ solely to the extent that the powers, designations, preferences and relative, optional or other special rights and qualifications, limitations and restrictions of the Class A Common Stock and the Class B Common Stock differ as described in this Article Fourth, then the powers, designations, preferences and relative, optional or other special rights and qualifications, limitations and restrictions of such shares of capital stock or other equity interests may differ to the extent that the powers, designations, preferences and relative, optional or other special rights and qualifications, limitations and restrictions of the Class A Common Stock and the Class B Common Stock differ as provided herein (including, without limitation, with respect to the voting rights and conversion provisions hereof); and *provided further*, that, if the holders of any series of Common Stock are granted the right to elect to receive one of two or more alternative forms of consideration, the foregoing provisions shall be deemed satisfied if holders of the other series of Common Stock are granted corresponding election rights.

B. PREFERRED STOCK

Shares of Preferred Stock may be issued from time to time in one or more series, each of such series to have such terms as stated in the resolution or resolutions providing for the establishment of such series adopted by the Board of Directors as hereinafter provided. Authority is hereby expressly granted to the Board of Directors to issue, from time to time, shares of Preferred Stock in one or more series, and, in connection with the establishment of any such series, by resolution or resolutions to determine and fix the designation of and the number of shares comprising such series, and such voting powers, full or limited, or no voting powers, and such other powers, designations, preferences and relative, participating, optional and other special rights, and the qualifications, limitations and restrictions thereof, if

any, including, without limitation, dividend rights, conversion rights, redemption privileges and liquidation preferences, as shall be stated in such resolution or resolutions, all to the fullest extent permitted by the General Corporation Law. Without limiting the generality of the foregoing, the resolution or resolutions providing for the establishment of any series of Preferred Stock may, to the extent permitted by law, provide that such series shall be superior to, rank equally with or be junior to the Preferred Stock of any other series. The powers, preferences and relative, participating, optional and other special rights of each series of Preferred Stock, and the qualifications, limitations or restrictions thereof, if any, may be different from those of any and all other series at any time outstanding. Except as otherwise expressly provided in the resolution or resolutions providing for the establishment of any series of Preferred Stock, no vote of the holders of shares of Preferred Stock or Common Stock shall be a prerequisite to the issuance of any shares of any series of the Preferred Stock so authorized in accordance with this Amended and Restated Certificate of Incorporation. The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock entitled to vote thereon) the affirmative vote of the holders of a majority in voting power of the outstanding shares of capital stock of the Corporation entitled to vote thereon, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

FIFTH: The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors.

1. Powers of the Board. In addition to the powers and authority expressly conferred upon them by applicable law or by this Amended and Restated Certificate of Incorporation or the Bylaws of the Corporation (as amended and/or restated from time to time, the "***Bylaws***"), the directors are hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the Corporation.

2. Classification of the Board. Except as may be provided in a resolution or resolutions of the Board of Directors providing for any series of Preferred Stock with respect to any directors elected (or to be elected) by the holders of such series and except as otherwise required by applicable law, the directors shall be divided into three classes, designated as Class I, Class II and Class III, as nearly equal in number as possible. Directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board of Directors. Class I directors shall initially serve for a term expiring at the first annual meeting of stockholders following the Effective Time, Class II directors shall initially serve for a term expiring at the second annual meeting of stockholders following the Effective Time and Class III directors shall initially serve for a term expiring at the third annual meeting of stockholders following the Effective Time. At each annual meeting of stockholders commencing with the first annual meeting of stockholders following the Effective Time, the directors of the class to be elected at each annual meeting of stockholders shall be elected for a three-year term. If the total number of such directors is changed, any increase or decrease shall be apportioned among the classes so as to maintain the number of directors in each class as nearly equal as possible, and any such additional director of any class elected to fill a newly created directorship resulting from an increase in such class, in accordance with Section 5 of Article Fifth, shall hold office for a term that shall coincide with the remaining term of that class, but in no case shall a decrease in the total number of directors remove or shorten the term of any incumbent director. Notwithstanding the foregoing provisions of this Section 2 of Article Fifth, each director shall serve until his or her successor is duly elected and qualified or until his or her death, resignation, disqualification, retirement, or removal.

3. Number of Directors. Except as may be provided in a resolution or resolutions of the Board of Directors providing for any series of Preferred Stock with respect to any directors elected (or to be elected) by the holders of such series and except as otherwise required by applicable law, the total number of authorized directors constituting the Board of Directors shall be fixed from time to time exclusively by the Board of Directors pursuant to a resolution adopted by the Board of Directors.

4. Removal of Directors. Except as may be provided in a resolution or resolutions of the Board of Directors providing for any series of Preferred Stock with respect to any directors elected (or to be elected) by the holders of such series and except as otherwise required by applicable law, the Board of Directors or any individual director may be removed from office at any time (a) prior to the Voting Threshold Date (as defined below), with or without cause, by the affirmative vote of the holders of a majority of the voting power of the outstanding shares of

capital stock of the Corporation then entitled to vote generally in the election of directors, and (b) from and after the Voting Threshold Date, only for cause, by the affirmative vote of the holders of a majority of the voting power of the outstanding shares of capital stock of the Corporation then entitled to vote generally in the election of directors.

5. Vacancies and Newly Created Directorships. Except as may be provided in a resolution or resolutions providing for any series of Preferred Stock with respect to any directors elected (or to be elected) by the holders of such series and except as otherwise required by applicable law, any vacancies on the Board of Directors resulting from death, resignation, disqualification, retirement, removal or other causes and any newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by the stockholders, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified or until such director's death, resignation, disqualification, retirement, or removal.

6. Bylaws. Subject to any additional vote required by this Amended and Restated Certificate of Incorporation, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to adopt, repeal, alter, amend or rescind the Bylaws. The affirmative vote of at least a majority of the Board of Directors then in office shall be required in order for the Board of Directors to adopt, repeal, alter, amend or rescind the Bylaws. The stockholders shall also have power to adopt, repeal, alter, amend or rescind the Bylaws. In addition to any vote of the holders of any class or series of stock of the Corporation required by applicable law or by this Amended and Restated Certificate of Incorporation (including any Preferred Stock outstanding at any time), such adoption, repeal, alteration, amendment or rescission of the Bylaws by the stockholders shall require the affirmative vote of the holders of at least sixty-six and two-third percent (66 2/3%) of the voting power of the then outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class.

7. Elections of Directors. Elections of directors need not be by ballot unless the Bylaws shall so provide.

SIXTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws.

SEVENTH: Subject to the rights of the holders of any series of Preferred Stock with respect to actions by the holders of shares of such series, from and after the Voting Threshold Date, (a) no action shall be taken by the stockholders of the Corporation except at a duly called annual or special meeting of stockholders called in accordance with the Bylaws and (b) no action shall be taken by the stockholders of the Corporation by written consent. "***Voting Threshold Date***" shall mean 5:00 p.m. New York City time on the first day falling on or after the date on which the outstanding shares of Class B Common Stock cease to represent at least fifty percent (50%) of the total voting power of the outstanding shares of capital stock of the Corporation then entitled to vote generally in the election of directors. Advance notice of stockholder nominations for the election of directors and of business to be brought by stockholders before any meeting of the stockholders of the Corporation shall be given in the manner provided in the Bylaws.

EIGHTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Eighth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended. Any repeal or modification of the foregoing provisions of this Article Eighth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

NINTH: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the General Corporation Law. Any amendment, repeal or modification of the foregoing provisions of this Article Ninth shall not adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification.

TENTH: Unless the Corporation consents in writing to the selection of an alternative forum, (A) the Court of Chancery of the State of Delaware (or, if such court does not have subject matter jurisdiction thereof, the federal district court of the State of Delaware) shall, to the fullest extent permitted by law, be the sole and exclusive forum for: (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim for or based on a breach of a fiduciary duty owed by any current or former director, officer, other employee, agent or stockholder of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation or any current or former director, officer, employee, agent or stockholder of the Corporation arising pursuant to any provision of the General Corporation Law or the Corporation's Certificate of Incorporation or Bylaws or as to which the General Corporation Law confers jurisdiction on the Court of Chancery of the State of Delaware, or (iv) any action asserting a claim related to or involving the Corporation that is governed by the internal affairs doctrine; and (B) subject to the preceding provisions of this Article Tenth, the federal district courts of the United States of America shall, to the fullest extent permitted by law, be the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

Notwithstanding the foregoing, this Article Tenth shall not apply to claims seeking to enforce any liability or duty created by the Securities Exchange Act of 1934, as amended, or any other claim for which the U.S. federal courts have exclusive jurisdiction.

If any action, the subject matter of which is within the scope of clause (A) of the first sentence of this Article Tenth, is filed in a court other than the courts in the State of Delaware (a "***Foreign Action***") in the name of any stockholder, such stockholder shall be deemed to have consented to (i) the personal jurisdiction of the state and federal courts in the State of Delaware in connection with any action brought in any such court to enforce clause (A) the first sentence of this Article Tenth and (ii) having service of process made upon such stockholder in any such action by service upon such stockholder's counsel in the Foreign Action as agent for such stockholder.

Any person or entity purchasing or otherwise acquiring or holding any interest in shares of capital stock of the Corporation shall be deemed to have notice of and consented to the provisions of this Article Tenth.

If any provision or provisions of this Article Tenth shall be held to be invalid, illegal or unenforceable as applied to any circumstance for any reason whatsoever, (a) the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article Tenth (including, without limitation, each portion of any paragraph of this Article Tenth containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby and (b) the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

ELEVENTH: The Corporation reserves the right to amend or repeal any provision contained in this Amended and Restated Certificate of Incorporation in the manner prescribed by the laws of the State of Delaware and all rights conferred upon stockholders are granted subject to this reservation; *provided*, *however*, that, notwithstanding any other provision of this Amended and Restated Certificate of Incorporation or any provision of law that might otherwise permit a lesser vote or no vote, but in addition to any vote of the holders of any class or series of the stock of the Corporation, and, as applicable, such other approvals of the Board of Directors, as are required by law or by this Amended and Restated Certificate of Incorporation, (A) the affirmative vote of the holders of sixty-six and two-third percent (66 2/3%) of the voting power of the outstanding shares of capital stock of the Corporation entitled to

vote generally in the election of directors, voting together as a single class, shall be required to amend or repeal, or adopt any provision of this Amended and Restated Certificate of Incorporation inconsistent with, (i) Article Fourth, (ii) Article Fifth, (iii) Article Seventh, (iv) Article Eighth, (v) Article Ninth, (vi) Article Tenth or (vii) this Article Eleventh, and (B) for so long as any shares of Class B Common Stock are outstanding, the affirmative vote of the holders at least eighty percent (80%) of the shares of Class B Common Stock outstanding at the time of such vote, voting as a separate series, shall be required to amend or repeal, or adopt any provision of this Amended and Restated Certificate of Incorporation inconsistent with Part A of Article Fourth or this clause (B) of Article Eleventh.

* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

4. That this Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this corporation's Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this day of , 2021.

By: _____

Luis von Ahn

Chief Executive Officer

Amended and Restated Bylaws of

Duolingo, Inc.

(a Delaware corporation)

Table of Contents

Amended and Restated Bylaws of
Duolingo, Inc.

Article I - Corporate Offices

1.1 Registered Office.

The address of the registered office of Duolingo, Inc. (the "***Corporation***") in the State of Delaware, and the name of its registered agent at such address, shall be as set forth in the Corporation's certificate of incorporation, as the same may be amended and/or restated from time to time (the "***Certificate of Incorporation***").

1.2 Other Offices.

The Corporation may have additional offices at any place or places, within or outside the State of Delaware, as the Corporation's board of directors (the "***Board***") may from time to time establish or as the business of the Corporation may require.

Article II - Meetings of Stockholders

2.1 Place of Meetings.

Meetings of stockholders shall be held at such place, if any, within or outside the State of Delaware, designated by the Board. The Board may, in its sole discretion, determine that a meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication as authorized by Section 211(a)(2) of the General Corporation Law of the State of Delaware (the "***DGCL***"). In the absence of any such designation or determination, stockholders' meetings shall be held at the Corporation's principal executive office.

2.2 Annual Meeting.

The Board shall designate the date and time of the annual meeting. At the annual meeting, directors shall be elected and other proper business properly brought before the meeting in accordance with Section 2.4 of these bylaws may be transacted. The Board may postpone, reschedule or cancel any previously scheduled annual meeting of stockholders.

2.3 Special Meeting.

Except as otherwise required by applicable law, special meetings of the stockholders may be called only by (i) an officer of the Corporation pursuant to a resolution adopted by a majority of the directors then in office, or (ii) the Chairperson of the Board, and in each case, only in such manner as set forth in the Certificate of Incorporation and in these bylaws.

No business may be transacted at any special meeting of stockholders other than the business specified in the notice of such meeting. The Board may postpone, reschedule or cancel any previously scheduled special meeting of stockholders.

2.4 Advance Notice of Business to be Brought before a Meeting.

(i) At an annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be (a) specified in a notice of meeting given by or at the direction of the Board, (b) if not specified in a notice of meeting, otherwise brought before the meeting by the Board or the chairperson of the meeting, or (c) otherwise properly brought before the meeting by a stockholder present in person who (A)(1) was a record owner of shares of the Corporation both at the time of giving the notice provided for in this Section 2.4 and at the time of the meeting, (2) is entitled to vote at the meeting and (3) has complied with this Section 2.4 in all applicable respects or (B) properly made such proposal in accordance with Rule 14a-8 under the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (as so amended and inclusive of such rules and regulations, the "***Exchange Act***"). The foregoing clause (c) shall be the exclusive means for a stockholder to propose business to be brought before an annual meeting of the stockholders. For purposes of this Section 2.4 and Section 2.5 of these bylaws, "***present in person***" shall mean that the stockholder proposing that the business be brought before the annual meeting of the Corporation, or a qualified representative of such proposing stockholder, appear at such annual meeting. A "***qualified representative***" of such proposing stockholder shall be a duly authorized officer, manager or partner of such stockholder or any other person authorized by a writing executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting of stockholders and such person must produce such writing or electronic transmission, or a reliable reproduction of the writing or electronic transmission, at the meeting of stockholders. Stockholders seeking to nominate persons for election to the Board must comply with Section 2.5 of these bylaws, and this Section 2.4 shall not be applicable to nominations for election to the Board except as expressly provided in Section 2.5 and Section 2.6 of these bylaws.

(ii) Without qualification, for business to be properly brought before an annual meeting by a stockholder, the stockholder must (a) provide Timely Notice (as defined below) thereof in writing and in proper form to the Secretary of the Corporation and (b) provide any updates or supplements to such notice at the times and in the forms required by this Section 2.4. To be timely, a stockholder's notice must be delivered to, or mailed and received at, the principal executive offices of the Corporation not less than ninety (90) days nor more than one hundred twenty (120) days prior to the one-year anniversary of the preceding year's annual meeting which, in the case of the first annual meeting of stockholders following the closing of the Corporation's initial underwritten public offering of Class A common stock, the date of the preceding year's annual meeting shall be deemed to be June 10; *provided, however*, that if the date of the annual meeting is more than thirty (30) days before or more than sixty (60) days after such anniversary date, notice by the stockholder to be timely must be so delivered, or mailed and received, not later than the ninetieth (90^{th}) day prior to such annual meeting or, if later, the tenth (10^{th}) day following the day on which public disclosure of the date of such annual meeting was

first made by the Corporation (such notice within such time periods, "***Timely Notice***"). In no event shall any adjournment or postponement of an annual meeting or the announcement thereof commence a new time period for the giving of Timely Notice as described above.

(iii) To be in proper form for purposes of this Section 2.4, a stockholder's notice to the Secretary shall set forth:

(a) As to each Proposing Person (as defined below), (A) the name and address of such Proposing Person (including, if applicable, the name and address that appear on the Corporation's books and records); and (B) the number of shares of each class or series of stock of the Corporation that are, directly or indirectly, owned of record or beneficially owned (within the meaning of Rule 13d-3 under the Exchange Act) by such Proposing Person, except that such Proposing Person shall in all events be deemed to beneficially own any shares of any class or series of stock of the Corporation as to which such Proposing Person has a right to acquire beneficial ownership at any time in the future (the disclosures to be made pursuant to the foregoing clauses (A) and (B) are referred to as "***Stockholder Information***");

(b) As to each Proposing Person, (A) the full notional amount of any securities that, directly or indirectly, underlie any "***derivative security***" (as such term is defined in Rule 16a-1(c) under the Exchange Act) that constitutes a "***call equivalent position***" (as such term is defined in Rule 16a-1(b) under the Exchange Act) ("***Synthetic Equity Position***") and that is, directly or indirectly, held or maintained by such Proposing Person with respect to any shares of any class or series of stock of the Corporation; *provided* that, for the purposes of the definition of "Synthetic Equity Position," the term "derivative security" shall also include any security or instrument that would not otherwise constitute a "derivative security" as a result of any feature that would make any conversion, exercise or similar right or privilege of such security or instrument becoming determinable only at some future date or upon the happening of a future occurrence, in which case the determination of the amount of securities into which such security or instrument would be convertible or exercisable shall be made assuming that such security or instrument is immediately convertible or exercisable at the time of such determination; and, *provided, further*, that any Proposing Person satisfying the requirements of Rule 13d-1(b)(1) under the Exchange Act (other than a Proposing Person that so satisfies Rule 13d-1(b)(1) under the Exchange Act solely by reason of Rule 13d-1(b)(1)(ii)(E)) shall not be deemed to hold or maintain the notional amount of any securities that underlie a Synthetic Equity Position held by such Proposing Person as a hedge with respect to a bona fide derivatives trade or position of such Proposing Person arising in the ordinary course of such Proposing Person's business as a derivatives dealer, (B) any rights to dividends on the shares of any class or series of stock of the Corporation owned beneficially by such Proposing Person that are separated or separable from the underlying shares of the Corporation, (C) any material pending

or threatened legal proceeding in which such Proposing Person is a party or material participant involving the Corporation or any of its officers or directors, or any affiliate of the Corporation, (D) any other material relationship between such Proposing Person, on the one hand, and the Corporation or any affiliate of the Corporation, on the other hand, (E) any direct or indirect material interest in any material contract or agreement of such Proposing Person with the Corporation or any affiliate of the Corporation (including, in any such case, any employment agreement, collective bargaining agreement or consulting agreement), (F) a representation that such Proposing Person intends or is part of a group which intends to deliver a proxy statement or form of proxy to holders of at least the percentage of the Corporation's outstanding capital stock required to approve or adopt the proposal or otherwise solicit proxies from stockholders in support of such proposal and (G) any other information relating to such Proposing Person that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies or consents by such Proposing Person in support of the business proposed to be brought before the meeting pursuant to Section 14(a) of the Exchange Act (the disclosures to be made pursuant to the foregoing clauses (A) through (G) are referred to as "***Disclosable Interests***"); *provided*, *however*, that Disclosable Interests shall not include any such disclosures with respect to the ordinary course business activities of any broker, dealer, commercial bank, trust company or other nominee who is a Proposing Person solely as a result of being the stockholder directed to prepare and submit the notice required by these bylaws on behalf of a beneficial owner; and

(c) As to each item of business that the stockholder proposes to bring before the annual meeting, (A) a brief description of the business desired to be brought before the annual meeting, the reasons for conducting such business at the annual meeting and any material interest in such business of each Proposing Person, (B) the text of the proposal or business (including the text of any resolutions proposed for consideration and in the event that such business includes a proposal to amend the bylaws, the language of the proposed amendment), (C) a reasonably detailed description of all agreements, arrangements and understandings (x) between or among any of the Proposing Persons or (y) between or among any Proposing Person and any other record or beneficial holder(s) or person(s) who have a right to acquire beneficial ownership at any time in the future of the shares of any class or series of stock of the Corporation or other person or entity (including their names) in connection with the proposal of such business by such stockholder and (D) any other information relating to such item of business that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies in support of the business proposed to be brought before the meeting pursuant to Section 14(a) of the Exchange Act; *provided*, *however*, that the disclosures required by this Section 2.4(iii) shall not include any disclosures with respect to any broker, dealer, commercial bank, trust company or other nominee who is a

Proposing Person solely as a result of being the stockholder directed to prepare and submit the notice required by these bylaws on behalf of a beneficial owner.

(iv) For purposes of this Section 2.4, the term "***Proposing Person***" shall mean (a) the stockholder providing the notice of business proposed to be brought before an annual meeting, (b) the beneficial owner or beneficial owners, if different, on whose behalf the notice of the business proposed to be brought before the annual meeting is made and (c) any participant (as defined in paragraphs (a)(ii)-(vi) of Instruction 3 to Item 4 of Schedule 14A) with such stockholder in such solicitation.

(v) A Proposing Person shall update and supplement its notice to the Corporation of its intent to propose business at an annual meeting, if necessary, so that the information provided or required to be provided in such notice pursuant to this Section 2.4 shall be true and correct as of the record date for stockholders entitled to vote at the meeting and as of the date that is ten (10) business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the Secretary at the principal executive offices of the Corporation (A) not later than five (5) business days after the record date for stockholders entitled to vote at the meeting (in the case of the update and supplement required to be made as of such record date), and (B) not later than eight (8) business days prior to the date for the meeting or, if practicable, any adjournment or postponement thereof (and, if not practicable, on the first practicable date prior to the date to which the meeting has been adjourned or postponed) (in the case of the update and supplement required to be made as of ten (10) business days prior to the meeting or any adjournment or postponement thereof). For the avoidance of doubt, the obligation to update and supplement as set forth in this paragraph or any other Section of these bylaws shall not limit the Corporation's rights with respect to any deficiencies in any notice provided by a stockholder, extend any applicable deadlines hereunder or enable or be deemed to permit a stockholder who has previously submitted notice hereunder to amend or update any proposal or to submit any new proposal, including by changing or adding matters, business or resolutions proposed to be brought before a meeting of the stockholders.

(vi) Notwithstanding anything in these bylaws to the contrary, no business shall be conducted at an annual meeting that is not properly brought before the meeting in accordance with this Section 2.4. The presiding person of the meeting shall, if the facts warrant, determine that the business was not properly brought before the meeting in accordance with this Section 2.4, and if such presiding person should so determine, such presiding person shall so declare to the meeting and any such business not properly brought before the meeting shall not be transacted.

(vii) This Section 2.4 is expressly intended to apply to any business proposed to be brought before an annual meeting of stockholders other than any proposal made in accordance with Rule 14a-8 under the Exchange Act and included in the Corporation's proxy statement. In addition to the requirements of this Section 2.4 with respect to any business proposed to be brought before an annual meeting, each Proposing Person shall comply with all applicable requirements of the Exchange Act with respect to any such business. Nothing in this Section 2.4

shall be deemed to affect the rights of stockholders to request inclusion of proposals in the Corporation's proxy statement pursuant to Rule 14a-8 under the Exchange Act.

(viii) For purposes of these bylaws, "***public disclosure***" shall mean disclosure in a press release reported by a national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Sections 13, 14 or 15(d) of the Exchange Act.

2.5 Advance Notice of Nominations for Election of Directors at a Meeting.

(i) Nominations of any person for election to the Board at an annual meeting may be made at such meeting only (a) by or at the direction of the Board, including by any committee or persons authorized to do so by the Board or these bylaws, or (b) by a stockholder present in person (as defined in Section 2.4) who (1) was a record owner of shares of the Corporation both at the time of giving the notice provided for in this Section 2.5 and at the time of the meeting, (2) is entitled to vote at the meeting and (3) has complied with this Section 2.5 and Section 2.6 as to such notice and nomination. The foregoing clause (c) shall be the exclusive means for a stockholder to make any nomination of a person or persons for election to the Board at any annual meeting of stockholders.

(ii) Without qualification, for a stockholder to make any nomination of a person or persons for election to the Board at an annual meeting, the stockholder must (a) provide Timely Notice (as defined in Section 2.4(ii) of these bylaws) thereof in writing and in proper form to the Secretary of the Corporation, (b) provide the information, agreements and questionnaires with respect to such stockholder and its candidate for nomination as required to be set forth by this Section 2.5 and Section 2.6, and (c) provide any updates or supplements to such notice at the times and in the forms required by this Section 2.5 and Section 2.6. The number of nominees a stockholder may nominate for election at the annual meeting (or in the case of a stockholder giving the notice on behalf of a beneficial owner, the number of nominees a stockholder may nominate for election at the annual meeting on behalf of such beneficial owner) shall not exceed the number of directors to be elected at such annual meeting.

(iii) In no event shall any adjournment or postponement of an annual meeting or the announcement thereof commence a new time period for the giving of a stockholder's notice as described above.

(iv) To be in proper form for purposes of this Section 2.5, a stockholder's notice to the Secretary shall set forth:

(a) As to each Nominating Person (as defined below), the Stockholder Information (as defined in Section 2.4(iii)(a), except that for purposes of this Section 2.5, the term "Nominating Person" shall be substituted for the term "Proposing Person" in all places it appears in Section 2.4(iii)(a));

(b) As to each Nominating Person, any Disclosable Interests (as defined in Section 2.4(iii)(b), except that for purposes of this Section 2.5 the term

"Nominating Person" shall be substituted for the term "Proposing Person" in all places it appears in Section 2.4(iii)(b) and the disclosure with respect to the business to be brought before the meeting in Section 2.4(iii)(c) shall be made with respect to nomination of each person for election as a director at the meeting); and

(c) As to each candidate whom a Nominating Person proposes to nominate for election as a director, (A) all information with respect to such candidate for nomination that would be required to be set forth in a stockholder's notice pursuant to this Section 2.5 and Section 2.6 if such candidate for nomination were a Nominating Person, (B) all information relating to such candidate for nomination that is required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for election of directors in a contested election pursuant to Section 14(a) under the Exchange Act (including such candidate's written consent to being named in the proxy statement as a nominee and to serving as a director if elected), (C) a description of any direct or indirect material interest in any material contract or agreement between or among any Nominating Person, on the one hand, and each candidate for nomination or his or her respective associates or any other participants in such solicitation, on the other hand, including, without limitation, all information that would be required to be disclosed pursuant to Item 404 under Regulation S-K if such Nominating Person were the "registrant" for purposes of such rule and the candidate for nomination were a director or executive officer of such registrant (the disclosures to be made pursuant to the foregoing clauses (A) through (C) are referred to as "***Nominee Information***"), and (D) a completed and signed questionnaire, representation and agreement as provided in Section 2.6(i).

(v) For purposes of this Section 2.5, the term "***Nominating Person***" shall mean (a) the stockholder providing the notice of the nomination proposed to be made at the meeting, (b) the beneficial owner or beneficial owners, if different, on whose behalf the notice of the nomination proposed to be made at the meeting is made and (c) any other participant in such solicitation.

(vi) A stockholder providing notice of any nomination proposed to be made at a meeting shall further update and supplement such notice, if necessary, so that the information provided or required to be provided in such notice pursuant to this Section 2.5 shall be true and correct as of the record date for stockholders entitled to vote at the meeting and as of the date that is ten (10) business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the Secretary at the principal executive offices of the Corporation (A) not later than five (5) business days after the record date for stockholders entitled to vote at the meeting (in the case of the update and supplement required to be made as of such record date), and (B) not later than eight (8) business days prior to the date for the meeting or, if practicable, any adjournment or postponement thereof (and, if not practicable, on the first practicable date prior to the date to which the meeting has been adjourned or postponed) (in the case of the update and supplement required to be made as of ten (10) business days prior to the meeting or any adjournment or postponement thereof). For

the avoidance of doubt, the obligation to update and supplement as set forth in this paragraph or any other Section of these bylaws shall not limit the Corporation's rights with respect to any deficiencies in any notice provided by a stockholder, extend any applicable deadlines hereunder or enable or be deemed to permit a stockholder who has previously submitted notice hereunder to amend or update any nomination or to submit any new nomination.

(vii) In addition to the requirements of this Section 2.5 with respect to any nomination proposed to be made at a meeting, each Nominating Person shall comply with all applicable requirements of the Exchange Act with respect to any such nominations.

2.6 Additional Requirements for Valid Nomination of Candidates to Serve as Director and, if Elected, to be Seated as Directors.

(i) To be eligible to be a candidate for election as a director of the Corporation at an annual meeting, a candidate must be nominated in the manner prescribed in Section 2.5 and the candidate for nomination, whether nominated by the Board or by a stockholder of record, must have previously delivered (in accordance with the time period prescribed for delivery in a notice to such candidate given by or on behalf of the Board), to the Secretary at the principal executive offices of the Corporation, (a) a completed written questionnaire (in the form provided by the Corporation upon written request therefor) with respect to the background, qualifications, stock ownership and independence of such proposed nominee and (b) a written representation and agreement (in the form provided by the Corporation upon written request therefor) that such candidate for nomination (A) is not and, if elected as a director during his or her term of office, will not become a party to (1) any agreement, arrangement or understanding with, and has not given and will not give any commitment or assurance to, any person or entity as to how such proposed nominee, if elected as a director of the Corporation, will act or vote on any issue or question (a "***Voting Commitment***"), or (2) any Voting Commitment that could limit or interfere with such proposed nominee's ability to comply, if elected as a director of the Corporation, with such proposed nominee's fiduciary duties under applicable law, (B) is not, and will not become a party to, any agreement, arrangement or understanding with any person or entity other than the Corporation with respect to any direct or indirect compensation or reimbursement for service as a director of the Corporation that has not been disclosed therein, and (C) if elected as a director of the Corporation, will comply with all applicable corporate governance, conflict of interest, confidentiality, stock ownership and trading and other policies and guidelines of the Corporation applicable to directors and in effect during such person's term in office as a director (and, if requested by any candidate for nomination, the Secretary of the Corporation shall provide to such candidate for nomination all such policies and guidelines then in effect).

(ii) The Board may also require any proposed candidate for nomination as a director to furnish such other information as may reasonably be requested by the Board in writing prior to the meeting of stockholders at which such candidate's nomination is to be acted upon in order for the Board to determine the eligibility of such candidate for nomination to be an independent director of the Corporation.

(iii) A candidate for nomination as a director shall further update and supplement the materials delivered pursuant to this Section 2.6, if necessary, so that the information provided or required to be provided pursuant to this Section 2.6 shall be true and correct as of the record date for stockholders entitled to vote at the meeting and as of the date that is ten (10) business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to, or mailed and received by, the Secretary at the principal executive offices of the Corporation (or any other office specified by the Corporation in any public announcement) (A) not later than five (5) business days after the record date for stockholders entitled to vote at the meeting (in the case of the update and supplement required to be made as of such record date), and (B) not later than eight (8) business days prior to the date for the meeting or, if practicable, any adjournment or postponement thereof (and, if not practicable, on the first practicable date prior to the date to which the meeting has been adjourned or postponed) (in the case of the update and supplement required to be made as of ten (10) business days prior to the meeting or any adjournment or postponement thereof). For the avoidance of doubt, the obligation to update and supplement as set forth in this paragraph or any other Section of these bylaws shall not limit the Corporation's rights with respect to any deficiencies in any notice provided by a stockholder, extend any applicable deadlines hereunder or enable or be deemed to permit a stockholder who has previously submitted notice hereunder to amend or update any nomination or to submit any new nomination.

(iv) In addition to the requirements of this Section 2.6 with respect to any nomination proposed to be made at a meeting, each Proposing Person shall comply with all applicable requirements of the Exchange Act with respect to any such nominations.

(v) No candidate shall be eligible for nomination as a director of the Corporation unless such candidate for nomination and the Nominating Person seeking to place such candidate's name in nomination has complied with Section 2.5 and this Section 2.6, as applicable. The presiding person at the meeting shall, if the facts warrant, determine that a nomination was not properly made in accordance with this Section 2.6, and if such presiding person should so determine, such presiding person shall so declare such determination to the meeting, the defective nomination shall be disregarded and any ballots cast for the candidate in question (but in the case of any form of ballot listing other qualified nominees, only the ballots cast for the nominee in question) shall be void and of no force or effect.

(vi) Notwithstanding anything in these bylaws to the contrary, no candidate for nomination by a Nominating Person shall be eligible to be seated as a director of the Corporation unless nominated and elected in accordance with Section 2.5 and this Section 2.6.

2.7 Notice of Stockholders' Meetings.

Unless otherwise provided by law, the Certificate of Incorporation or these bylaws, the notice of any meeting of stockholders shall be sent or otherwise given in accordance with Section 8.1 of these bylaws not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting. The notice shall specify the place, if any, date and time of the meeting, the means of remote communication, if any, by which

stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called.

2.8 Procedures for Stockholders to Act by Consent in Lieu of a Meeting.

(i) Unless otherwise prohibited by the Certificate of Incorporation, any action required or permitted to be taken at an annual or special meeting of stockholders may be taken without a meeting, without prior notice and without a vote, if a consent or consents, setting forth the action so taken, (a) shall be signed by stockholders on the record date established pursuant to Section 2.8(ii) below (the "***Written Consent Record Date***") of outstanding shares of the Corporation having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and (b) shall be delivered to the Corporation at its registered office in the State of Delaware, at its principal place of business, to an officer or agent of the Corporation having custody of the minute books in which proceedings of meetings of stockholders are recorded or in any other manner permitted by law. Delivery shall be made by hand or by certified or registered mail, return receipt requested. No consent shall be effective to take corporate action unless consents signed by a sufficient number of holders to take such action are delivered to the Corporation in the manner described in this Section 2.8 within 60 days after the first date on which a consent is so delivered to the Corporation. Only stockholders on the Written Consent Record Date shall be entitled to consent to corporate action without a meeting.

(ii) Without qualification, any stockholder seeking to have the stockholders authorize or take any action by consent shall first request in writing that the Board fix a Written Consent Record Date for the purpose of determining the stockholders entitled to take such action, which request shall be in proper form and delivered to, or mailed and received by, the Secretary of the Corporation at the principal executive offices of the Corporation. Within ten (10) days after receipt of a request in proper form and otherwise in compliance with this Section 2.8(ii) from any such stockholder, the Board may adopt a resolution fixing a Written Consent Record Date for the purpose of determining the stockholders entitled to take such action, which date shall not be more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the Board. If no resolution fixing a record date has been adopted by the Board within such ten (10) day period after the date on which such a request is received, (a) the Written Consent Record Date for determining stockholders entitled to consent to such action, when no prior action of the Board is required by applicable law, shall be the first date on which valid signed consents constituting applicable percentage of the outstanding shares of the Corporation and setting forth the action taken or proposed to be taken is delivered to the Corporation in the manner described in this Section 2.8, and (b) the Written Consent Record Date for determining stockholders entitled to consent to such action, when prior action by the Board is required by applicable law, shall be at the close of business on the date on which the Board adopts the resolution taking such prior action.

2.9 Quorum.

Unless otherwise provided by law, the Certificate of Incorporation or these bylaws, the holders of a majority in voting power of the stock issued and outstanding and entitled to vote,

present in person, or by remote communication, if applicable, or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders. Where a separate vote by class or series is required, the presence in person or by proxy of the holders of a majority in voting power of the outstanding shares of such class or series shall be necessary and sufficient to constitute a quorum with respect to that matter. A quorum, once established at a meeting, shall not be broken by the withdrawal of enough votes to leave less than a quorum. If, however, a quorum is not present or represented at any meeting of the stockholders, then either (i) the person presiding over the meeting or (ii) a majority in voting power of the stockholders, present in person, or by remote communication, if applicable, or represented by proxy, shall have power to recess the meeting or adjourn the meeting from time to time in the manner provided in Section 2.10 of these bylaws until a quorum is present or represented. At any recessed or adjourned meeting at which a quorum is present or represented, any business may be transacted that might have been transacted at the meeting as originally noticed.

2.10 Adjourned Meeting; Notice.

When a meeting is adjourned to another time or place, unless these bylaws otherwise require, notice need not be given of the adjourned meeting if the time, place, if any, thereof, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken. At any adjourned meeting, the Corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, a notice of the adjourned meeting shall be given to each stockholder entitled to vote at the meeting. If after the adjournment a new record date for determination of stockholders entitled to vote is fixed for the adjourned meeting, the Board shall fix as the record date for determining stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote at the adjourned meeting, and shall give notice of the adjourned meeting to each stockholder entitled to vote at such meeting as of the record date so fixed for notice of such adjourned meeting.

2.11 Conduct of Business.

The date and time of the opening and the closing of the polls for each matter upon which the stockholders will vote at a meeting shall be announced at the meeting by the person presiding over the meeting. The Board may adopt by resolution such rules and regulations for the conduct of the meeting of stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board, the person presiding over any meeting of stockholders shall have the right and authority to convene and (for any or no reason) to recess and/or adjourn the meeting, to prescribe such rules, regulations and procedures (which need not be in writing) and to do all such acts as, in the judgment of such presiding person, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board or prescribed by the person presiding over the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) rules and procedures for maintaining order at the meeting and the safety of those present (including, without limitation, rules and procedures for removal of disruptive persons from the

meeting); (iii) limitations on attendance at or participation in the meeting to stockholders entitled to vote at the meeting, their duly authorized and constituted proxies or such other persons as the person presiding over the meeting shall determine; (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (v) limitations on the time allotted to questions or comments by participants. The presiding person at any meeting of stockholders, in addition to making any other determinations that may be appropriate to the conduct of the meeting (including, without limitation, determinations with respect to the administration and/or interpretation of any of the rules, regulations or procedures of the meeting, whether adopted by the Board or prescribed by the person presiding over the meeting), shall, if the facts warrant, determine and declare to the meeting that a matter of business was not properly brought before the meeting and if such presiding person should so determine, such presiding person shall so declare to the meeting and any such matter or business not properly brought before the meeting shall not be transacted or considered. Unless and to the extent determined by the Board or the person presiding over the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

2.12 Voting.

Except as may be otherwise provided in the Certificate of Incorporation, these bylaws or the DGCL, each stockholder shall be entitled to one (1) vote for each share of capital stock held by such stockholder.

Except as otherwise provided by the Certificate of Incorporation, at all duly called or convened meetings of stockholders at which a quorum is present, for the election of directors, a plurality of the votes cast shall be sufficient to elect a director. Unless a different or minimum vote is required by the Certificate of Incorporation, these bylaws, the rules or regulations of any stock exchange applicable to the Corporation, applicable law or pursuant to any regulation applicable to the Corporation or its securities pursuant to which the matter is being submitted to stockholders for approval, in which case such different or minimum vote shall be the required vote on such matter, each matter presented to the stockholders at a duly called or convened meeting at which a quorum is present shall be decided by the affirmative vote of the holders of a majority in voting power of the votes cast (excluding abstentions and broker non-votes) on such matter.

2.13 Record Date for Stockholder Meetings and Other Purposes.

In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board, and which record date shall, unless otherwise required by law, not be more than sixty (60) days nor less than ten (10) days before the date of such meeting. If the Board so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the Board determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination. If no record date is fixed by the Board, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be the close of business on the next day

preceding the day on which notice is first given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided, however*, that the Board may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting; and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance herewith at the adjourned meeting.

In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment or any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of capital stock, or for the purposes of any other lawful action, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty (60) days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board adopts the resolution relating thereto.

2.14 Proxies.

Each stockholder entitled to vote at a meeting of stockholders may authorize another person or persons to act for such stockholder by proxy authorized by an instrument in writing or by a transmission permitted by law filed in accordance with the procedure established for the meeting, but no such proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212 of the DGCL. A proxy may be in the form of an electronic transmission which sets forth or is submitted with information from which it can be determined that the transmission was authorized by the stockholder.

2.15 List of Stockholders Entitled to Vote.

The Corporation shall prepare, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting (*provided, however*, that if the record date for determining the stockholders entitled to vote is less than ten (10) days before the date of the meeting, the list shall reflect the stockholders entitled to vote as of the tenth (10th) day before the meeting date), arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. The Corporation shall not be required to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting for a period of at least ten (10) days prior to the meeting: (i) on a reasonably accessible electronic network, *provided* that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the Corporation's principal executive office. In the event that the Corporation determines to make the list available on an electronic network, the Corporation may take reasonable steps to ensure that such information is available only to stockholders of the Corporation. If the meeting is to be held at a place, then the list shall be produced and kept at the

time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting. Such list shall presumptively determine the identity of the stockholders entitled to vote at the meeting and the number of shares held by each of them. Except as otherwise provided by law, the stock ledger shall be the only evidence as to who are the stockholders entitled to examine the list of stockholders required by this Section 2.15 or to vote in person or by proxy at any meeting of stockholders.

2.16 Inspectors of Election.

Before any meeting of stockholders, the Corporation shall appoint an inspector or inspectors of election to act at the meeting or its adjournment and make a written report thereof. The Corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. If any person appointed as inspector or any alternate fails to appear or fails or refuses to act, then the person presiding over the meeting shall appoint a person to fill that vacancy.

Such inspectors shall:

(i) determine the number of shares outstanding and the voting power of each, the number of shares represented at the meeting and the validity of any proxies and ballots;

(ii) count all votes or ballots;

(iii) count and tabulate all votes;

(iv) determine and retain for a reasonable period a record of the disposition of any challenges made to any determination by the inspector(s); and

(v) certify its or their determination of the number of shares represented at the meeting and its or their count of all votes and ballots.

Each inspector, before entering upon the discharge of the duties of inspector, shall take and sign an oath faithfully to execute the duties of inspection with strict impartiality and according to the best of such inspector’s ability. Any report or certificate made by the inspectors of election is prima facie evidence of the facts stated therein. The inspectors of election may appoint such persons to assist them in performing their duties as they determine.

2.17 Delivery to the Corporation.

Whenever this Article II requires one or more persons (including a record or beneficial owner of stock) to deliver a document or information to the Corporation or any officer, employee or agent thereof (including any notice, request, questionnaire, revocation, representation or other document or agreement), such document or information shall be in writing exclusively (and not

in an electronic transmission) and shall be delivered exclusively by hand (including, without limitation, overnight courier service) or by certified or registered mail, return receipt requested, and the Corporation shall not be required to accept delivery of any document not in such written form or so delivered. For the avoidance of doubt, the Corporation expressly opts out of Section 116 of the DGCL with respect to the delivery of information and documents to the Corporation required by this Article II.

Article III - Directors

3.1 Powers.

Except as otherwise provided by the Certificate of Incorporation or the DGCL, the business and affairs of the Corporation shall be managed by or under the direction of the Board.

3.2 Number of Directors.

Subject to the Certificate of Incorporation, the total number of directors constituting the Board shall be determined from time to time by resolution of the Board. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

3.3 Election, Qualification and Term of Office of Directors.

Except as provided in Section 3.4 of these bylaws, and subject to the Certificate of Incorporation, each director, including a director elected to fill a vacancy or newly created directorship, shall hold office until the expiration of the term of the class, if any, for which elected and until such director's successor is elected and qualified or until such director's earlier death, resignation, disqualification or removal. Directors need not be stockholders. Any class shall consist, as nearly as possible, of one-third of the total number of directors constituting the entire Board. The Certificate of Incorporation or these bylaws may prescribe qualifications for directors.

3.4 Resignation and Vacancies.

Any director may resign at any time upon notice given in writing or by electronic transmission to the Corporation. The resignation shall take effect at the time specified therein or upon the happening of an event specified therein, and if no time or event is specified, at the time of its receipt. When one or more directors so resigns and the resignation is effective at a future date or upon the happening of an event to occur on a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each director so chosen shall hold office as provided in Section 3.3.

Unless otherwise provided in the Certificate of Incorporation or these bylaws, vacancies resulting from the death, resignation, disqualification or removal of any director, and newly created directorships resulting from any increase in the authorized number of directors shall be

filled only by a majority of the directors then in office, although less than a quorum, or by a sole remaining director. Any director appointed in accordance with the preceding sentence shall hold office for the remainder of the term of the class, if any, to which the director is appointed and until such director's successor shall have been elected and qualified.

3.5 Place of Meetings; Meetings by Telephone.

The Board may hold meetings, both regular and special, either within or outside the State of Delaware.

Unless otherwise restricted by the Certificate of Incorporation or these bylaws, members of the Board, or any committee designated by the Board, may participate in a meeting of the Board, or any committee, by means of conference telephone, video conferencing or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting pursuant to this bylaw shall constitute presence in person at the meeting.

3.6 Regular Meetings.

Regular meetings of the Board may be held within or outside the State of Delaware and at such time and at such place as which has been designated by the Board and publicized among all directors, either orally or in writing, by telephone, including a voice-messaging system or other system designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other means of electronic transmission. No further notice shall be required for regular meetings of the Board.

3.7 Special Meetings; Notice.

Special meetings of the Board for any purpose or purposes may be called at any time by the Chairperson of the Board, the Chief Executive Officer, the President, the Secretary or a majority of the total number of directors constituting the Board.

Notice of the time and place of special meetings shall be:

(i) delivered personally by hand, by courier or by telephone;

(ii) sent by United States first-class mail, postage prepaid;

(iii) sent by facsimile or electronic mail; or

(iv) sent by other means of electronic transmission,

directed to each director at that director's address, telephone number, facsimile number or electronic mail address, or other address for electronic transmission, as the case may be, as shown on the Corporation's records.

If the notice is (i) delivered personally by hand, by courier or by telephone, (ii) sent by facsimile or electronic mail, or (iii) sent by other means of electronic transmission, it shall be delivered or sent at least twenty-four (24) hours before the time of the holding of the meeting. If the notice is sent by U.S. mail, it shall be deposited in the U.S. mail at least four (4) days before the time of the holding of the meeting. The notice need not specify the place of the meeting (if the meeting is to be held at the Corporation's principal executive office) nor the purpose of the meeting.

3.8 Quorum.

At all meetings of the Board, unless otherwise provided by the Certificate of Incorporation, a majority of the total number of directors shall constitute a quorum for the transaction of business. The vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute, the Certificate of Incorporation or these bylaws. If a quorum is not present at any meeting of the Board, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

3.9 Board Action without a Meeting.

Unless otherwise restricted by the Certificate of Incorporation or these bylaws, any action required or permitted to be taken at any meeting of the Board, or of any committee thereof, may be taken without a meeting if all members of the Board or committee, as the case may be, consent thereto in writing or by electronic transmission. After an action is taken, the consent or consents relating thereto shall be filed with the minutes of the proceedings of the Board, or the committee thereof, in the same paper or electronic form as the minutes are maintained. Such action by written consent or consent by electronic transmission shall have the same force and effect as a unanimous vote of the Board.

3.10 Fees and Compensation of Directors.

Unless otherwise restricted by the Certificate of Incorporation or these bylaws, the Board shall have the authority to fix the compensation, including fees and reimbursement of expenses, of directors for services to the Corporation in any capacity.

Article IV - Committees

4.1 Committees of Directors.

The Board may designate one (1) or more committees, each committee to consist, of one (1) or more of the directors of the Corporation. The Board may designate one (1) or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint

another member of the Board to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board or in these bylaws, shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority to (i) approve or adopt, or recommend to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopt, amend or repeal any bylaw of the Corporation.

4.2 Committee Minutes.

Each committee shall keep regular minutes of its meetings and report the same to the Board when required.

4.3 Meetings and Actions of Committees.

Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of:

(i) Section 3.5 (place of meetings; meetings by telephone);

(ii) Section 3.6 (regular meetings);

(iii) Section 3.7 (special meetings; notice);

(iv) Section 3.9 (board action without a meeting); and

(v) Section 7.13 (waiver of notice),

with such changes in the context of those bylaws as are necessary to substitute the committee and its members for the Board and its members. *However*:

(i) the time of regular meetings of committees may be determined either by resolution of the Board or by resolution of the committee;

(ii) special meetings of committees may also be called by resolution of the Board or the chairperson of the applicable committee; and

(iii) the Board may adopt rules for the governance of any committee to override the provisions that would otherwise apply to the committee pursuant to this Section 4.3, *provided* that such rules do not violate the provisions of the Certificate of Incorporation or applicable law.

At all meetings of committees, unless otherwise provided by the Certificate of Incorporation, a majority of the total number of the members of the committee shall constitute a quorum for the transaction of business. The vote of a majority of the directors present at any

meeting at which a quorum is present shall be the act of the committee, except as may be otherwise specifically provided by statute, the Certificate of Incorporation or these bylaws. If a quorum is not present at any meeting of the committee, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

4.4 Subcommittees.

Unless otherwise provided in the Certificate of Incorporation, these bylaws or the resolutions of the Board designating the committee, a committee may create one (1) or more subcommittees, each subcommittee to consist of one (1) or more members of the committee, and delegate to a subcommittee any or all of the powers and authority of the committee.

Article V - Officers

5.1 Officers.

The officers of the Corporation shall include a Chief Executive Officer, a President and a Secretary. The Corporation may also have, at the discretion of the Board, a Chairperson of the Board, a Vice Chairperson of the Board, a Chief Financial Officer, a Treasurer, one (1) or more Vice Presidents, one (1) or more Assistant Vice Presidents, one (1) or more Assistant Treasurers, one (1) or more Assistant Secretaries, and any such other officers as may be appointed in accordance with the provisions of these bylaws. Any number of offices may be held by the same person. No officer need be a stockholder or director of the Corporation.

5.2 Appointment of Officers.

The Board shall appoint the officers of the Corporation, except such officers as may be appointed in accordance with the provisions of Section 5.3 of these bylaws.

5.3 Subordinate Officers.

The Board may appoint, or empower the Chief Executive Officer or, in the absence of a Chief Executive Officer, the President, to appoint, such other officers and agents as the business of the Corporation may require. Each of such officers and agents shall hold office for such period, have such authority, and perform such duties as are provided in these bylaws or as the Board may from time to time determine.

5.4 Removal and Resignation of Officers.

Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, either with or without cause, by the Board or, except in the case of an officer chosen by the Board, by any officer upon whom such power of removal may be conferred by the Board.

Any officer may resign at any time by giving written notice to the Corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice. Unless otherwise specified in the notice of resignation, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the Corporation under any contract to which the officer is a party.

5.5 Vacancies in Offices.

Any vacancy occurring in any office of the Corporation shall be filled by the Board or as provided in Section 5.2.

5.6 Representation of Shares of Other Corporations.

The Chairperson of the Board, the Chief Executive Officer, or the President of this Corporation, or any other person authorized by the Board, the Chief Executive Officer or the President, is authorized to vote, represent and exercise on behalf of this Corporation all rights incident to any and all shares or voting securities of any other corporation or other person standing in the name of this Corporation. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

5.7 Authority and Duties of Officers.

All officers of the Corporation shall respectively have such authority and perform such duties in the management of the business of the Corporation as may be provided herein or designated from time to time by the Board and, to the extent not so provided, as generally pertain to their respective offices, subject to the control of the Board.

5.8 Compensation.

The compensation of the officers of the Corporation for their services as such shall be fixed from time to time by or at the direction of the Board. An officer of the Corporation shall not be prevented from receiving compensation by reason of the fact that such officer is also a director of the Corporation.

Article VI - Records

A stock ledger consisting of one or more records in which the names of all of the Corporation’s stockholders of record, the address and number of shares registered in the name of each such stockholder, and all issuances and transfers of stock of the corporation are recorded in accordance with Section 224 of the DGCL shall be administered by or on behalf of the Corporation. Any records administered by or on behalf of the Corporation in the regular course of its business, including its stock ledger, books of account, and minute books, may be kept on, or by means of, or be in the form of, any information storage device, or method, or one or more electronic networks or databases (including one or more distributed electronic networks or databases), *provided* that the records so kept can be converted into clearly legible paper form

within a reasonable time and, with respect to the stock ledger, that the records so kept (i) can be used to prepare the list of stockholders specified in Sections 219 and 220 of the DGCL, (ii) record the information specified in Sections 156, 159, 217(a) and 218 of the DGCL, and (iii) record transfers of stock as governed by Article 8 of the Uniform Commercial Code as adopted in the State of Delaware.

Article VII - General Matters

7.1 Execution of Corporate Contracts and Instruments.

The Board, except as otherwise provided in these bylaws, may authorize any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the Corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the Board or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the Corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount. Except as provided in Section 2.17 of these bylaws, any document, including, without limitation, any consent, agreement, certificate or instrument, required by the DGCL, the Certificate of Incorporation or these bylaws to be executed by any officer, director, stockholder, employee or agent of the Corporation may be executed using a facsimile or other form of electronic signature to the fullest extent permitted by applicable law. All other contracts, agreements, certificates or instruments to be executed on behalf of the Corporation may be executed using a facsimile or other form of electronic signature to the fullest extent permitted by applicable law.

7.2 Stock Certificates.

The shares of the Corporation shall be represented by certificates, *provided* that the Board by resolution may provide that some or all of the shares of any class or series of stock of the Corporation shall be uncertificated. Certificates for the shares of stock, if any, shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock represented by a certificate shall be entitled to have a certificate signed by, or in the name of the Corporation by, any two officers authorized to sign stock certificates representing the number of shares registered in certificate form. The Chairperson or Vice Chairperson of the Board, Chief Executive Officer, the President, Vice President, the Treasurer, any Assistant Treasurer, the Secretary or any Assistant Secretary of the Corporation shall be specifically authorized to sign stock certificates. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue.

The Corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, or upon the books and records of

the Corporation in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the Corporation shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

7.3 Special Designation of Certificates.

If the Corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or on the back of the certificate that the Corporation shall issue to represent such class or series of stock (or, in the case of uncertificated shares, set forth in a notice provided pursuant to Section 151 of the DGCL); *provided*, *however*, that except as otherwise provided in Section 202 of the DGCL, in lieu of the foregoing requirements, there may be set forth on the face of back of the certificate that the Corporation shall issue to represent such class or series of stock (or, in the case of any uncertificated shares, included in the aforementioned notice) a statement that the Corporation will furnish without charge to each stockholder who so requests the powers, the designations, the preferences and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

7.4 Lost Certificates.

The Corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the Corporation may require the owner of the lost, stolen or destroyed certificate, or such owner’s legal representative, to give the Corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

7.5 Shares Without Certificates.

The Corporation may adopt a system of issuance, recordation and transfer of its shares of stock by electronic or other means not involving the issuance of certificates, *provided* the use of such system by the Corporation is permitted in accordance with applicable law.

7.6 Construction; Definitions.

Unless the context requires otherwise, the general provisions, rules of construction and definitions in the DGCL shall govern the construction of these bylaws. Without limiting the generality of this provision, the singular number includes the plural and the plural number includes the singular.

7.7 Dividends.

The Board, subject to any restrictions contained in either (i) the DGCL or (ii) the Certificate of Incorporation, may declare and pay dividends upon the shares of its capital stock. Dividends may be paid in cash, in property or in shares of the Corporation's capital stock.

The Board may set apart out of any of the funds of the Corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve. Such purposes shall include but not be limited to equalizing dividends, repairing or maintaining any property of the Corporation, and meeting contingencies.

7.8 Fiscal Year.

The fiscal year of the Corporation shall be fixed by resolution of the Board and may be changed by the Board.

7.9 Seal.

The Corporation may adopt a corporate seal, which shall be adopted and which may be altered by the Board. The Corporation may use the corporate seal by causing it or a facsimile thereof to be impressed or affixed or in any other manner reproduced.

7.10 Transfer of Stock.

Shares of the Corporation shall be transferable in the manner prescribed by law and in these bylaws. Shares of stock of the Corporation shall be transferred on the books of the Corporation only by the holder of record thereof or by such holder's attorney duly authorized in writing, upon surrender to the Corporation of the certificate or certificates representing such shares endorsed by the appropriate person or persons (or by delivery of duly executed instructions with respect to uncertificated shares), with such evidence of the authenticity of such endorsement or execution, transfer, authorization and other matters as the Corporation may reasonably require, and accompanied by all necessary stock transfer stamps. No transfer of stock shall be valid as against the Corporation for any purpose until it shall have been entered in the stock records of the Corporation by an entry showing the names of the persons from and to whom it was transferred.

7.11 Stock Transfer Agreements.

The Corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes or series of stock of the Corporation to restrict the transfer of shares of stock of the Corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

7.12 Registered Stockholders.

The Corporation:

(i) shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and to vote as such owner; and

(ii) shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of the State of Delaware.

7.13 Waiver of Notice.

Whenever notice is required to be given under any provision of the DGCL, the Certificate of Incorporation or these bylaws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the Certificate of Incorporation or these bylaws.

Article VIII - Notice

8.1 Delivery of Notice; Notice by Electronic Transmission.

Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the Corporation under any provisions of the DGCL, the Certificate of Incorporation or these bylaws may be given in writing directed to the stockholder's mailing address (or by electronic transmission directed to the stockholder's electronic mail address, as applicable) as it appears on the records of the Corporation and shall be given (1) if mailed, when the notice is deposited in the U.S. mail, postage prepaid, (2) if delivered by courier service, the earlier of when the notice is received or left at such stockholder's address or (3) if given by electronic mail, when directed to such stockholder's electronic mail address unless the stockholder has notified the Corporation in writing or by electronic transmission of an objection to receiving notice by electronic mail. A notice by electronic mail must include a prominent legend that the communication is an important notice regarding the Corporation.

Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the Corporation under any provision of the DGCL, the Certificate of Incorporation or these bylaws shall be effective if given by a form of electronic transmission consented to by the stockholder to whom the notice is given. Any such

consent shall be revocable by the stockholder by written notice or electronic transmission to the Corporation. Notwithstanding the provisions of this paragraph, the Corporation may give a notice by electronic mail in accordance with the first paragraph of this Section 8.1 without obtaining the consent required by this paragraph.

Any notice given pursuant to the preceding paragraph shall be deemed given:

(i) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice;

(ii) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and

(iii) if by any other form of electronic transmission, when directed to the stockholder.

Notwithstanding the foregoing, a notice may not be given by an electronic transmission from and after the time that (1) the Corporation is unable to deliver by such electronic transmission two (2) consecutive notices given by the Corporation and (2) such inability becomes known to the Secretary or an Assistant Secretary of the Corporation or to the transfer agent, or other person responsible for the giving of notice, *provided, however*, the inadvertent failure to discover such inability shall not invalidate any meeting or other action.

An affidavit of the Secretary or an Assistant Secretary or of the transfer agent or other agent of the Corporation that the notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

Article IX - Indemnification

9.1 Indemnification of Directors and Officers.

The Corporation shall indemnify and hold harmless, to the fullest extent permitted by the DGCL as it presently exists or may hereafter be amended, any director or officer of the Corporation who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "***Proceeding***") by reason of the fact that such director or officer, or a person for whom such director or officer is the legal representative, is or was a director or officer of the Corporation or, while serving as a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust, enterprise or non-profit entity (a "***covered person***"), including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees, judgments, fines, and amounts paid in settlement, and excise taxes or penalties arising under the Employee Retirement Income Security Act of 1974, as amended) reasonably incurred by such person in connection with any such Proceeding. Notwithstanding the preceding

sentence, except as otherwise provided in Section 9.4, the Corporation shall be required to indemnify a person in connection with a Proceeding initiated by such person only if the Proceeding was authorized in the specific case by the Board.

9.2 Indemnification of Others.

The Corporation shall have the power to indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any employee or agent of the Corporation who was or is made or is threatened to be made a party or is otherwise involved in any Proceeding by reason of the fact that such employee or agent, or a person for whom such employee or agent is the legal representative, is or was an employee or agent of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust, enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses reasonably incurred by such person in connection with any such Proceeding.

9.3 Prepayment of Expenses.

The Corporation shall to the fullest extent not prohibited by applicable law pay the expenses (including attorneys' fees) incurred by any covered person, and may pay the expenses incurred by any employee or agent of the Corporation, in defending any Proceeding in advance of its final disposition; *provided*, *however*, that such payment of expenses in advance of the final disposition of the Proceeding shall be made only upon receipt of an undertaking by the person to repay all amounts advanced if it should be ultimately determined that the person is not entitled to be indemnified under this Article IX or otherwise.

9.4 Determination; Claim.

If a claim for indemnification (following the final disposition of such Proceeding) under this Article IX is not paid in full within sixty (60) days, or a claim for advancement of expenses under this Article IX is not paid in full within thirty (30) days, after a written claim therefor has been received by the Corporation the claimant may thereafter (but not before) file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim to the fullest extent permitted by law. In any such action the Corporation shall have the burden of proving that the claimant was not entitled to the requested indemnification or payment of expenses under applicable law.

9.5 Non-Exclusivity of Rights.

The rights conferred on any person by this Article IX shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, these bylaws, agreement, vote of stockholders or disinterested directors or otherwise.

9.6 Insurance.

The Corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust enterprise or non-profit entity against any liability asserted against him or her and incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the Corporation would have the power to indemnify him or her against such liability under the provisions of the DGCL.

9.7 Other Indemnification.

The Corporation's obligation, if any, to indemnify or advance expenses to any person who was or is serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, enterprise or non-profit entity shall be reduced by any amount such person may collect as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, enterprise or non-profit enterprise.

9.8 Continuation of Indemnification.

The rights to indemnification and to prepayment of expenses provided by, or granted pursuant to, this Article IX shall continue notwithstanding that the person has ceased to be a director or officer of the Corporation and shall inure to the benefit of the estate, heirs, executors, administrators, legatees and distributees of such person.

9.9 Amendment or Repeal; Interpretation.

The provisions of this Article IX shall constitute a contract between the Corporation, on the one hand, and, on the other hand, each individual who serves or has served as a director or officer of the Corporation (whether before or after the adoption of these bylaws), in consideration of such person's performance of such services, and pursuant to this Article IX the Corporation intends to be legally bound to each such current or former director or officer of the Corporation. With respect to current and former directors and officers of the Corporation, the rights conferred under this Article IX are present contractual rights and such rights are fully vested, and shall be deemed to have vested fully, immediately upon adoption of theses bylaws. With respect to any directors or officers of the Corporation who commence service following adoption of these bylaws, the rights conferred under this provision shall be present contractual rights and such rights shall fully vest, and be deemed to have vested fully, immediately upon such director or officer commencing service as a director or officer of the Corporation. Any repeal or modification of the foregoing provisions of this Article IX shall not adversely affect any right or protection (i) hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification or (ii) under any agreement providing for indemnification or advancement of expenses to an officer or director of the Corporation in effect prior to the time of such repeal or modification.

Any reference to an officer of the Corporation in this Article IX shall be deemed to refer exclusively to the Chief Executive Officer, President and Secretary, or other officer of the Corporation appointed by (x) the Board pursuant to Article V of these bylaws or (y) an officer to whom the Board has delegated the power to appoint officers pursuant to Article V of these bylaws, and any reference to an officer of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall be deemed to refer exclusively to an officer appointed by the board of directors (or equivalent governing body) of such other entity pursuant to the certificate of incorporation and bylaws (or equivalent organizational documents) of such other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise. The fact that any person who is or was an employee of the Corporation or an employee of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise has been given or has used the title of "Vice President" or any other title that could be construed to suggest or imply that such person is or may be an officer of the Corporation or of such other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall not result in such person being constituted as, or being deemed to be, an officer of the Corporation or of such other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise for purposes of this Article IX.

Article X - Amendments

The Board is expressly empowered to adopt, amend or repeal the bylaws of the Corporation. The stockholders also shall have power to adopt, amend or repeal the bylaws of the Corporation by the affirmative vote of the holders of at least sixty-six and two-third percent (66 2/3%) of the voting power of all the then-outstanding shares of capital stock of the Corporation entitled to vote thereon.

Article XI - Forum Selection

Unless the Corporation consents in writing to the selection of an alternative forum, (a) the Court of Chancery (the "***Chancery Court***") of the State of Delaware (or, in the event that the Chancery Court does not have jurisdiction, the federal district court for the District of Delaware or other state courts of the State of Delaware) shall, to the fullest extent permitted by law, be the sole and exclusive forum for (i) any derivative action, suit or proceeding brought on behalf of the Corporation, (ii) any action, suit or proceeding asserting a claim of breach of a fiduciary duty owed by any director, officer or stockholder of the Corporation to the Corporation or to the Corporation's stockholders, (iii) any action, suit or proceeding arising pursuant to any provision of the DGCL or the Certificate of Incorporation or these bylaws (as either may be amended from time to time) or (iv) any action, suit or proceeding asserting a claim against the Corporation governed by the internal affairs doctrine; and (b) subject to the preceding provisions of this Article XI, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended. If any action the subject matter of which is within the scope of clause (a) of the immediately preceding sentence is filed in a court other than the courts in the State of Delaware (a "***Foreign Action***") in the name of any stockholder, such stockholder shall be

deemed to have consented to (x) the personal jurisdiction of the state and federal courts in the State of Delaware in connection with any action brought in any such court to enforce the provisions of clause (a) of the immediately preceding sentence and (y) having service of process made upon such stockholder in any such action by service upon such stockholder's counsel in the Foreign Action as agent for such stockholder.

Any person or entity purchasing or otherwise acquiring any interest in any security of the Corporation shall be deemed to have notice of and consented to this Article XI. Notwithstanding the foregoing, the provisions of this Article XI shall not apply to suits brought to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts of the United States have exclusive jurisdiction.

If any provision or provisions of this Article XI shall be held to be invalid, illegal or unenforceable as applied to any circumstance for any reason whatsoever, (a) the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article XI (including, without limitation, each portion of any paragraph of this Article XI containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby and (b) the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

Article XII - Definitions

As used in these bylaws, unless the context otherwise requires, the following terms shall have the following meanings:

An "***electronic transmission***" means any form of communication, not directly involving the physical transmission of paper, including the use of, or participation in, one or more electronic networks or databases (including one or more distributed electronic networks or databases) or electronic mail, that creates a record that may be retained, retrieved and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

An "***electronic mail***" means an electronic transmission directed to a unique electronic mail address (which electronic mail shall be deemed to include any files attached thereto and any information hyperlinked to a website if such electronic mail includes the contact information of an officer or agent of the Corporation who is available to assist with accessing such files and information).

An "***electronic mail address***" means a destination, commonly expressed as a string of characters, consisting of a unique user name or mailbox (commonly referred to as the "local part" of the address) and a reference to an internet domain (commonly referred to as the "domain part" of the address), whether or not displayed, to which electronic mail can be sent or delivered.

The term "***person***" means any individual, general partnership, limited partnership, limited liability company, corporation, trust, business trust, joint stock company, joint venture, unincorporated association, cooperative or association or any other legal entity or organization of whatever nature, and shall include any successor (by merger or otherwise) of such entity.

Duolingo, Inc.

Certificate of Amendment and Restatement of Bylaws

The undersigned hereby certifies that he is the duly elected, qualified, and acting Secretary of Duolingo, Inc., a Delaware corporation (the "***Corporation***"), and that the foregoing bylaws were approved on , 2021, effective as of , 2021 by the Corporation's board of directors.

IN WITNESS WHEREOF, the undersigned has hereunto set his hand this ___ day of ___, 2021.

[Name]
Secretary

Exhibit 5.1

140 Scott Drive
Menlo Park, California 94025
Tel: +1.650.328.4600 Fax: +1.650.463.2600
www.lw.com

LATHAM & WATKINS LLP

FIRM / AFFILIATE OFFICES

Beijing	Moscow
Boston	Munich
Brussels	New York
Century City	Orange County
Chicago	Paris
Dubai	Riyadh
Düsseldorf	San Diego
Frankfurt	San Francisco
Hamburg	Seoul
Hong Kong	Shanghai
Houston	Silicon Valley
London	Singapore
Los Angeles	Tokyo
Madrid	Washington, D.C.
Milan	

July 19, 2021

Duolingo, Inc.
5900 Penn Avenue
Pittsburgh, Pennsylvania 15206

Re: Registration Statement No. 333-257483
Up to 5,872,029 shares of Class A common stock, $0.0001 par value per share

Ladies and Gentlemen:

We have acted as special counsel to Duolingo, Inc., a Delaware corporation (the "***Company***"), in connection with the proposed registration of up to 5,872,029 shares (the "***Shares***") of the Company's Class A common stock, par value $0.0001 per share (the "***Common Stock***"), which includes up to 4,465,916 shares of Common Stock to be offered and sold by the Company (including up to 765,916 shares of Common Stock issuable upon exercise of the underwriters' option to purchase additional shares from the Company, the "***Company Shares***") and 1,406,113 shares of Common Stock to be offered and sold by the selling stockholders (the "***Selling Stockholder Shares***"). The Shares are included in a registration statement on Form S-1 under the Securities Act of 1933, as amended (the "***Act***"), initially filed with the Securities and Exchange Commission (the "***Commission***") on June 28, 2021 (Registration No. 333-257483) (as amended, the "***Registration Statement***"). The term "Shares" shall include any additional shares of common stock registered by the Company pursuant to Rule 462(b) under the Act in connection with the offering contemplated by the Registration Statement. This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or related prospectus (the "***Prospectus***"), other than as expressly stated herein with respect to the issue of the Shares.

LATHAM & WATKINS LLP

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware and we express no opinion with respect to any other laws.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof:

1. When the amended and restated certificate of incorporation of the Company in the form most recently filed as an exhibit to the Registration Statement has been duly filed with the Secretary of State of the State of Delaware and when the Company Shares have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the purchasers and have been issued by the Company against payment therefor (not less than par value) in the circumstances contemplated by the form of underwriting agreement most recently filed as an exhibit to the Registration Statement, the issue and sale of the Company Shares will have been duly authorized by all necessary corporate action of the Company and the Company Shares will be validly issued, fully paid and non-assessable. In rendering the foregoing opinion, we have assumed that the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the General Corporation Law of the State of Delaware.

2. The Selling Stockholder Shares have been duly authorized by all necessary corporate action of the Company and are validly issued, fully paid and non-assessable.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Registration Statement and to the reference to our firm in the Prospectus under the heading “Legal Matters.” We further consent to the incorporation by reference of this letter and consent into any registration statement filed pursuant to Rule 462(b) with respect to the Shares. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Latham & Watkins LLP

DUOLINGO, INC.
2021 INCENTIVE AWARD PLAN

ARTICLE I.
PURPOSE

The Plan's purpose is to enhance the Company's ability to attract, retain and motivate persons who make (or are expected to make) important contributions to the Company by providing these individuals with equity ownership opportunities.

ARTICLE II.
DEFINITIONS

As used in the Plan, the following words and phrases have the meanings specified below, unless the context clearly indicates otherwise:

2.1 "***Administrator***" means the Board or a Committee to the extent that the Board's powers or authority under the Plan have been delegated to such Committee. With reference to the Board's or a Committee's powers or authority under the Plan that have been delegated to one or more officers pursuant to Section 4.2, the term "Administrator" shall refer to such officer(s) unless and until such delegation has been revoked.

2.2 "***Applicable Law***" means any applicable law, including without limitation: (a) provisions of the Code, the Securities Act, the Exchange Act and any rules or regulations thereunder; (b) corporate, securities, tax or other laws, statutes, rules, requirements or regulations, whether federal, state, local or foreign; and (c) rules of any securities exchange or automated quotation system on which the Shares are listed, quoted or traded.

2.3 "***Automatic Exercise Right***" means, with respect to an Option or a Stock Appreciation Right, the last business day of the applicable Option term or Stock Appreciation Right term that was initially established by the Administrator for such Option or Stock Appreciation Right (e.g., the last business day prior to the tenth anniversary of the date of grant of such Option or Stock Appreciation Right if the Option or Stock Appreciation Right initially had a ten-year Option term or Stock Appreciation Right term, as applicable).

2.4 "***Award***" means an Option award, Stock Appreciation Right award, Restricted Stock award, Restricted Stock Unit award, Performance Bonus Award, Performance Stock Unit award, Dividend Equivalents award or Other Stock or Cash Based Award granted to a Participant under the Plan.

2.5 "***Award Agreement***" means an agreement evidencing an Award, which may be written or electronic, that contains such terms and conditions as the Administrator determines, consistent with and subject to the terms and conditions of the Plan.

2.6 "***Board***" means the Board of Directors of the Company.

2.7 "***Cause***" shall have the meaning ascribed to such term, or term of similar effect, in any offer letter, employment, severance or similar agreement, including any Award Agreement, between the Participant and the Company or any Subsidiary; provided, that in the absence of an offer letter, employment, severance or similar agreement containing such definition, "Cause" means (i) any willful, material violation by the Participant of any law or regulation applicable to the business of the Company or a Subsidiary or other affiliate of the Company, (ii) the Participant's conviction for, or guilty plea to, a

felony (or crime of similar magnitude under Applicable Law outside the United States) or a crime involving moral turpitude, or any willful perpetration by the Participant of a common law fraud, act of material dishonesty or misappropriation or similar conduct against the Company, (iii) the Participant's commission of an act of personal dishonesty which involves personal profit in connection with the Company or any other entity having a business relationship with the Company, (iv) any material breach or violation by the Participant of any provision of any agreement or understanding between the Company or any Subsidiary or other affiliate of the Company and the Participant regarding the terms of the Participant's service as an employee, officer, director or consultant to the Company or a Subsidiary or other affiliate of the Company, including without limitation, the willful and continued failure or refusal of the Participant to perform the material duties required of such Participant as an employee, officer, director or consultant of the Company or a Subsidiary or other affiliate of the Company, other than as a result of having a Disability, or a breach of any applicable invention assignment and confidentiality agreement or similar agreement between the Company or a Subsidiary or other affiliate of the Company and the Participant, (v) the Participant's violation of the Company's code of ethics, (vi) the Participant's disregard of the policies of the Company or any Subsidiary or other affiliate of the Company so as to cause loss, harm, damage or injury to the property, reputation or employees of the Company or a Subsidiary or other affiliate of the Company, or (vii) any other misconduct by the Participant which is injurious to the financial condition or business reputation of, or is otherwise injurious to, the Company or a Subsidiary or other affiliate of the Company.

2.8 "***Change in Control***" means any of the following:

(a) A transaction or series of transactions (other than an offering of Common Stock to the general public through a registration statement filed with the Securities and Exchange Commission) whereby any "person" or related "group" of "persons" (as such terms are used in Sections 13(d) and 14(d)(2) of the Exchange Act) directly or indirectly acquires beneficial ownership (within the meaning of Rules 13d-3 and 13d-5 under the Exchange Act) of the Company's securities possessing more than 50% of the total combined voting power of the Company's securities outstanding immediately after such acquisition; provided, however, that the following acquisitions shall not constitute a Change in Control: (i) any acquisition by the Company or any Subsidiary; (ii) any acquisition by an employee benefit plan maintained by the Company or any Subsidiary, (iii) any acquisition which complies with Sections 2.8(c)(i), 2.8(c)(ii) and 2.8(c)(iii); or (iv) in respect of an Award held by a particular Participant, any acquisition by the Participant or any group of persons including the Participant (or any entity controlled by the Participant or any group of persons including the Participant);

(b) The Incumbent Directors cease for any reason to constitute a majority of the Board;

(c) The consummation by the Company (whether directly involving the Company or indirectly involving the Company through one or more intermediaries) of (x) a merger, consolidation, reorganization, or business combination, (y) a sale or other disposition of all or substantially all of the Company's assets in any single transaction or series of related transactions or (z) the acquisition of assets or stock of another entity, in each case other than a transaction:

(i) which results in the Company's voting securities outstanding immediately before the transaction continuing to represent (either by remaining outstanding or by being converted into voting securities of the Company or the person that, as a result of the transaction, controls, directly or indirectly, the Company or owns, directly or indirectly, all or substantially all of the Company's assets or otherwise succeeds to the business of the Company (the Company or such person,

the "***Successor Entity***")) directly or indirectly, at least a majority of the combined voting power of the Successor Entity's outstanding voting securities immediately after the transaction;

(ii) after which no person or group beneficially owns voting securities representing 50% or more of the combined voting power of the Successor Entity; provided, however, that no person or group shall be treated for purposes of this Section 2.8(c)(ii) as beneficially owning 50% or more of the combined voting power of the Successor Entity solely as a result of the voting power held in the Company prior to the consummation of the transaction; and

(iii) after which at least a majority of the members of the board of directors (or the analogous governing body) of the Successor Entity were Board members at the time of the Board's approval of the execution of the initial agreement providing for such transaction; or

(d) The completion of a liquidation or dissolution of the Company.

Notwithstanding the foregoing, if a Change in Control constitutes a payment event with respect to any Award (or any portion of an Award) that provides for the deferral of compensation that is subject to Section 409A, to the extent required to avoid the imposition of additional taxes under Section 409A, the transaction or event described in subsection (a), (b), (c) or (d) of this Section 2.8 with respect to such Award (or portion thereof) shall only constitute a Change in Control for purposes of the payment timing of such Award if such transaction also constitutes a "change in control event," as defined in Treasury Regulation Section 1.409A-3(i)(5).

The Administrator shall have full and final authority, which shall be exercised in its sole discretion, to determine conclusively whether a Change in Control has occurred pursuant to the above definition, the date of such Change in Control and any incidental matters relating thereto; provided that any exercise of authority in conjunction with a determination of whether a Change in Control is a "change in control event" as defined in Treasury Regulation Section 1.409A-3(i)(5) shall be consistent with such regulation.

2.9 "***Code***" means the U.S. Internal Revenue Code of 1986, as amended, and all regulations, guidance, compliance programs and other interpretative authority issued thereunder.

2.10 "***Committee***" means one or more committees or subcommittees of the Board, which may include one or more Directors or executive officers of the Company, to the extent permitted by Applicable Law. To the extent required to comply with the provisions of Rule 16b-3, it is intended that each member of the Committee will be, at the time the Committee takes any action with respect to an Award that is subject to Rule 16b-3, a "non-employee director" within the meaning of Rule 16b-3; however, a Committee member's failure to qualify as a "non-employee director" within the meaning of Rule 16b-3 will not invalidate any Award granted by the Committee that is otherwise validly granted under the Plan.

2.11 "***Common Stock***" means the Class A common stock of the Company.

2.12 "***Company***" means Duolingo, Inc., a Delaware corporation, or any successor.

2.13 "***Consultant***" means any person, including any adviser, engaged by the Company or a Subsidiary to render services to such entity if the consultant or adviser: (i) renders bona fide services to the Company or a Subsidiary; (ii) renders services not in connection with the offer or sale of securities in a capital-raising transaction and does not directly or indirectly promote or maintain a market for the Company's securities; and (iii) is a natural person.

2.14 "***Designated Beneficiary***" means, if permitted by the Company, the beneficiary or beneficiaries the Participant designates, in a manner the Company determines, to receive amounts due or exercise the Participant's rights if the Participant dies. Without a Participant's effective designation, "Designated Beneficiary" will mean the Participant's estate or legal heirs.

2.15 "***Director***" means a Board member.

2.16 "***Disability***" means a permanent and total disability under Section 22(e)(3) of the Code.

2.17 "***Dividend Equivalents***" means a right granted to a Participant to receive the equivalent value (in cash or Shares) of dividends paid on a specified number of Shares. Such Dividend Equivalent shall be converted to cash or additional Shares, or a combination of cash and Shares, by such formula and at such time and subject to such limitations as may be determined by the Administrator.

2.18 "***DRO***" means a "domestic relations order" as defined by the Code or Title I of the Employee Retirement Income Security Act of 1974, as amended, or the rules thereunder.

2.19 "***Effective Date***" has the meaning set forth in Section 11.3.

2.20 "***Employee***" means any employee of the Company or any of its Subsidiaries.

2.21 "***Equity Restructuring***" means a nonreciprocal transaction between the Company and its stockholders, such as a stock dividend, stock split (including a reverse stock split), spin-off or recapitalization through a large, nonrecurring cash dividend, that affects the number or kind of Shares (or other Company securities) or the share price of Common Stock (or other Company securities) and causes a change in the per share value of the Common Stock underlying outstanding Awards.

2.22 "***Exchange Act***" means the U.S. Securities Exchange Act of 1934, as amended, and all regulations, guidance and other interpretative authority issued thereunder.

2.23 "***Fair Market Value***" means, as of any date, the value of a Share determined as follows: (i) if the Common Stock is listed on any established stock exchange, the value of a Share will be the closing sales price for a Share as quoted on such exchange for such date, or if no sale occurred on such date, the last day preceding such date during which a sale occurred, as reported in *The Wall Street Journal* or another source the Administrator deems reliable; (ii) if the Common Stock is not listed on an established stock exchange but is quoted on a national market or other quotation system, the value of a Share will be the closing sales price for a Share on such date, or if no sales occurred on such date, then on the last date preceding such date during which a sale occurred, as reported in *The Wall Street Journal* or another source the Administrator deems reliable; or (iii) if the Common Stock is not listed on any established stock exchange or quoted on a national market or other quotation system, the value established by the Administrator in its sole discretion. Notwithstanding the foregoing, with respect to any Award granted after the effectiveness of the Company's registration statement relating to its initial public offering but prior to the Public Trading Date, the Fair Market Value means the initial public offering price of a Share as set forth in the Company's final prospectus relating to its initial public offering filed with the Securities and Exchange Commission.

2.24 "***Good Reason***" shall have the meaning ascribed to such term, or term of similar effect, in any offer letter, employment, severance or similar agreement, including any Award Agreement, between the Participant and the Company or any Subsidiary; provided, that in the absence of an offer letter, employment, severance or similar agreement containing such definition, Good Reason means the

occurrence of one or more of the following without the Participant's consent: (i) a material reduction in the Participant's base compensation or (ii) a relocation of the principal place at which the Participant must perform services that increases the Participant's one way commute by more than 35 miles. In order to establish Good Reason, the Participant must provide the Administrator with notice of the event giving rise to Good Reason within 30 days of the occurrence of such event, the event shall remain uncured 30 days thereafter and the Participant must actually terminate services with the Company within 30 days following the end of such cure period.

2.25 "***Greater Than 10% Stockholder***" means an individual then owning (within the meaning of Section 424(d) of the Code) more than 10% of the total combined voting power of all classes of stock of the Company or any parent corporation or subsidiary corporation of the Company, as determined in accordance with Section 424(e) and (f) of the Code, respectively.

2.26 "***Incentive Stock Option***" means an Option that meets the requirements to qualify as an "incentive stock option" as defined in Section 422 of the Code.

2.27 "***Incumbent Directors"*** means, for any period of 12 consecutive months, individuals who, at the beginning of such period, constitute the Board together with any new Director(s) (other than a Director designated by a person who shall have entered into an agreement with the Company to effect a transaction described in clause (a) or (c) of the Change in Control definition) whose election or nomination for election to the Board was approved by a vote of at least a majority (either by a specific vote or by approval of the proxy statement of the Company in which such person is named as a nominee for Director without objection to such nomination) of the Directors then still in office who either were Directors at the beginning of the 12-month period or whose election or nomination for election was previously so approved. No individual initially elected or nominated as a director of the Company as a result of an actual or threatened election contest with respect to Directors or as a result of any other actual or threatened solicitation of proxies by or on behalf of any person other than the Board shall be an Incumbent Director.

2.28 "***Non-Employee Director***" means a Director who is not an Employee.

2.29 "***Nonqualified Stock Option***" means an Option that is not an Incentive Stock Option.

2.30 "***Option***" means a right granted under Article VI to purchase a specified number of Shares at a specified price per Share during a specified time period. An Option may be either an Incentive Stock Option or a Nonqualified Stock Option.

2.31 "***Other Stock or Cash Based Awards***" means cash awards, awards of Shares, and other awards valued wholly or partially by referring to, or are otherwise based on, Shares or other property.

2.32 "***Overall Share Limit***" means the sum of (i) 7,832,000 plus (ii) any Shares that are available for issuance under the Prior Plan as of the Effective Date plus (iii) any Shares or shares of Class B common stock that are subject to Prior Plan Awards that become available for issuance under the Plan as Shares pursuant to Article V plus (iv) an increase commencing on January 1, 2022 and continuing annually on the anniversary thereof through (and including) January 1, 2031, equal to the lesser of (A) 5% of the Shares outstanding on the last day of the immediately preceding calendar year (calculated on an as-converted basis) and (B) such smaller number of Shares as determined by the Board or the Committee.

2.33 "***Participant***" means a Service Provider who has been granted an Award.

2.34 "***Performance Bonus Award***" has the meaning set forth in Section 8.3.

2.35 "***Performance Stock Unit***" means a right granted to a Participant pursuant to Section 8.1 and subject to Section 8.2, to receive cash or Shares, the payment of which is contingent upon achieving certain performance goals or other performance-based targets established by the Administrator.

2.36 "***Permitted Transferee***" means, with respect to a Participant, any "family member" of the Participant, as defined in the General Instructions to Form S-8 Registration Statement under the Securities Act (or any successor form thereto), or any other transferee specifically approved by the Administrator after taking into account Applicable Law.

2.37 "***Plan***" means this 2021 Incentive Award Plan.

2.38 "***Prior Plan***" means the Duolingo, Inc. 2011 Equity Incentive Plan, as amended from time to time.

2.39 "***Prior Plan Award***" means an award outstanding under the Prior Plan as of immediately prior to the Effective Date.

2.40 "***Public Trading Date***" means the first date upon which Common Stock is listed (or approved for listing) upon notice of issuance on any securities exchange or designated (or approved for designation) upon notice of issuance as a national market security on an interdealer quotation system.

2.41 "***Restricted Stock***" means Shares awarded to a Participant under Article VII, subject to certain vesting conditions and other restrictions.

2.42 "***Restricted Stock Unit***" means an unfunded, unsecured right to receive, on the applicable settlement date, one Share or an amount in cash or other consideration determined by the Administrator to be equal to the Fair Market Value as of such settlement date, subject to certain vesting conditions and other restrictions.

2.43 "***Rule 16b-3***" means Rule 16b-3 promulgated under the Exchange Act, including any amendments thereto.

2.44 "***Section 409A***" means Section 409A of the Code and the regulations promulgated thereunder by the United States Treasury Department, as amended or as may be amended from time to time.

2.45 "***Securities Act***" means the Securities Act of 1933, as amended, and all regulations, guidance and other interpretative authority issued thereunder.

2.46 "***Service Provider***" means an Employee, Consultant or Director.

2.47 "***Shares***" means shares of Common Stock.

2.48 "***Stock Appreciation Right***" or "***SAR***" means a right granted under Article VI to receive a payment equal to the excess of the Fair Market Value of a specified number of Shares on the date the right is exercised over the exercise price set forth in the applicable Award Agreement.

2.49 "***Subsidiary***" means any entity (other than the Company), whether U.S. or non-U.S., in an unbroken chain of entities beginning with the Company if each of the entities other than the last entity in the unbroken chain beneficially owns, at the time of the determination, securities or interests representing at least 50% of the total combined voting power of all classes of securities or interests in one of the other entities in such chain.

2.50 "***Substitute Awards***" means Awards granted or Shares issued by the Company in assumption of, or in substitution or exchange for, awards previously granted, or the right or obligation to make future awards, in each case by a company or other entity acquired by the Company or any Subsidiary or with which the Company or any Subsidiary combines.

2.51 "***Tax-Related Items***" means any U.S. and non-U.S. federal, state and/or local taxes (including, without limitation, income tax, social insurance contributions, fringe benefit tax, employment tax, stamp tax and any employer tax liability which has been transferred to a Participant) for which a Participant is liable in connection with Awards and/or Shares.

2.52 "***Termination of Service***" means:

(a) As to a Consultant, the time when the engagement of a Participant as a Consultant to the Company or a Subsidiary is terminated for any reason, with or without Cause, including, without limitation, by resignation, discharge, death or retirement, but excluding terminations where the Consultant simultaneously commences or remains in employment or service with the Company or any Subsidiary.

(b) As to a Non-Employee Director, the time when a Participant who is a Non-Employee Director ceases to be a Director for any reason, including, without limitation, a termination by resignation, failure to be elected, death or retirement, but excluding terminations where the Participant simultaneously commences or remains in employment or service with the Company or any Subsidiary.

(c) As to an Employee, the time when the employee-employer relationship between a Participant and the Company or any Subsidiary is terminated for any reason, including, without limitation, a termination by resignation, discharge, death, disability or retirement; but excluding terminations where the Participant simultaneously commences or remains in employment or service with the Company or any Subsidiary.

The Company, in its sole discretion, shall determine the effect of all matters and questions relating to any Termination of Service, including, without limitation, whether a Termination of Service has occurred, whether a Termination of Service resulted from a discharge for Cause and all questions of whether particular leaves of absence constitute a Termination of Service. For purposes of the Plan, a Participant's employee-employer relationship or consultancy relationship shall be deemed to be terminated in the event that the Subsidiary employing or contracting with such Participant ceases to remain a Subsidiary following any merger, sale of stock or other corporate transaction or event (including, without limitation, a spin-off), even though the Participant may subsequently continue to perform services for that entity.

ARTICLE III.
ELIGIBILITY

Service Providers are eligible to be granted Awards under the Plan, subject to the limitations described herein. No Service Provider shall have any right to be granted an Award pursuant to the Plan

and neither the Company nor the Administrator is obligated to treat Service Providers, Participants or any other persons uniformly.

ARTICLE IV.
ADMINISTRATION AND DELEGATION

4.1 Administration.

(a) The Plan is administered by the Administrator. The Administrator has authority to determine which Service Providers receive Awards, grant Awards and set Award terms and conditions, subject to the conditions and limitations in the Plan. The Administrator also has the authority to take all actions and make all determinations under the Plan, to interpret the Plan and Award Agreements and to adopt, amend and repeal Plan administrative rules, guidelines and practices as it deems advisable. The Administrator may correct defects and ambiguities, supply omissions, reconcile inconsistencies in the Plan or any Award and make all other determinations that it deems necessary or appropriate to administer the Plan and any Awards. The Administrator (and each member thereof) is entitled to, in good faith, rely or act upon any report or other information furnished to it, him or her by any officer or other Employee, the Company's independent certified public accountants, or any executive compensation consultant or other professional retained by the Company to assist in the administration of the Plan. The Administrator's determinations under the Plan are in its sole discretion and will be final, binding and conclusive on all persons having or claiming any interest in the Plan or any Award.

(b) Without limiting the foregoing, the Administrator has the exclusive power, authority and sole discretion to: (i) designate Participants; (ii) determine the type or types of Awards to be granted to each Participant; (iii) determine the number of Awards to be granted and the number of Shares to which an Award will relate; (iv) subject to the limitations in the Plan, determine the terms and conditions of any Award and related Award Agreement, including, but not limited to, the exercise price, grant price, purchase price, any performance criteria, any restrictions or limitations on the Award, any schedule for vesting, lapse of forfeiture restrictions or restrictions on the exercisability of an Award, and accelerations, waivers or amendments thereof; (v) determine whether, to what extent, and under what circumstances an Award may be settled in, or the exercise price of an Award may be paid in cash, Shares, or other property, or an Award may be canceled, forfeited, or surrendered; and (vi) make all other decisions and determinations that may be required pursuant to the Plan or as the Administrator deems necessary or advisable to administer the Plan.

4.2 Delegation of Authority. To the extent permitted by Applicable Law, the Board or any Committee may delegate any or all of its powers under the Plan to one or more Committees or officers of the Company or any of its Subsidiaries; provided, however, that in no event shall an officer of the Company or any of its Subsidiaries be delegated the authority to grant Awards to, or amend Awards held by, the following individuals: (a) individuals who are subject to Section 16 of the Exchange Act, or (b) officers of the Company or any of its Subsidiaries or Directors to whom authority to grant or amend Awards has been delegated hereunder. Any delegation hereunder shall be subject to the restrictions and limits that the Board or Committee specifies at the time of such delegation or that are otherwise included in the applicable organizational documents, and the Board or Committee, as applicable, may at any time rescind the authority so delegated or appoint a new delegatee. At all times, the delegatee appointed under this Section 4.2 shall serve in such capacity at the pleasure of the Board or the Committee, as applicable, and the Board or the Committee may abolish any committee at any time and re-vest in itself any previously delegated authority. Further, regardless of any delegation, the Board or a Committee may, in its discretion, exercise any and all rights and duties as the Administrator under the Plan delegated thereby,

except with respect to Awards that are required to be determined in the sole discretion of the Board or Committee under the rules of any securities exchange or automated quotation system on which the Shares are listed, quoted or traded.

ARTICLE V.
STOCK AVAILABLE FOR AWARDS

5.1 Number of Shares. Subject to adjustment under Article IX and the terms of this Article V, Awards may be made under the Plan covering up to the Overall Share Limit. As of the Effective Date, the Company will cease granting awards under the Prior Plan; however, Prior Plan Awards will remain subject to the terms of the Prior Plan. Shares issued or delivered under the Plan may consist of authorized but unissued Shares, Shares purchased on the open market or treasury Shares.

5.2 Share Recycling.

(a) If all or any part of an Award or Prior Plan Award expires, lapses or is terminated, converted into an award in respect of shares of another entity in connection with a spin-off or other similar event, exchanged or settled for cash, surrendered, repurchased, canceled without having been fully exercised or forfeited, in any case, in a manner that results in the Company acquiring Shares or shares of Class B common stock covered by the Award or Prior Plan Award at a price not greater than the price (as adjusted to reflect any Equity Restructuring) paid by the Participant for such Shares or shares or not issuing any Shares or shares of Class B common stock covered by the Award or Prior Plan Award, the unused Shares or shares of Class B common stock covered by the Award or Prior Plan Award will, as applicable, become or again be available, in each case, as Common Stock for Awards under the Plan. The payment of Dividend Equivalents in cash in conjunction with any outstanding Awards or Prior Plan Awards shall not count against the Overall Share Limit.

(b) In addition, the following shall be available as Shares for future grants of Awards: (i) Shares or shares of Class B common stock tendered by a Participant or withheld by the Company in payment of the exercise price of an Option or any stock option granted under the Prior Plan; (ii) Shares or shares of Class B common stock tendered by the Participant or withheld by the Company to satisfy any tax withholding obligation with respect to an Award or any Prior Plan Award; and (iii) Shares subject to a Stock Appreciation Right that are not issued in connection with the stock settlement of the Stock Appreciation Right on exercise thereof. Notwithstanding the provisions of this Section 5.2(b), no Shares may again be optioned, granted or awarded pursuant to an Incentive Stock Option if such action would cause such Option to fail to qualify as an incentive stock option under Section 422 of the Code.

5.3 Incentive Stock Option Limitations. Notwithstanding anything to the contrary herein, no more than 44,749,446 Shares (as adjusted to reflect any Equity Restructuring) may be issued pursuant to the exercise of Incentive Stock Options.

5.4 Substitute Awards. In connection with an entity's merger or consolidation with the Company or any Subsidiary or the Company's or any Subsidiary's acquisition of an entity's property or stock, the Administrator may grant Substitute Awards in respect of any options or other stock or stock-based awards granted before such merger or consolidation by such entity or its affiliate. Substitute Awards may be granted on such terms and conditions as the Administrator deems appropriate, notwithstanding limitations on Awards in the Plan. Substitute Awards will not count against the Overall Share Limit (nor shall Shares subject to a Substitute Award be added to the Shares available for Awards under the Plan as provided under Section 5.2 above), except that Shares acquired by exercise of substitute

Incentive Stock Options will count against the maximum number of Shares that may be issued pursuant to the exercise of Incentive Stock Options under the Plan. Additionally, in the event that a company acquired by the Company or any Subsidiary or with which the Company or any Subsidiary combines has shares available under a pre-existing plan approved by stockholders and not adopted in contemplation of such acquisition or combination, the shares available for grant pursuant to the terms of such pre-existing plan (as appropriately adjusted to reflect the transaction) may be used for Awards under the Plan and shall not count against the Overall Share Limit (and Shares subject to such Awards may again become available for Awards under the Plan as provided under Section 5.2 above); provided that Awards using such available shares shall not be made after the date awards or grants could have been made under the terms of the pre-existing plan, absent the acquisition or combination, and shall only be made to individuals who were not Service Providers prior to such acquisition or combination.

5.5 Non-Employee Director Award Limit. Notwithstanding any provision to the contrary in the Plan or in any policy of the Company regarding non-employee director compensation, the sum of the grant date fair value (determined as of the grant date in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, or any successor thereto) of all equity-based Awards and the maximum amount that may become payable pursuant to all cash-based Awards that may be granted to a Service Provider as compensation for services as a Non-Employee Director during any calendar year shall not exceed $1,000,000 for such Service Provider's first year of service as a Non-Employee Director and $750,000 for each year thereafter.

ARTICLE VI.
STOCK OPTIONS AND STOCK APPRECIATION RIGHTS

6.1 General. The Administrator may grant Options or Stock Appreciation Rights to one or more Service Providers, subject to such terms and conditions not inconsistent with the Plan as the Administrator shall determine. The Administrator will determine the number of Shares covered by each Option and Stock Appreciation Right, the exercise price of each Option and Stock Appreciation Right and the conditions and limitations applicable to the exercise of each Option and Stock Appreciation Right. A Stock Appreciation Right will entitle the Participant (or other person entitled to exercise the Stock Appreciation Right) to receive from the Company upon exercise of the exercisable portion of the Stock Appreciation Right an amount determined by multiplying (x) the excess, if any, of the Fair Market Value of one Share on the date of exercise over the exercise price per Share of the Stock Appreciation Right by (y) the number of Shares with respect to which the Stock Appreciation Right is exercised, subject to any limitations of the Plan or that the Administrator may impose, and payable in cash, Shares valued at Fair Market Value on the date of exercise or a combination of the two as the Administrator may determine or provide in the Award Agreement.

6.2 Exercise Price. The Administrator will establish each Option's and Stock Appreciation Right's exercise price and specify the exercise price in the Award Agreement. Subject to Section 6.7, the exercise price will not be less than 100% of the Fair Market Value on the grant date of the Option or Stock Appreciation Right. Notwithstanding the foregoing, in the case of an Option or Stock Appreciation Right that is a Substitute Award, the exercise price per share of the Shares subject to such Option or Stock Appreciation Right, as applicable, may be less than the Fair Market Value on the date of grant; provided that the exercise price of any Substitute Award shall be determined in accordance with the applicable requirements of Sections 424 and 409A of the Code.

6.3 Duration of Options. Subject to Section 6.7, each Option or Stock Appreciation Right will be exercisable at such times and as specified in the Award Agreement, provided that the term of an

Option or Stock Appreciation Right will not exceed ten years; provided, further, that, unless otherwise determined by the Administrator or specified in the Award Agreement, (a) no portion of an Option or Stock Appreciation Right which is unexercisable at a Participant's Termination of Service shall thereafter become exercisable and (b) the portion of an Option or Stock Appreciation Right that is unexercisable at a Participant's Termination of Service shall automatically expire on the date of such Termination of Service. In addition, in no event shall an Option or Stock Appreciation Right granted to an Employee who is a non-exempt employee for purposes of overtime pay under the U.S. Fair Labor Standards Act of 1938 be exercisable earlier than six months after its date of grant. Notwithstanding the foregoing, if the Participant, prior to the end of the term of an Option or Stock Appreciation Right, commits an act of Cause (as determined by the Administrator), or violates any non-competition, non-solicitation or confidentiality provisions of any employment contract, confidentiality and nondisclosure agreement or other agreement between the Participant and the Company or any of its Subsidiaries, the right to exercise the Option or Stock Appreciation Right, as applicable, may be terminated by the Company and the Company may suspend the Participant's right to exercise the Option or Stock Appreciation Right when it reasonably believes that the Participant may have participated in any such act or violation.

6.4 Exercise. Options and Stock Appreciation Rights may be exercised by delivering to the Company (or such other person or entity designated by the Administrator) a notice of exercise, in a form and manner the Company approves (which may be written, electronic or telephonic and may contain representations and warranties deemed advisable by the Administrator), signed or authenticated by the person authorized to exercise the Option or Stock Appreciation Right, together with, as applicable, (a) payment in full of the exercise price for the number of Shares for which the Option is exercised in a manner specified in Section 6.5 and (b) satisfaction in full of any withholding obligation for Tax-Related Items in a manner specified in Section 10.5. The Administrator may, in its discretion, limit exercise with respect to fractional Shares and require that any partial exercise of an Option or Stock Appreciation Right be with respect to a minimum number of Shares.

6.5 Payment Upon Exercise. The Administrator shall determine the methods by which payment of the exercise price of an Option shall be made, including, without limitation:

(a) Cash, check or wire transfer of immediately available funds; provided that the Company may limit the use of one of the foregoing methods if one or more of the methods below is permitted;

(b) If there is a public market for Shares at the time of exercise, unless the Company otherwise determines, (A) delivery (including electronically or telephonically to the extent permitted by the Company) of a notice that the Participant has placed a market sell order with a broker acceptable to the Company with respect to Shares then issuable upon exercise of the Option and that the broker has been directed to deliver promptly to the Company funds sufficient to pay the exercise price, or (B) the Participant's delivery to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company to deliver promptly to the Company an amount sufficient to pay the exercise price by cash, wire transfer of immediately available funds or check; provided that such amount is paid to the Company at such time as may be required by the Company;

(c) To the extent permitted by the Administrator, delivery (either by actual delivery or attestation) of Shares owned by the Participant valued at their Fair Market Value on the date of delivery;

(d) To the extent permitted by the Administrator, surrendering Shares then issuable upon the Option's exercise valued at their Fair Market Value on the exercise date;

(e) To the extent permitted by the Administrator, delivery of a promissory note or any other lawful consideration; or

(f) To the extent permitted by the Administrator, any combination of the above payment forms.

6.6 Expiration of Option Term or Stock Appreciation Right Term: Automatic Exercise of In-The-Money Options and Stock Appreciation Rights. Unless otherwise provided by the Administrator in an Award Agreement or otherwise or as otherwise directed by a holder of an Option or a Stock Appreciation Right in writing to the Company, each vested and exercisable Option and Stock Appreciation Right outstanding on the Automatic Exercise Date with an exercise price per Share that is less than the sum of the Fair Market Value and any related broker's fees (as described in Section 11.19(c)) per Share as of such date shall automatically and without further action by the holder of the Option or Stock Appreciation Right or the Company be exercised on the Automatic Exercise Date. In the sole discretion of the Administrator, payment of the exercise price of any such Option shall be made pursuant to Section 6.5(b) or 6.5(d) and the Company or any Subsidiary shall be entitled to deduct or withhold an amount sufficient to satisfy any withholding obligation for Tax-Related Items associated with such exercise in accordance with Section 10.5. Unless otherwise determined by the Administrator, this Section 6.6 shall not apply to an Option or Stock Appreciation Right if the holder of such Option or Stock Appreciation Right incurs a Termination of Service on or before the Automatic Exercise Date. For the avoidance of doubt, no Option or Stock Appreciation Right with an exercise price per Share that is equal to or greater than the Fair Market Value on the Automatic Exercise Date shall be exercised pursuant to this Section 6.6.

6.7 Additional Terms of Incentive Stock Options. The Administrator may grant Incentive Stock Options only to employees of the Company, any of its present or future parent or subsidiary corporations, as defined in Sections 424(e) or (f) of the Code, respectively, and any other entities the employees of which are eligible to receive Incentive Stock Options under the Code. If an Incentive Stock Option is granted to a Greater Than 10% Stockholder, the exercise price will not be less than 110% of the Fair Market Value on the Option's grant date, and the term of the Option will not exceed five years. All Incentive Stock Options (and Award Agreements related thereto) will be subject to and construed consistently with Section 422 of the Code. By accepting an Incentive Stock Option, the Participant agrees to give prompt notice to the Company of dispositions or other transfers (other than in connection with a Change in Control) of Shares acquired under the Option made within the later of (a) two years from the grant date of the Option or (b) one year after the transfer of such Shares to the Participant, specifying the date of the disposition or other transfer and the amount the Participant realized, in cash, other property, assumption of indebtedness or other consideration, in such disposition or other transfer. Neither the Company nor the Administrator will be liable to a Participant, or any other party, if an Incentive Stock Option fails or ceases to qualify as an "incentive stock option" under Section 422 of the Code. Any Incentive Stock Option or portion thereof that fails to qualify as an "incentive stock option" under Section 422 of the Code for any reason, including becoming exercisable with respect to Shares having a fair market value exceeding the $100,000 limitation under Treasury Regulation Section 1.422-4, will be a Nonqualified Stock Option.

ARTICLE VII.
RESTRICTED STOCK; RESTRICTED STOCK UNITS

7.1 General. The Administrator may grant Restricted Stock, or the right to purchase Restricted Stock, to any Service Provider, subject to forfeiture or the Company's right to repurchase all or part of the underlying Shares at their issue price or other stated or formula price from the Participant if conditions the Administrator specifies in the Award Agreement are not satisfied before the end of the applicable restriction period or periods that the Administrator establishes for such Award. In addition, the Administrator may grant Restricted Stock Units, which may be subject to vesting and forfeiture conditions during the applicable restriction period or periods, as set forth in an Award Agreement, to Service Providers. The Administrator shall establish the purchase price, if any, and form of payment for Restricted Stock and Restricted Stock Units; provided, however, that if a purchase price is charged, such purchase price shall be no less than the par value, if any, of the Shares to be purchased, unless otherwise permitted by Applicable Law. In all cases, legal consideration shall be required for each issuance of Restricted Stock and Restricted Stock Units to the extent required by Applicable Law. The Award Agreement for each Award of Restricted Stock and Restricted Stock Units shall set forth the terms and conditions not inconsistent with the Plan as the Administrator shall determine.

7.2 Restricted Stock.

(a) *Stockholder Rights*. Unless otherwise determined by the Administrator, each Participant holding Shares of Restricted Stock will be entitled to all the rights of a stockholder with respect to such Shares, subject to the restrictions in the Plan and the applicable Award Agreement, including the right to receive all dividends and other distributions paid or made with respect to the Shares to the extent such dividends and other distributions have a record date that is on or after the date on which such Participant becomes the record holder of such Shares; provided, however, that with respect to a share of Restricted Stock subject to restrictions or vesting conditions, except in connection with a spin-off or other similar event as otherwise permitted under Section 9.2, dividends which are paid to Company stockholders prior to the removal of restrictions and satisfaction of vesting conditions shall only be paid to the Participant to the extent that the restrictions are subsequently removed and the vesting conditions are subsequently satisfied and the share of Restricted Stock vests.

(b) *Stock Certificates*. The Company may require that the Participant deposit in escrow with the Company (or its designee) any stock certificates issued in respect of Shares of Restricted Stock, together with a stock power endorsed in blank.

(c) *Section 83(b) Election*. If a Participant makes an election under Section 83(b) of the Code to be taxed with respect to the Restricted Stock as of the date of transfer of the Restricted Stock rather than as of the date or dates upon which such Participant would otherwise be taxable under Section 83(a) of the Code, such Participant shall be required to deliver a copy of such election to the Company promptly after filing such election with the Internal Revenue Service along with proof of the timely filing thereof.

7.3 Restricted Stock Units. The Administrator may provide that settlement of Restricted Stock Units will occur upon or as soon as reasonably practicable after the Restricted Stock Units vest or will instead be deferred, on a mandatory basis or at the Participant's election, subject to compliance with Applicable Law. A Participant holding Restricted Stock Units will have only the rights of a general unsecured creditor of the Company (solely to the extent of any rights then applicable to Participant with respect to such Restricted Stock Units) until delivery of Shares, cash or other securities or property is made as specified in the applicable Award Agreement.

ARTICLE VIII.
OTHER TYPES OF AWARDS

8.1 General. The Administrator may grant Performance Stock Unit awards, Performance Bonus Awards, Dividend Equivalents or Other Stock or Cash Based Awards, to one or more Service Providers, in such amounts and subject to such terms and conditions not inconsistent with the Plan as the Administrator shall determine.

8.2 Performance Stock Unit Awards. Each Performance Stock Unit award shall be denominated in a number of Shares or in unit equivalents of Shares or units of value (including a dollar value of Shares) and may be linked to any one or more of performance or other specific criteria, including service to the Company or Subsidiaries, determined to be appropriate by the Administrator, in each case on a specified date or dates or over any period or periods determined by the Administrator. In making such determinations, the Administrator may consider (among such other factors as it deems relevant in light of the specific type of award) the contributions, responsibilities and other compensation of the particular Participant.

8.3 Performance Bonus Awards. Each right to receive a bonus granted under this Section 8.3 shall be denominated in the form of cash (but may be payable in cash, stock or a combination thereof) (a "***Performance Bonus Award***") and shall be payable upon the attainment of performance goals that are established by the Administrator and relate to one or more of performance or other specific criteria, including service to the Company or Subsidiaries, in each case on a specified date or dates or over any period or periods determined by the Administrator.

8.4 Dividend Equivalents. If the Administrator provides, an Award (other than an Option or Stock Appreciation Right) may provide a Participant with the right to receive Dividend Equivalents. Dividend Equivalents may be paid currently or credited to an account for the Participant, settled in cash or Shares and subject to the same restrictions on transferability and forfeitability as the Award with respect to which the Dividend Equivalents are granted and subject to other terms and conditions as set forth in the Award Agreement. Notwithstanding anything to the contrary herein, Dividend Equivalents with respect to an Award subject to vesting shall either (x) to the extent permitted by Applicable Law, not be paid or credited or (y) be accumulated and subject to vesting to the same extent as the related Award. All such Dividend Equivalents shall be paid at such time as the Administrator shall specify in the applicable Award Agreement or as determined by the Administrator in the event not specified in such Award Agreement.

8.5 Other Stock or Cash Based Awards. Other Stock or Cash Based Awards may be granted to Participants, including Awards entitling Participants to receive cash or Shares to be delivered in the future and annual or other periodic or long-term cash bonus awards (whether based on specified performance criteria or otherwise), in each case subject to any conditions and limitations in the Plan. Such Other Stock or Cash Based Awards will also be available as a payment form in the settlement of other Awards, as standalone payments and as payment in lieu of compensation to which a Participant is otherwise entitled, subject to compliance with Section 409A. Other Stock or Cash Based Awards may be paid in Shares, cash or other property, as the Administrator determines. Subject to the provisions of the Plan, the Administrator will determine the terms and conditions of each Other Stock or Cash Based Award, including any purchase price, performance goal(s), transfer restrictions, and vesting conditions, which will be set forth in the applicable Award Agreement. Except in connection with a spin-off or other similar event as otherwise permitted under Article IX, dividends that are paid prior to vesting of any

Other Stock or Cash Based Award shall only be paid to the applicable Participant to the extent that the vesting conditions are subsequently satisfied and the Other Stock or Cash Based Award vests.

ARTICLE IX.
ADJUSTMENTS FOR CHANGES IN COMMON STOCK AND CERTAIN OTHER EVENTS

9.1 Equity Restructuring. In connection with any Equity Restructuring, notwithstanding anything to the contrary in this Article IX, the Administrator will equitably adjust the terms of the Plan and each outstanding Award as it deems appropriate to reflect the Equity Restructuring, which may include (i) adjusting the number and type of securities subject to each outstanding Award or with respect to which Awards may be granted under the Plan (including, but not limited to, adjustments of the limitations in Article V hereof on the maximum number and kind of shares that may be issued); (ii) adjusting the terms and conditions of (including the grant or exercise price), and the performance goals or other criteria included in, outstanding Awards; and (iii) granting new Awards or making cash payments to Participants. The adjustments provided under this Section 9.1 will be nondiscretionary and final and binding on all interested parties, including the affected Participant and the Company; provided that the Administrator will determine whether an adjustment is equitable.

9.2 Corporate Transactions. In the event of any extraordinary dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), reorganization, merger, consolidation, split-up, spin off, combination, amalgamation, repurchase, recapitalization, liquidation, dissolution, or sale, transfer, exchange or other disposition of all or substantially all of the assets of the Company, or sale or exchange of Common Stock or other securities of the Company, Change in Control, issuance of warrants or other rights to purchase Common Stock or other securities of the Company, other similar corporate transaction or event, other unusual or nonrecurring transaction or event affecting the Company or its financial statements or any change in any Applicable Law or accounting principles, the Administrator, on such terms and conditions as it deems appropriate, either by the terms of the Award or by action taken prior to the occurrence of such transaction or event (except that action to give effect to a change in Applicable Law or accounting principles may be made within a reasonable period of time after such change) and either automatically or upon the Participant's request, is hereby authorized to take any one or more of the following actions whenever the Administrator determines that such action is appropriate in order to (x) prevent dilution or enlargement of the benefits or potential benefits intended by the Company to be made available under the Plan or with respect to any Award granted or issued under the Plan, (y) to facilitate such transaction or event or (z) give effect to such changes in Applicable Law or accounting principles:

(a) To provide for the cancellation of any such Award in exchange for either an amount of cash or other property with a value equal to the amount that could have been obtained upon the exercise or settlement of the vested portion of such Award or realization of the Participant's rights under the vested portion of such Award, as applicable, in each case as of the date of such cancellation; provided that, if the amount that could have been obtained upon the exercise or settlement of the vested portion of such Award or realization of the Participant's rights, in any case, is equal to or less than zero, then the Award may be terminated without payment;

(b) To provide that such Award shall vest and, to the extent applicable, be exercisable as to all Shares (or other property) covered thereby, notwithstanding anything to the contrary in the Plan or the provisions of such Award;

(c) To provide that such Award be assumed by the successor or survivor corporation or entity, or a parent or subsidiary thereof, or shall be substituted for by awards covering the stock of the successor or survivor corporation or entity, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and applicable exercise or purchase price, in all cases, as determined by the Administrator;

(d) To make adjustments in the number and type of Shares (or other securities or property) subject to outstanding Awards or with respect to which Awards may be granted under the Plan (including, but not limited to, adjustments of the limitations in Article V hereof on the maximum number and kind of Shares which may be issued) or in the terms and conditions of (including the grant or exercise price), and the criteria included in, outstanding Awards;

(e) To replace such Award with other rights or property selected by the Administrator; or

(f) To provide that the Award will terminate and cannot vest, be exercised or become payable after the applicable event.

9.3 Change in Control.

(a) Notwithstanding any other provision of the Plan, in the event of a Change in Control, unless the Administrator elects to (i) terminate an Award in exchange for cash, rights or property, or (ii) cause an Award to become fully exercisable and no longer subject to any forfeiture restrictions prior to the consummation of a Change in Control, pursuant to Section 9.2, (A) such Award (other than any portion subject to performance-based vesting) shall continue in effect or be assumed or an equivalent Award substituted by the successor corporation or a parent or subsidiary of the successor corporation and (B) the portion of such Award subject to performance-based vesting shall be subject to the terms and conditions of the applicable Award Agreement and, in the absence of applicable terms and conditions, the Administrator's discretion.

(b) In the event that the successor corporation in a Change in Control refuses to assume or substitute for an Award (other than any portion subject to performance-based vesting, which shall be handled as specified in the individual Award Agreement or as otherwise provided by the Administrator), the Administrator shall cause such Award to become fully vested and, if applicable, exercisable immediately prior to the consummation of such transaction and all forfeiture restrictions on such Award to lapse and, to the extent unexercised upon the consummation of such transaction, to terminate in exchange for cash, rights or other property. The Administrator shall notify the Participant of any Award that becomes exercisable pursuant to the preceding sentence that such Award shall be fully exercisable for a period of time as determined by the Administrator from the date of such notice (which shall be 15 days if no period is determined by the Administrator), contingent upon the occurrence of the Change in Control, and such Award shall terminate upon the consummation of the Change in Control in accordance with the preceding sentence.

(c) For the purposes of this Section 9.3, an Award shall be considered assumed if, following the Change in Control, the Award confers the right to purchase or receive, for each Share subject to the Award immediately prior to the Change in Control, the consideration (whether stock, cash, or other securities or property) received in the Change in Control by holders of Common Stock for each Share held on the effective date of the transaction (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding Shares); provided,

however, that if such consideration received in the Change in Control was not solely common stock of the successor corporation or its parent, the Administrator may, with the consent of the successor corporation, provide for the consideration to be received upon the exercise of the Award, for each Share subject to an Award, to be solely common stock of the successor corporation or its parent equal in fair market value to the per-share consideration received by holders of Common Stock in the Change in Control.

9.4 Administrative Stand Still. In the event of any pending stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other extraordinary transaction or change affecting the Shares or the share price of Common Stock (including any Equity Restructuring or any securities offering or other similar transaction) or for reasons of administrative convenience or to facilitate compliance with any Applicable Law, the Administrator may refuse to permit the exercise or settlement of one or more Awards for such period of time as the Company may determine to be reasonably appropriate under the circumstances.

9.5 General. Except as expressly provided in the Plan or the Administrator's action under the Plan, no Participant will have any rights due to any subdivision or consolidation of Shares of any class, dividend payment, increase or decrease in the number of Shares of any class or dissolution, liquidation, merger, or consolidation of the Company or other corporation. Except as expressly provided with respect to an Equity Restructuring under Section 9.1 above or the Administrator's action under the Plan, no issuance by the Company of Shares of any class, or securities convertible into Shares of any class, will affect, and no adjustment will be made regarding, the number of Shares subject to an Award or the Award's grant price or exercise price. The existence of the Plan, any Award Agreements and the Awards granted hereunder will not affect or restrict in any way the Company's right or power to make or authorize (i) any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, (ii) any merger, consolidation, spinoff, dissolution or liquidation of the Company or sale of Company assets or (iii) any sale or issuance of securities, including securities with rights superior to those of the Shares or securities convertible into or exchangeable for Shares.

ARTICLE X.
PROVISIONS APPLICABLE TO AWARDS

10.1 Transferability.

(a) No Award may be sold, assigned, transferred, pledged or otherwise encumbered, either voluntarily or by operation of law, except by will or the laws of descent and distribution, or, subject to the Administrator's consent, pursuant to a DRO, unless and until such Award has been exercised or the Shares underlying such Award have been issued, and all restrictions applicable to such Shares have lapsed. During the life of a Participant, Awards will be exercisable only by the Participant, unless it has been disposed of pursuant to a DRO. After the death of a Participant, any exercisable portion of an Award may, prior to the time when such portion becomes unexercisable under the Plan or the applicable Award Agreement, be exercised by the Participant's personal representative or by any person empowered to do so under the deceased Participant's will or under the then-Applicable Law of descent and distribution. References to a Participant, to the extent relevant in the context, will include references to a transferee approved by the Administrator.

(b) Notwithstanding Section 10.1(a), the Administrator, in its sole discretion, may determine to permit a Participant or a Permitted Transferee of such Participant to transfer an Award other than an Incentive Stock Option (unless such Incentive Stock Option is intended to become a Nonqualified

Stock Option) to any one or more Permitted Transferees of such Participant, subject to the following terms and conditions: (i) an Award transferred to a Permitted Transferee shall not be assignable or transferable by the Permitted Transferee other than (A) to another Permitted Transferee of the applicable Participant or (B) by will or the laws of descent and distribution or, subject to the consent of the Administrator, pursuant to a DRO; (ii) an Award transferred to a Permitted Transferee shall continue to be subject to all the terms and conditions of the Award as applicable to the original Participant (other than the ability to further transfer the Award to any Person other than another Permitted Transferee of the applicable Participant); (iii) the Participant (or transferring Permitted Transferee) and the receiving Permitted Transferee shall execute any and all documents requested by the Administrator, including, without limitation, documents to (A) confirm the status of the transferee as a Permitted Transferee, (B) satisfy any requirements for an exemption for the transfer under Applicable Law and (C) evidence the transfer; and (iv) any transfer of an Award to a Permitted Transferee shall be without consideration, except as required by Applicable Law. In addition, and further notwithstanding Section 10.1(a), the Administrator, in its sole discretion, may determine to permit a Participant to transfer Incentive Stock Options to a trust that constitutes a Permitted Transferee if, under Section 671 of the Code and other Applicable Law, the Participant is considered the sole beneficial owner of the Incentive Stock Option while it is held in the trust.

(c) Notwithstanding Section 10.1(a), if permitted by the Administrator, a Participant may, in the manner determined by the Administrator, designate a Designated Beneficiary. A Designated Beneficiary, legal guardian, legal representative, or other person claiming any rights pursuant to the Plan is subject to all terms and conditions of the Plan and any Award Agreement applicable to the Participant and any additional restrictions deemed necessary or appropriate by the Administrator. If the Participant is married or a domestic partner in a domestic partnership qualified under Applicable Law and resides in a community property state, a designation of a person other than the Participant's spouse or domestic partner, as applicable, as the Participant's Designated Beneficiary with respect to more than 50% of the Participant's interest in the Award shall not be effective without the prior written or electronic consent of the Participant's spouse or domestic partner. Subject to the foregoing, a beneficiary designation may be changed or revoked by a Participant at any time; provided that the change or revocation is delivered in writing to the Administrator prior to the Participant's death.

10.2 Documentation. Each Award will be evidenced in an Award Agreement in such form as the Administrator determines in its discretion. Each Award may contain such terms and conditions as are determined by the Administrator in its sole discretion, to the extent not inconsistent with those set forth in the Plan.

10.3 Discretion. Except as the Plan otherwise provides, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award to a Participant need not be identical, and the Administrator need not treat Participants or Awards (or portions thereof) uniformly.

10.4 Changes in Participant's Status. The Administrator will determine how the disability, death, retirement, authorized leave of absence or any other change or purported change in a Participant's Service Provider status affects an Award and the extent to which, and the period during which, the Participant, the Participant's legal representative, conservator, guardian or Designated Beneficiary may exercise rights under the Award, if applicable. Except to the extent otherwise required by Applicable Law or expressly authorized by the Company or by the Company's written policy on leaves of absence, no service credit shall be given for vesting purposes for any period the Participant is on a leave of absence.

10.5 Withholding. Each Participant must pay the Company or a Subsidiary, as applicable, or make provision satisfactory to the Administrator for payment of, any Tax-Related Items required by Applicable Law to be withheld in connection with such Participant's Awards and/or Shares by the date of the event creating the liability for Tax-Related Items. At the Company's discretion and subject to any Company insider trading policy (including black-out periods), any withholding obligation for Tax-Related Items may be satisfied by (i) deducting an amount sufficient to satisfy such withholding obligation from any payment of any kind otherwise due to a Participant; (ii) accepting a payment from the Participant in cash, by wire transfer of immediately available funds, or by check made payable to the order of the Company or a Subsidiary, as applicable; (iii) accepting the delivery of Shares, including Shares delivered by attestation; (iv) retaining Shares from the Award creating the withholding obligation for Tax-Related Items, valued on the date of delivery; (v) if there is a public market for Shares at the time the withholding obligation for Tax-Related Items is to be satisfied, selling Shares issued pursuant to the Award creating the withholding obligation for Tax-Related Items, either voluntarily by the Participant or mandatorily by the Company; (vi) accepting delivery of a promissory note or any other lawful consideration; or (vii) any combination of the foregoing payment forms. The amount withheld pursuant to any of the foregoing payment forms shall be determined by the Company and may be up to, but no greater than, the aggregate amount of such obligations based on the maximum statutory withholding rates in the applicable Participant's jurisdiction for all Tax-Related Items that are applicable to such taxable income. If any tax withholding obligation will be satisfied under clause (v) of the preceding paragraph, each Participant's acceptance of an Award under the Plan will constitute the Participant's authorization to the Company and instruction and authorization to any brokerage firm selected by the Company to effect the sale to complete the transactions described in clause (v).

10.6 Amendment of Award; Repricing. The Administrator may amend, modify or terminate any outstanding Award, including by substituting another Award of the same or a different type, changing the exercise or settlement date, and converting an Incentive Stock Option to a Nonqualified Stock Option. The Participant's consent to such action will be required unless (i) the action, taking into account any related action, does not materially and adversely affect the Participant's rights under the Award, or (ii) the change is permitted under Article IX or pursuant to Section 11.6. In addition, the Administrator shall, without the approval of the stockholders of the Company, have the authority to (a) amend any outstanding Option or Stock Appreciation Right to reduce its exercise price per Share or (b) cancel any Option or Stock Appreciation Right in exchange for cash or another Award.

10.7 Conditions on Delivery of Stock. The Company will not be obligated to deliver any Shares under the Plan or remove restrictions from Shares previously delivered under the Plan until (i) all Award conditions have been met or removed to the Company's satisfaction, (ii) as determined by the Company, all other legal matters regarding the issuance and delivery of such Shares have been satisfied, including, without limitation, any applicable securities laws and stock exchange or stock market rules and regulations, (iii) any approvals from governmental agencies that the Company determines are necessary or advisable have been obtained, and (iv) the Participant has executed and delivered to the Company such representations or agreements as the Administrator deems necessary or appropriate to satisfy Applicable Law. The inability or impracticability of the Company to obtain or maintain authority to issue or sell any securities from any regulatory body having jurisdiction, which authority is deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares hereunder, shall relieve the Company of any liability in respect of the failure to issue or sell such Shares as to which such requisite authority shall not have been obtained, and shall constitute circumstances in which the Administrator may determine to amend or cancel Awards pertaining to such Shares, with or without consideration to the Participant.

10.8 Acceleration. The Administrator may at any time provide that any Award will become immediately vested and fully or partially exercisable, free of some or all restrictions or conditions, or otherwise fully or partially realizable.

ARTICLE XI.
MISCELLANEOUS

11.1 No Right to Employment or Other Status. No person will have any claim or right to be granted an Award, and the grant of an Award will not be construed as giving a Participant the right to commence or continue employment or any other relationship with the Company or a Subsidiary. The Company and its Subsidiaries expressly reserve the right at any time to dismiss or otherwise terminate its relationship with a Participant free from any liability or claim under the Plan or any Award, except as expressly provided in an Award Agreement or other written agreement between the Participant and the Company or any Subsidiary.

11.2 No Rights as Stockholder; Certificates. Subject to the Award Agreement, no Participant or Designated Beneficiary will have any rights as a stockholder with respect to any Shares to be distributed under an Award until becoming the record holder of such Shares. Notwithstanding any other provision of the Plan, unless the Administrator otherwise determines or Applicable Law requires, the Company will not be required to deliver to any Participant certificates evidencing Shares issued in connection with any Award and instead such Shares may be recorded in the books of the Company (or, as applicable, its transfer agent or stock plan administrator). The Company may place legends on any share certificate or book entry to reference restrictions applicable to the Shares (including, without limitation, restrictions applicable to Restricted Stock).

11.3 Effective Date. The Plan will become effective on the date prior to the Public Trading Date (the "***Effective Date***"), provided that it is approved by the Company's stockholders prior to such date and occurring within 12 months following the date the Board approved the Plan. If the Plan is not approved by the Company's stockholders within the foregoing time frame, the Plan will not become effective. No Incentive Stock Option may be granted pursuant to the Plan after the tenth anniversary of the earlier of (i) the date the Plan was approved by the Board or (ii) the date the Plan was approved by the Company's stockholders.

11.4 Amendment of Plan. The Board may amend, suspend or terminate the Plan at any time and from time to time; provided that (a) no amendment requiring stockholder approval to comply with Applicable Law shall be effective unless approved by the stockholders, and (b) no amendment, other than an increase to the Overall Share Limit or pursuant to Article IX or Section 11.6, may materially and adversely affect any Award outstanding at the time of such amendment without the affected Participant's consent. No Awards may be granted under the Plan during any suspension period or after Plan termination. Awards outstanding at the time of any Plan suspension or termination will continue to be governed by the Plan and the Award Agreement, as each in effect before such suspension or termination. The Board will obtain stockholder approval of any Plan amendment to the extent necessary to comply with Applicable Law.

11.5 Provisions for Foreign Participants. The Administrator may modify Awards granted to Participants who are nationals of a country other than the United States or employed or residing outside the United States, establish subplans or procedures under the Plan or take any other necessary or appropriate action to address Applicable Law, including (a) differences in laws, rules, regulations or customs of such jurisdictions with respect to tax, securities, currency, employee benefit or other matters,

(b) listing and other requirements of any non-U.S. securities exchange, and (c) any necessary local governmental or regulatory exemptions or approvals.

11.6 Section 409A.

(a) *General*. The Company intends that all Awards be structured to comply with, or be exempt from, Section 409A, such that no adverse tax consequences, interest, or penalties under Section 409A apply. Notwithstanding anything in the Plan or any Award Agreement to the contrary, the Administrator may, without a Participant's consent, amend this Plan or Awards, adopt policies and procedures, or take any other actions (including amendments, policies, procedures and retroactive actions) as are necessary or appropriate to preserve the intended tax treatment of Awards, including any such actions intended to (A) exempt this Plan or any Award from Section 409A, or (B) comply with Section 409A, including regulations, guidance, compliance programs and other interpretative authority that may be issued after an Award's grant date. The Company makes no representations or warranties as to an Award's tax treatment under Section 409A or otherwise. The Company will have no obligation under this Section 11.6 or otherwise to avoid the taxes, penalties or interest under Section 409A with respect to any Award and will have no liability to any Participant or any other person if any Award, compensation or other benefits under the Plan are determined to constitute noncompliant "nonqualified deferred compensation" subject to taxes, penalties or interest under Section 409A.

(b) *Separation from Service*. If an Award constitutes "nonqualified deferred compensation" under Section 409A, any payment or settlement of such Award upon a Participant's Termination of Service will, to the extent necessary to avoid taxes under Section 409A, be made only upon the Participant's "separation from service" (within the meaning of Section 409A), whether such "separation from service" occurs upon or after the Participant's Termination of Service. For purposes of this Plan or any Award Agreement relating to any such payments or benefits, references to a "termination," "termination of employment" or like terms means a "separation from service."

(c) *Payments to Specified Employees*. Notwithstanding any contrary provision in the Plan or any Award Agreement, any payment(s) of "nonqualified deferred compensation" required to be made under an Award to a "specified employee" (as defined under Section 409A and as the Administrator determines) due to his or her "separation from service" will, to the extent necessary to avoid taxes under Section 409A(a)(2)(B)(i) of the Code, be delayed for the six-month period immediately following such "separation from service" (or, if earlier, until the specified employee's death) and will instead be paid (as set forth in the Award Agreement) on the day immediately following such six-month period or as soon as administratively practicable thereafter (without interest). Any payments of "nonqualified deferred compensation" under such Award payable more than six months following the Participant's "separation from service" will be paid at the time or times the payments are otherwise scheduled to be made.

(d) *Separate Payments*. If an Award includes a "series of installment payments" within the meaning of Section 1.409A-2(b)(2)(iii) of Section 409A, the Participant's right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment and, if an Award includes "dividend equivalents" within the meaning of Section 1.409A-3(e) of Section 409A, the Participant's right to receive the dividend equivalents will be treated separately from the right to other amounts under the Award.

(e) *Change in Control*. Any payment due upon a Change in Control of the Company will be paid only if such Change in Control constitutes a "change in ownership" or "change in effective control" within the meaning of Section 409A, and in the event that such Change in Control does not

constitute a “change in the ownership” or “change in the effective control” within the meaning of Section 409A, such Award for which payment is due upon a Change in Control of the Company will vest upon the Change in Control and any payment will be delayed until the first compliant date under Section 409A.

11.7 Limitations on Liability. Notwithstanding any other provisions of the Plan, no individual acting as a Director, officer or other Employee will be liable to any Participant, former Participant, spouse, beneficiary, or any other person for any claim, loss, liability, or expense incurred in connection with the Plan or any Award, and such individual will not be personally liable with respect to the Plan because of any contract or other instrument executed in his or her capacity as an Administrator, Director, officer or other Employee. The Company will indemnify and hold harmless each Director, officer or other Employee that has been or will be granted or delegated any duty or power relating to the Plan’s administration or interpretation, against any cost or expense (including attorneys’ fees) or liability (including any sum paid in settlement of a claim with the Administrator’s approval) arising from any act or omission concerning this Plan unless arising from such person’s own fraud or bad faith; provided that he or she gives the Company an opportunity, at its own expense, to handle and defend the same before he or she undertakes to handle and defend it on his or her own behalf.

11.8 Data Privacy. As a condition for receiving any Award, each Participant explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of personal data as described in this Section 11.8 by and among the Company and its Subsidiaries and affiliates exclusively for implementing, administering and managing the Participant’s participation in the Plan. The Company and its Subsidiaries and affiliates may hold certain personal information about a Participant, including the Participant’s name, address and telephone number; birthdate; social security, insurance number or other identification number; salary; nationality; job title(s); any Shares held in the Company or its Subsidiaries and affiliates; and Award details, to implement, manage and administer the Plan and Awards (the “***Data***”). The Company and its Subsidiaries and affiliates may transfer the Data amongst themselves as necessary to implement, administer and manage a Participant’s participation in the Plan, and the Company and its Subsidiaries and affiliates may transfer the Data to third parties assisting the Company with Plan implementation, administration and management. These recipients may be located in the Participant’s country, or elsewhere, and the Participant’s country may have different data privacy laws and protections than a recipient’s country. By accepting an Award, each Participant authorizes such recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, to implement, administer and manage the Participant’s participation in the Plan, including any required Data transfer to a broker or other third party with whom the Company or the Participant may elect to deposit any Shares. The Data related to a Participant will be held only as long as necessary to implement, administer, and manage the Participant’s participation in the Plan. A Participant may, at any time, view the Data that the Company holds regarding such Participant, request additional information about the storage and processing of the Data regarding such Participant, recommend any necessary corrections to the Data regarding the Participant or refuse or withdraw the consents in this Section 11.8 in writing, without cost, by contacting the local human resources representative. The Company may cancel Participant’s ability to participate in the Plan and, in the Administrator’s sole discretion, the Participant may forfeit any outstanding Awards if the Participant refuses or withdraws the consents in this Section 11.8. For more information on the consequences of refusing or withdrawing consent, Participants may contact their local human resources representative.

11.9 Severability. If any portion of the Plan or any action taken under it is held illegal or invalid for any reason, the illegality or invalidity will not affect the remaining parts of the Plan, and the Plan will be construed and enforced as if the illegal or invalid provisions had been excluded, and the illegal or invalid action will be null and void.

11.10 Governing Documents. If any contradiction occurs between the Plan and any Award Agreement or other written agreement between a Participant and the Company (or any Subsidiary), the Plan will govern, unless such Award Agreement or other written agreement was approved by the Administrator and expressly provides that a specific provision of the Plan will not apply.

11.11 Governing Law. The Plan and all Awards will be governed by and interpreted in accordance with the laws of the State of Delaware, without regard to the conflict of law rules thereof or of any other jurisdiction. By accepting an Award, each Participant irrevocably and unconditionally consents to submit to the exclusive jurisdiction of the courts of the State of Delaware and of the United States of America, in each case located in the State of Delaware, for any action arising out of or relating to the Plan (and agrees not to commence any litigation relating thereto except in such courts), and further agrees that service of any process, summons, notice or document by U.S. registered mail to the address contained in the records of the Company shall be effective service of process for any litigation brought against it in any such court. By accepting an Award, each Participant irrevocably and unconditionally waives any objection to the laying of venue of any litigation arising out of the Plan or Award hereunder in the courts of the State of Delaware or the United States of America, in each case located in the State of Delaware, and further irrevocably and unconditionally waives and agrees not to plead or claim in any such court that any such litigation brought in any such court has been brought in an inconvenient forum. By accepting an Award, each Participant irrevocably and unconditionally waives, to the fullest extent permitted by applicable law, any and all rights to trial by jury in connection with any litigation arising out of or relating to the Plan or any Award hereunder.

11.12 Clawback Provisions. All Awards (including the gross amount of any proceeds, gains or other economic benefit the Participant actually or constructively receives upon receipt or exercise of any Award or the receipt or resale of any Shares underlying the Award) will be subject to recoupment by the Company to the extent required to comply with Applicable Law or any policy of the Company providing for the reimbursement of incentive compensation, whether or not such policy was in place at the time of grant of an Award.

11.13 Titles and Headings. The titles and headings in the Plan are for convenience of reference only and, if any conflict, the Plan's text, rather than such titles or headings, will control.

11.14 Conformity to Applicable Law. Participant acknowledges that the Plan is intended to conform to the extent necessary with Applicable Law. Notwithstanding anything herein to the contrary, the Plan and all Awards will be administered only in a manner intended to conform with Applicable Law. To the extent Applicable Law permits, the Plan and all Award Agreements will be deemed amended as necessary to conform to Applicable Law.

11.15 Relationship to Other Benefits. No payment under the Plan will be taken into account in determining any benefits under any pension, retirement, savings, profit sharing, group insurance, welfare or other benefit plan of the Company or any Subsidiary, except as expressly provided in writing in such other plan or an agreement thereunder.

11.16 Unfunded Status of Awards. The Plan is intended to be an "unfunded" plan for incentive compensation. With respect to any payments not yet made to a Participant pursuant to an Award, nothing contained in the Plan or Award Agreement shall give the Participant any rights that are greater than those of a general creditor of the Company or any Subsidiary.

11.17 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan, the Plan and any Award granted or awarded to any individual who is then subject to Section 16 of the Exchange Act shall be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including Rule 16b-3) that are requirements for the application of such exemptive rule. To the extent permitted by Applicable Law, the Plan and Awards granted or awarded hereunder shall be deemed amended to the extent necessary to conform to such applicable exemptive rule.

11.18 Prohibition on Executive Officer and Director Loans. Notwithstanding any other provision of the Plan to the contrary, no Participant who is a Director or an "executive officer" of the Company within the meaning of Section 13(k) of the Exchange Act shall be permitted to make payment with respect to any Awards granted under the Plan, or continue any extension of credit with respect to such payment, with a loan from the Company or a loan arranged by the Company in violation of Section 13(k) of the Exchange Act.

11.19 Broker-Assisted Sales. In the event of a broker-assisted sale of Shares in connection with the payment of amounts owed by a Participant under or with respect to the Plan or Awards, including amounts to be paid under the final sentence of Section 10.5: (a) any Shares to be sold through the broker-assisted sale will be sold on the day the payment first becomes due, or as soon thereafter as practicable; (b) such Shares may be sold as part of a block trade with other Participants in the Plan in which all Participants receive an average price; (c) the applicable Participant will be responsible for all broker's fees and other costs of sale, and by accepting an Award, each Participant agrees to indemnify and hold the Company and its Directors, officers and other Employees harmless from any losses, costs, damages, or expenses relating to any such sale; (d) to the extent the Company or its designee receives proceeds of such sale that exceed the amount owed, the Company will pay such excess in cash to the applicable Participant as soon as reasonably practicable; (e) the Company and its designees are under no obligation to arrange for such sale at any particular price; and (f) in the event the proceeds of such sale are insufficient to satisfy the Participant's applicable obligation, the Participant may be required to pay immediately upon demand to the Company or its designee an amount in cash sufficient to satisfy any remaining portion of the Participant's obligation.

* * * * *

DUOLINGO, INC.
2021 INCENTIVE AWARD PLAN
STOCK OPTION GRANT NOTICE

Duolingo, Inc., a Delaware corporation, (the "***Company***"), pursuant to its 2021 Incentive Award Plan, as may be amended from time to time (the "***Plan***"), hereby grants to the holder listed below ("***Participant***"), an option to purchase the number of shares of the Company's Common Stock (the "***Shares***"), set forth below (the "***Option***"). This Option is subject to all of the terms and conditions set forth herein, as well as in the Plan and the Stock Option Agreement attached hereto as **Exhibit A** (the "***Stock Option Agreement***") including any special provisions for Participant's country of residence, if any, set forth in the Appendix for Participant's Country (the "***Country Provisions***"), each of which are incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Grant Notice, the Country Provisions and the Stock Option Agreement.

Participant:	[_____]
Grant Date:	[_____]
Vesting Commencement Date:	[_____]
Exercise Price per Share:	$[_____]
Total Exercise Price:	$[_____]
Total Number of Shares Subject to the Option:	[_____]
Expiration Date:	[_____]
Vesting Schedule:	[_____]

Type of Option: ☐ Incentive Stock Option ☐ Nonqualified Stock Option

If the Company uses an electronic capitalization table system (such as Shareworks) and the fields in this Grant Notice are blank or the information is otherwise provided in a different format electronically, the blank fields and other information will be deemed to come from the electronic capitalization system and is considered part of this Grant Notice.

By his or her signature and the Company's signature below, Participant agrees to be bound by the terms and conditions of the Plan, the Stock Option Agreement and this Grant Notice. Participant has reviewed the Plan, the Stock Option Agreement and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of the Plan, the Stock Option Agreement and this Grant Notice. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, the Stock Option Agreement or this Grant Notice.

DUOLINGO, INC.:		**PARTICIPANT:**	
HOLDER:			
By:	_____	By:	_____
Print Name:	_____	Print Name:	_____
Title:	_____		
Address:	_____	Address:	_____
	_____		_____

EXHIBIT A
TO STOCK OPTION GRANT NOTICE

STOCK OPTION AGREEMENT

Pursuant to the Stock Option Grant Notice (the "***Grant Notice***") to which this Stock Option Agreement (this "***Agreement***") is attached, Duolingo, Inc., a Delaware corporation (the "***Company***"), has granted to Participant an Option under the Company's 2021 Incentive Award Plan, as may be amended from time to time (the "***Plan***"), to purchase the number of Shares indicated in the Grant Notice.

ARTICLE I.

GENERAL

1.1 Defined Terms. Capitalized terms not specifically defined herein shall have the meanings specified in the Plan and the Grant Notice.

1.2 Incorporation of Terms of Plan. The Option is subject to the terms and conditions of the Plan which are incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan shall control. If the Country Provisions apply to Participant, in the event of a conflict between the terms of this Agreement, the Grant Notice or the Plan and the Country Provisions, the terms of the Country Provisions shall control.

ARTICLE II.

GRANT OF OPTION

2.1 Grant of Option. In consideration of Participant's past and/or continued employment with or service to the Company or any Subsidiary and for other good and valuable consideration, effective as of the Grant Date set forth in the Grant Notice (the "***Grant Date***"), the Company irrevocably grants to Participant the Option to purchase any part or all of an aggregate of the number of Shares set forth in the Grant Notice, upon the terms and conditions set forth in the Plan, this Agreement, and the Country Provisions (if applicable), subject to adjustments as provided in Article IX of the Plan. Unless designated as a Nonqualified Stock Option in the Grant Notice, the Option shall be an Incentive Stock Option to the maximum extent permitted by law.

2.2 Exercise Price. The exercise price of the Shares subject to the Option shall be as set forth in the Grant Notice, without commission or other charge; *provided*, *however*, that the exercise price per share of the Shares subject to the Option shall not be less than 100% of the Fair Market Value of a Share on the Grant Date. Notwithstanding the foregoing, if this Option is designated as an Incentive Stock Option and Participant is a Greater Than 10% Stockholder as of the Grant Date, the exercise price per share of the Shares subject to the Option shall not be less than 110% of the Fair Market Value of a Share on the Grant Date.

2.3 Consideration to the Company. In consideration of the grant of the Option by the Company, Participant agrees to render faithful and efficient services to the Company and its Subsidiaries, as applicable.

ARTICLE III.

PERIOD OF EXERCISABILITY

3.1 Commencement of Exercisability.

(a) Subject to this Section 3.1 and Sections 3.2, 3.3, 5.11 and 5.17 hereof, the Option shall become vested and exercisable in such amounts and at such times as are set forth in the Grant Notice.

(b) No portion of the Option which has not become vested and exercisable at the date of Participant's Termination of Service shall thereafter become vested and exercisable, except as may be otherwise provided by the Administrator or as set forth in a written agreement between the Company (or any Subsidiary that is the employer of Participant) and Participant.

(c) Notwithstanding Section 3.1(a) hereof and the Grant Notice, but subject to Section 3.1(b) hereof, in the event of a Change in Control the Option shall be treated pursuant to Sections 9.2 and 9.3 of the Plan.

3.2 Duration of Exercisability. The installments provided for in the vesting schedule set forth in the Grant Notice are cumulative. Each such installment which becomes vested and exercisable pursuant to the vesting schedule set forth in the Grant Notice shall remain vested and exercisable until it becomes unexercisable under Section 3.3 hereof.

3.3 Expiration of Option. The Option may not be exercised to any extent by anyone after the first to occur of the following events:

(a) The Expiration Date set forth in the Grant Notice, which shall in no event be more than ten years from the Grant Date;

(b) If this Option is designated as an Incentive Stock Option and Participant, at the time the Option was granted, was a Greater Than 10% Stockholder, the expiration of five years from the Grant Date;

(c) The expiration of three months from the date of Participant's Termination of Service, unless such termination occurs by reason of Participant's death or Disability or Cause;

(d) The expiration of one year from the date of Participant's Termination of Service by reason of Participant's death or Disability; or

(e) Participant's Termination of Service for Cause.

3.4 Special Tax Consequences. Participant acknowledges that, to the extent that the aggregate Fair Market Value (determined as of the time the Option is granted) of all Shares with respect to which Incentive Stock Options, including the Option (if applicable), are exercisable for the first time by Participant in any calendar year exceeds $100,000, the Option and such other options shall be Nonqualified Stock Options to the extent necessary to comply with the limitations imposed by Section 422(d) of the Code. Participant further acknowledges that the rule set forth in the preceding sentence shall be applied by taking the Option and other "incentive stock options" into account in the order in which they were granted, as determined under Section 422(d) of the Code and the Treasury Regulations thereunder. Participant also acknowledges that an Incentive Stock Option exercised more than three months after Participant's Termination of Employment, other than by reason of death or Disability, will be taxed as a Nonqualified Stock Option.

3.5 Tax Indemnity.

(a) Participant agrees to hold harmless, indemnify and keep indemnified the Company, any Subsidiary and Participant's employing company, if different, from and against any liability for or obligation to pay any Tax-Related Items that is attributable to (1) the grant or exercise of, or any benefit derived by Participant from, the Option, (2) the acquisition by Participant of the Shares on exercise of the Option or (3) the disposal of any Shares.

(b) The Option cannot be exercised until Participant has made such arrangements as the Company may require for the satisfaction of any Tax-Related Items that may arise in connection with the exercise of the Option or the acquisition of the Shares by Participant. The Company shall not be required to issue, allot or transfer Shares until Participant has satisfied this obligation.

(c) Participant hereby acknowledges that the Company (i) makes no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the Option and (ii) does not commit to and is under no obligation to structure the terms of the grant or any aspect of any Award, including the Option, to reduce or eliminate Participant's liability for Tax-Related Items or achieve any particular tax result. Furthermore, if Participant becomes subject to tax in more than one jurisdiction between the date of grant of an Award, including the Option, and the date of any relevant taxable event, Participant acknowledges that the Company may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

ARTICLE IV.

EXERCISE OF OPTION

4.1 Person Eligible to Exercise. Except as provided in Section 5.3 hereof, during the lifetime of Participant, only Participant may exercise the Option or any portion thereof, unless it has been disposed of pursuant to a DRO. After the death of Participant, any exercisable portion of the Option may, prior to the time when the Option becomes unexercisable under Section 3.3 hereof, be exercised by the deceased Participant's personal representative or by any person empowered to do so under the deceased Participant's will or under the then applicable laws of descent and distribution.

4.2 Partial Exercise. Any exercisable portion of the Option or the entire Option, if then wholly exercisable, may be exercised in whole or in part at any time prior to the time when the Option or portion thereof becomes unexercisable under Section 3.3 hereof. However, the Option shall not be exercisable with respect to fractional Shares.

4.3 Manner of Exercise. The Option, or any exercisable portion thereof, may be exercised solely by delivery to the Secretary of the Company (or any third party administrator or other person or entity designated by the Company; for the avoidance of doubt, delivery shall include electronic delivery), during regular business hours, of all of the following prior to the time when the Option or such portion thereof becomes unexercisable under Section 3.3 hereof:

(a) An exercise notice in a form specified by the Administrator, stating that the Option or portion thereof is thereby exercised, such notice complying with all applicable rules established by the Administrator. The notice shall be signed by Participant or other person then entitled to exercise the Option or such portion of the Option;

(b) The receipt by the Company of full payment for the Shares with respect to which the Option or portion thereof is exercised, including payment of any applicable Tax-Related Items, which

shall be made by deduction from other compensation payable to Participant or in such other form of consideration permitted under Section 4.4 hereof that is acceptable to the Company;

(c) Any other written representations or documents as may be required in the Administrator's sole discretion to evidence compliance with the Securities Act, the Exchange Act or any other Applicable Law; and

(d) In the event the Option or portion thereof shall be exercised pursuant to Section 4.1 hereof by any person or persons other than Participant, appropriate proof of the right of such person or persons to exercise the Option.

Notwithstanding any of the foregoing, the Company shall have the right to specify all conditions of the manner of exercise, which conditions may vary by country and which may be subject to change from time to time.

4.4 Method of Payment. Payment of the exercise price shall be by any of the following, or a combination thereof, at the election of Participant:

(a) Cash or check;

(b) With the consent of the Administrator, surrender of Shares (including, without limitation, Shares otherwise issuable upon exercise of the Option) held for such period of time as may be required by the Administrator in order to avoid adverse accounting consequences and having a Fair Market Value on the date of delivery equal to the aggregate exercise price of the Option or exercised portion thereof; or

(c) Other legal consideration acceptable to the Administrator (including, without limitation, through the delivery of a notice that Participant has placed a market sell order with a broker with respect to Shares then issuable upon exercise of the Option, and that the broker has been directed to pay a sufficient portion of the net proceeds of the sale to the Company in satisfaction of the Option exercise price; *provided* that payment of such proceeds is then made to the Company at such time as may be required by the Company, but in any event not later than the settlement of such sale).

4.5 Conditions to Issuance of Shares. The Shares deliverable upon the exercise of the Option, or any portion thereof, may be either previously authorized but unissued Shares or issued Shares which have then been reacquired by the Company. Such Shares shall be fully paid and nonassessable. The Company shall not be required to issue or deliver any Shares purchased upon the exercise of the Option or portion thereof prior to fulfillment of all of the conditions in Section 10.7 of the Plan.

4.6 Participant's Representations. If the Shares issuable hereunder have not been registered under the Securities Act or any applicable state laws on an effective registration statement at the time of exercise, Participant shall, if required by the Company, concurrently with such exercise, make such written representations as are deemed necessary or appropriate by the Company or its counsel.

4.7 Rights as Stockholder. The holder of the Option shall not be, nor have any of the rights or privileges of, a stockholder of the Company, including, without limitation, voting rights and rights to dividends, in respect of any Shares purchasable upon the exercise of any part of the Option unless and until such Shares shall have been issued by the Company and held of record by such holder (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company). No adjustment shall be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Article IX of the Plan.

ARTICLE V.

OTHER PROVISIONS

5.1 Administration. The Administrator shall have the power to interpret the Plan and this Agreement and to adopt such rules for the administration, interpretation and application of the Plan as are consistent therewith and to interpret, amend or revoke any such rules. All actions taken and all interpretations and determinations made by the Administrator in good faith shall be final and binding upon Participant, the Company and all other interested persons. No member of the Committee or the Board shall be personally liable for any action, determination or interpretation made in good faith with respect to the Plan, this Agreement or the Option.

5.2 Whole Shares. The Option may only be exercised for whole Shares.

5.3 Transferability. The Option shall be subject to the restrictions on transferability set forth in Section 10.1 of the Plan.

5.4 Tax Consultation. Participant understands that Participant may suffer adverse tax consequences as a result of the grant, vesting or exercise of the Option, or with the purchase or disposition of the Shares subject to the Option. Participant represents that Participant has consulted with any tax consultants Participant deems advisable in connection with the purchase or disposition of such Shares and that Participant is not relying on the Company for any tax advice.

5.5 Binding Agreement. Subject to the limitation on the transferability of the Option contained herein, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

5.6 Adjustments Upon Specified Events. The Administrator may accelerate the vesting of the Option in such circumstances as it, in its sole discretion, may determine. Participant acknowledges that the Option is subject to adjustment, modification and termination in certain events as provided in this Agreement and Article IX of the Plan.

5.7 Notices. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company in care of the Secretary of the Company at the Company's principal office, and any notice to be given to Participant shall be addressed to Participant at Participant's last address reflected on the Company's records. By a notice given pursuant to this Section 5.7, either party may hereafter designate a different address for notices to be given to that party. Any notice which is required to be given to Participant shall, if Participant is then deceased, be given to the person entitled to exercise his or her Option pursuant to Section 4.1 hereof by written notice under this Section 5.7. Any notice shall be deemed duly given when sent via email or when sent by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service (or similar non-U.S. entity).

5.8 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

5.9 Governing Law. The laws of the State of Delaware shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws. By entering into this Agreement, Participant irrevocably and unconditionally consents to submit to the exclusive jurisdiction of the courts of the State of Delaware and of the United States of America, in each case located in the State of Delaware, for any action arising out of or relating to this Agreement and the Plan (and agrees not to

commence any litigation relating thereto except in such courts), and further agrees that service of any process, summons, notice or document by U.S. registered mail to the address contained in the records of the Company shall be effective service of process for any litigation brought against it in any such court. By entering into this Agreement, Participant irrevocably and unconditionally waives any objection to the laying of venue of any litigation arising out of the Plan or this Agreement in the courts of the State of Delaware or the United States of America, in each case located in the State of Delaware, and further irrevocably and unconditionally waives and agrees not to plead or claim in any such court that any such litigation brought in any such court has been brought in an inconvenient forum. By entering into this Agreement, Participant irrevocably and unconditionally waives, to the fullest extent permitted by applicable law, any and all rights to trial by jury in connection with any litigation arising out of or relating to the Plan or this Agreement.

5.10 Conformity to Securities Laws. Participant acknowledges that the Plan and this Agreement are intended to conform to the extent necessary with all provisions of the Securities Act and the Exchange Act and any other Applicable Law. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the Option is granted and may be exercised, only in such a manner as to conform to such Applicable Law. To the extent permitted by Applicable Law, the Plan and this Agreement shall be deemed amended to the extent necessary to conform to such Applicable Law.

5.11 Amendment, Suspension and Termination. To the extent permitted by the Plan, this Agreement may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Administrator or the Board; *provided, however,* that, except as may otherwise be provided by the Plan, no amendment, modification, suspension or termination of this Agreement shall adversely affect the Option in any material way without the prior written consent of Participant.

5.12 Successors and Assigns. The Company may assign any of its rights and delegate any of its obligations under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth in Section 5.3 hereof, this Agreement shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns.

5.13 Notification of Disposition. If this Option is designated as an Incentive Stock Option, Participant shall give prompt notice to the Company of any disposition or other transfer of any Shares acquired under this Agreement if such disposition or transfer is made (a) within two years from the Grant Date with respect to such Shares or (b) within one year after the transfer of such Shares to Participant. Such notice shall specify the date of such disposition or other transfer and the amount realized, in cash, other property, assumption of indebtedness or other consideration, by Participant in such disposition or other transfer.

5.14 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if Participant is subject to Section 16 of the Exchange Act, then the Plan, the Option and this Agreement shall be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3 of the Exchange Act) that are requirements for the application of such exemptive rule. To the extent permitted by Applicable Law, this Agreement shall be deemed amended to the extent necessary to conform to such applicable exemptive rule.

5.15 Not a Contract of Service Relationship. Nothing in this Agreement or in the Plan shall confer upon Participant any right to commence or continue to serve as an Employee or other Service Provider or shall interfere with or restrict in any way the rights of the Company and its Subsidiaries,

which rights are hereby expressly reserved, to discharge or terminate the services of Participant at any time for any reason whatsoever, with or without Cause, except to the extent expressly provided otherwise by Applicable Law or in a written agreement between the Company or a Subsidiary (as applicable) and Participant.

5.16 Entire Agreement. The Plan, the Grant Notice and this Agreement (including the Country Provisions) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof, *provided* that the Option shall be subject to any accelerated vesting provisions in any written agreement between Participant and the Company (or any Subsidiary who is the employer of Participant) or a Company plan pursuant to which Participant is eligible to participate, in each case, in accordance with the terms therein.

5.17 Section 409A. This Option is not intended to constitute "nonqualified deferred compensation" within the meaning of Section 409A of the Code (together with any Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the date hereof, "***Section 409A***"). However, notwithstanding any other provision of the Plan, the Grant Notice or this Agreement, if at any time the Administrator determines that the Option (or any portion thereof) may be subject to Section 409A, the Administrator shall have the right in its sole discretion (without any obligation to do so or to indemnify Participant or any other person for failure to do so) to adopt such amendments to the Plan, the Grant Notice or this Agreement, or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, as the Administrator determines are necessary or appropriate either for the Option to be exempt from the application of Section 409A or to comply with the requirements of Section 409A.

5.18 Limitation on Participant's Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and shall not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. Participant shall have only the rights of a general unsecured creditor of the Company and its Subsidiaries with respect to amounts credited and benefits payable, if any, with respect to the Option, and rights no greater than the right to receive the Shares as a general unsecured creditor with respect to the Option, as and when exercised pursuant to the terms hereof.

5.19 Rules Particular To Specific Countries.

(a) *Generally*. Participant shall, if required by the Administrator, enter into an election with the Company or a Subsidiary (in a form approved by the Company) under which any liability to the Company's (or a Subsidiary's) Tax-Related Items, including, but not limited to, National Insurance Contributions ("***NICs***") and the Fringe Benefit Tax, is transferred to and met by Participant.

(b) *Tax Indemnity*. Participant shall indemnify and keep indemnified the Company and any of its subsidiaries from and against any Tax-Related Items.

5.20 Special Country Provisions for Options Granted to Participants. This Option shall be subject to the Country Provisions, if any, for Participant's country of residence, as set forth in the Country Provisions. If Participant relocates to one of the countries included in the Country Provisions during the life of this Option, the special provisions for such country shall apply to Participant, to the extent the Company determines that the application of such provisions is necessary or advisable in order to comply with local law or facilitate the administration of the Plan. The Company reserves the right to impose other requirements on this Option and the Shares purchased upon exercise of this Option, to the extent the

Company determines it is necessary or advisable in order to comply with local laws or facilitate the administration of the Plan, and to require Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

*** * * * ***

APPENDIX

TO

STOCK OPTION AGREEMENT

Special Country Provisions for Options for Participants

This Appendix includes special terms and conditions applicable to Participants in the countries below. These terms and conditions are in addition to those set forth in the Stock Option Agreement (the "***Agreement***") and the Plan, and to the extent there are any inconsistencies between these terms and conditions and those set forth in the Agreement, these terms and conditions shall prevail. Any capitalized term used in this Appendix without definition shall have the meaning ascribed to such term in the Plan or the Agreement, as applicable.

In accepting the Option, Participant acknowledges, understands and agrees that:

(a) the Plan is established voluntarily by the Company, it is discretionary in nature, and may be amended, suspended or terminated by the Company at any time, to the extent permitted by the Plan;

(b) the grant of the Option is voluntary and occasional and does not create any contractual or other right to receive future grants of options, or benefits in lieu of options, even if options have been granted in the past;

(c) all decisions with respect to future option or other grants, if any, will be at the sole discretion of the Company;

(d) the Option grant and Participant's participation in the Plan shall not create a right to employment or be interpreted as forming an employment or service contract with the Company, or, if different, Participant's employer, or any Subsidiary or parent or affiliate of the Company, and shall not interfere with the ability of the Company, the employer or any Subsidiary or parent or affiliate of the Company, as applicable, to provide for a termination of Participant's service;

(e) Participant is voluntarily participating in the Plan;

(f) the Option and any Shares acquired under the Plan are not intended to replace any pension rights or compensation;

(g) the Option and any Shares acquired under the Plan and the income and value of same, are not part of normal or expected compensation for any purpose, including, without limitation, calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, long-service awards, pension or retirement or welfare benefits or similar payments;

(e) the future value of the Shares underlying the Option is unknown, indeterminable, and cannot be predicted with certainty;

(f) if the underlying Shares do not increase in value, the Option will have no value;

(g) if Participant exercises the Option and acquires Shares, the value of such Shares may increase or decrease in value, even below the exercise price; and

(h) neither the Company, the employer nor any parent, Subsidiary or affiliate of the Company shall be liable for any foreign exchange rate fluctuation between Participant's local currency

and the United States Dollar that may affect the value of the Option or of any amounts due to Participant pursuant to the exercise of the Option or the subsequent sale of any Shares acquired upon exercise.

Securities Law Notice: Unless otherwise noted, neither the Company nor the Shares are registered with any local stock exchange or under the control of any local securities regulator outside the United States. The Agreement (of which this Appendix is a part), the Plan, and any other communications or materials that Participant may receive regarding participation in the Plan do not constitute advertising or an offering of securities outside the United States, and the issuance of securities described in any Plan-related documents is not intended for public offering or circulation in Participant's jurisdiction.

General Provisions

Data Privacy: **Participant acknowledges and agrees to the data privacy provisions set forth in Section 11.8 of the Plan.**

Notifications: This Appendix also includes information relating to exchange control and other issues of which Participant should be aware with respect to his or her participation in the Plan. The information is based on the exchange control, securities and other laws in effect in the respective countries as of July 12, 2021. Such laws are often complex and change frequently. As a result, the Company strongly recommends that Participant not rely on the information herein as the only source of information relating to the consequences of participation in the Plan because the information may be out of date at the time the Option is exercised or Shares acquired under the Plan are sold. In addition, the information contained in this Appendix is general in nature and may not apply to Participant's particular situation, and the Company is not in a position to assure Participant of any particular result. Accordingly, Participant is advised to seek appropriate professional advice as to how the relevant laws in his or her country may apply to his or her situation. Finally, Participant understands that if Participant is a citizen or resident of a country other than the one in which he or she is currently residing or working, the information contained herein may not be applicable to Participant.

English Language: By participating in the Plan, Participant acknowledges that Participant is proficient in the English language, or has consulted with an advisor who is sufficiently proficient in English, so as to allow him or her to understand the terms and conditions of the Plan and the Agreement applicable to Participant's country of residence. If Participant has received the Agreement and the Plan applicably to his or her country of residence or any other document related to the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

Currency: Participant understands that, any amounts related to the Option will be denominated in U.S. dollars and will be converted to any local currency using a prevailing exchange rate in effect at the time such conversion is performed, as determined by the Company. Participant understands and agrees that neither the Company nor any affiliate shall be liable for any foreign exchange rate fluctuation between Participant's local currency and the U.S. dollar that may affect the value of the Option, or of any amounts due to Participant or as a result of the subsequent sale of any Shares acquired under the Option.

Foreign Asset/Account Reporting; Exchange Controls: Participant's country of residence may have certain foreign asset and/or account reporting or exchange control requirements which may affect his or her ability to acquire or hold Shares under the Agreement or cash received (including proceeds arising from the sale of Shares) in a brokerage or bank account outside Participant's country. Participant may be required to report such accounts, assets or transactions to the tax or other authorities in his or her country. Participant may also be required to repatriate sale proceeds or other funds received as a result of his/her participation in the Plan to his or her country through a designated broker or bank and/or within a certain

time after receipt. Participant is responsible for ensuring compliance with such regulations and should consult with his or her personal legal advisor for any details.

No Advice Regarding Grant: The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding Participant's participation in the Plan or the Agreement or any receipt of the Option or sale of Shares acquired upon exercise of the Option. Participant should consult his or her own personal tax, legal and financial advisors regarding his or her participation in the Plan and the Agreement before taking any action related to the Option or the Shares.

Imposition of Other Requirements: The Company reserves the right to impose other requirements on Participant, on the Option and/or any Shares issuable upon exercise of the Option, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

BRAZIL

Notifications

Exchange Control Information. If Participant is a resident or domiciled in Brazil, Participant will be required to submit an annual declaration of assets and rights held outside of Brazil to the Central Bank of Brazil if the aggregate value of such assets and rights is equal to or greater than US$100,000. Please note that the US$100,000 threshold may be changed annually.

CANADA

Terms and Conditions

Termination Date. The following provision supplements Article III of the Agreement:

For purposes of this Option, Participant's Termination of Service is deemed to occur (regardless of the reason for the termination and whether or not later found to be invalid or in breach of Applicable Law in the jurisdiction where Participant is rendering services or the terms of Participant's employment or service agreement, if any) on the date (the "***Termination Date***") that is the earliest of (1) the termination date of Participant's status as a Service Provider, (2) the date Participant receives written notice of termination of Participant's status as a Service Provider, or (3) the date Participant is no longer actively employed by or actively providing services to the Company or any of its Subsidiaries regardless of any notice period or period of pay in lieu of such notice mandated under Applicable Law (including, but not limited to, statutory law, regulatory law and/or common law) in the jurisdiction where Participant is rendering service or the terms of Participant's employment or other service agreement, if any. The Administrator shall have the exclusive discretion to determine when Participant is no longer actively providing services for purposes of this Option (including whether Participant may still be considered to be providing services while on a leave of absence).

Notwithstanding the foregoing, if applicable employment standards legislation explicitly requires continued participation in the Plan during a statutory notice period, Participant acknowledges that his or her right to participate in the Plan, if any, will terminate effective as of the last day of Participant's minimum statutory notice period, but Participant will not earn or be entitled to pro-rata vesting if the vesting date falls after the end of Participant's statutory notice period, nor will Participant be entitled to any compensation for lost vesting.

The following provisions apply if Participant resides in Quebec:

Consent to Receive Information in English. The parties acknowledge that it is their express wish that the Agreement, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English.

Consentement Pour Recevoir Des Informations en Anglais. Les parties reconnaissent avoir exigé la rédaction en anglais de la convention, ainsi que de tous documents, avis et procédures judiciaires, exécutés, donnés ou intentés en vertu de, ou liés directement ou indirectement, à la présente convention.

Notifications

Securities Law Information. The sale or other disposal of Shares acquired under the Plan will take place only outside of Canada through the facilities of a stock exchange on which the Shares are listed.

Foreign Asset/Account Reporting Information. Canadian residents are required to report any foreign specified property (including cash held outside of Canada and Shares acquired under the Plan) on form T1135 (Foreign Income Verification Statement) if the total value of the foreign specified property exceeds C$100,000 at any time in the year. Options must be reported (generally, at nil cost) on Form 1135 if the C$100,000 cost threshold is exceeded due to other foreign specified property Participant holds. When Shares are acquired, their cost generally is the adjusted cost base ("***ACB***") of the Shares. The ACB would ordinarily equal the Fair Market Value of the Shares at exercise, but if Participant owns other Shares, this ACB may have to be averaged with the ACB of the other Shares. The form T1135 must be filed with Participant's annual tax return by April 30 of the following year for every year during which his or her foreign property exceeds C$100,000. Participant should consult with his or her personal tax advisor to determine his or her reporting requirements.

GERMANY

Notifications

Exchange Control Information. Cross-border payments in excess of €12,500 must be reported monthly to the German Federal Bank. If Participant receives cross-border payments in excess of €12,500 in connection with the sale of securities (including Shares acquired under the Plan) or the receipt of dividends paid on such Shares, Participant must report by the fifth day of the month following the month in which the payment was received. The report must be filed electronically. The form of report can be accessed via the German Federal Bank's website at www.bundesbank.de and is available in both German and English.

Foreign Asset/Account Reporting Information. If the acquisition of Shares under the Plan leads to a "qualified participation" at any point during the calendar year, Participant will need to report the acquisition when Participant files his or her tax return for the relevant year. A "qualified participation" is attained if (i) the value of the Shares acquired exceeds EUR 150,000 or (ii) in the unlikely event Participant holds Shares exceeding 10% of the total Common Stock. However, if Shares are listed on a recognized U.S. stock exchange and Participant owns less than 1% of the total Common Stock, this requirement will not apply.

HONDURAS

There are no country-specific provisions.

JAPAN

Notifications

Exchange Control Information. If Participant acquires shares of Common Stock valued at more than ¥100,000,000 in a single transaction, Participant must file a Securities Acquisition Report with the Ministry of Finance ("***MOF***") through the Bank of Japan within 20 days of the exercise of the Option. In addition, if Participant pays more than ¥30,000,000 in a single transaction for the shares at exercise, Participant must file a Payment Report with the MOF through the Bank of Japan by the 20th day of the month following the month in which the payment was made. The precise reporting requirements vary depending on whether the relevant payment is made through a bank in Japan. A Payment Report is required independently of a Securities Acquisition Report. Consequently, if the total amount that Participant pays on a one-time basis at exercise of the Option exceeds ¥100,000,000, Participant must file both a Payment Report and a Securities Acquisition Report.

MEXICO

Terms and Conditions

Acknowledgment of the Agreement. By participating in the Plan, Participant acknowledges that Participant has received a copy of the Plan, has reviewed the Plan in its entirety and fully understands and accepts all provisions of the Plan. Participant further acknowledges that Participant has read and expressly approves the terms and conditions set forth in the general provisions of this Appendix, in which the following is clearly described and established: (i) Participant's participation in the Plan does not constitute an acquired right; (ii) the Plan and Participant's participation in the Plan are offered by the Company on a wholly discretionary basis; (iii) Participant's participation in the Plan is voluntary; and (iv) the Company, or any Subsidiary or other affiliate of the Company, is not responsible for any decrease in the value of the underlying Shares.

Labor Law Policy and Acknowledgment. By participating in the Plan, Participant expressly recognizes that Duolingo, Inc., with registered offices at 5900 Penn Ave, Second Floor, Pittsburgh, PA 15206, U.S.A., is solely responsible for the administration of the Plan and that Participant's participation in the Plan and acquisition of Shares does not constitute an employment relationship between Participant and the Company since Participant is participating in the Plan on a wholly commercial basis. Based on the foregoing, Participant expressly recognizes that the Plan and the benefits that Participant may derive from participation in the Plan do not establish any rights between Participant and the Company and do not form part of the employment conditions and/or benefits provided by the Company and any modification of the Plan or its termination shall not constitute a change or impairment of the terms and conditions of Participant's employment.

Participant further understands that Participant's participation in the Plan is as a result of a unilateral and discretionary decision of the Company; therefore, the Company reserves the absolute right to amend and/or discontinue Participant's participation at any time without any liability to Participant.

Finally, Participant hereby declares that Participant does not reserve any action or right to bring any claim against the Company for any compensation or damages regarding any provision of the Plan or the benefits derived under the Plan, and Participant therefore grants a full and broad release to the Company or any Subsidiary or other affiliate of the Company, branches, representation offices, its shareholders, officers, agents or legal representatives with respect to any claim that may arise.

Términos y Condiciones

Reconocimiento del Contrato. Al participar en el Plan, usted reconoce que ha recibido una copia del Plan, que ha revisado el Plan en su totalidad, y que entiende y acepta en su totalidad, todas y cada una de las disposiciones del Plan. Asimismo reconoce que ha leído y aprueba expresamente los términos y condiciones señalados en el párrafo 3.1 del Convenio, en lo que claramente se describe y establece lo siguiente: (i) su participación en el Plan no constituye un derecho adquirido; (ii) el Plan y su participación en el Plan son ofrecidos por la Compañía sobre una base completamente discrecional; (iii) su participación en el Plan es voluntaria; y (iv) la Compañía y sus afiliadas no son responsables de ninguna por la disminución en el valor de las Acciones subyacentes.

Política de Legislación Laboral y Reconocimiento. *Al participar en el Plan, usted reconoce expresamente que Duolingo, Inc., con oficinas registradas en 5900 Penn Ave, Second Floor, Pittsburgh, PA 15206, EE.UU, es la única responsable por la administración del Plan, y que su participación en el Plan, así como la adquisición de las Acciones, no constituye una relación laboral entre usted y la Compañía, debido a que usted participa en el plan sobre una base completamente mercantil. Con base en lo anterior, usted reconoce expresamente que el Plan y los beneficios que pudiera obtener por su participación en el Plan, no establecen derecho alguno entre usted y la Compañía, y no forman parte de las condiciones y/o prestaciones laborales que la Compañía ofrece, y que las modificaciones al Plan o su terminación, no constituirán un cambio ni afectarán los términos y condiciones de su relación laboral.*

Asimismo usted entiende que su participación en el Plan es el resultado de una decisión unilateral y discrecional de la Compañía; por lo tanto, la Compañía se reserva el derecho absoluto de modificar y/o suspender su participación en cualquier momento, sin que usted incurra en responsabilidad alguna.

Finalmente, usted declara que no se reserva acción o derecho alguno para interponer reclamación alguna en contra de la Compañía, por concepto de compensación o daños relacionados con cualquier disposición del Plan o de los beneficios derivados del Plan, y por lo tanto, usted libera total y ampliamente de toda responsabilidad a la Compañía, a sus afiliadas, sucursales, oficinas de representación, sus accionistas, funcionarios, agentes o representantes legales, con respecto a cualquier reclamación que pudiera surgir.

SINGAPORE

Notifications

Securities Law Information. The Option award is being made in reliance of section 273(1)(f) of the Securities and Futures Act (Cap. 289) ("***SFA***") for which it is exempt from the prospectus and registration requirements under the SFA.

Director Notification Obligation. If Participant is a director, associate director or shadow director of a Singapore subsidiary or affiliate of the Company, Participant is subject to certain notification requirements under the Singapore Companies Act. Among these requirements is an obligation to notify the Company's relevant Singapore subsidiary or affiliate in writing when Participant receives an interest (e.g., an Option or Shares) in the Company or any parent, subsidiary or affiliate. In addition, Participant must notify the Company's Singapore subsidiary or affiliate when Participant sells Shares or shares of any relevant parent, subsidiary or affiliate (including when Participant sells Shares issued upon vesting and exercise of the Option). These notifications must be made within two days of acquiring or disposing of any interest in the Company or any parent, subsidiary or affiliate. In addition, a notification of

Participant's interests in the Company or any parent, subsidiary or affiliate must be made within two days of becoming a director.

SPAIN

Terms and Conditions

Nature of Grant. By accepting the Option, Participant consents to participate in the Plan and acknowledges that he or she has received a copy of the Plan. Participant understands that the Company has unilaterally, gratuitously and discretionally decided to grant Options under the Plan to individuals who may be employees of the Company or of a Subsidiary throughout the world. This decision is a limited decision that is entered into upon the express assumption and condition that any grant will not bind the Company or any Subsidiary other than as expressly set forth in the Agreement. Consequently, Participant understands that the Options are granted on the assumption and condition that the Options and any Shares acquired under the Plan are not part of any employment or service contract (either with the Company or with any Subsidiary) and shall not be considered a mandatory benefit or salary for any purpose (including severance compensation) or any other right whatsoever. In addition, Participant understands that this grant would not be made to him or her but for the assumptions and conditions referred to above; thus, Participant acknowledges and freely accepts that, should any or all of the assumptions be mistaken or should any of the conditions not be met for any reason, then any grant of, or right to, the Option shall be null and void. Further, Participant understands and agrees that, unless otherwise expressly provided for by the Company or set forth in the Plan or the Agreement, the rights under the Plan are a conditional right to Shares and can be forfeited in the case of, or affected by, Participant's Termination of Service. This will be the case, for example, even if (a) Participant is considered to be unfairly dismissed without good cause; (b) Participant is dismissed for disciplinary or objective reasons or due to a collective dismissal; (c) Participant terminates employment due to a change of work location, duties or any other employment or contractual condition; (d) Participant terminates employment due to unilateral breach of contract of the Company or its Subsidiaries and affiliates; or (e) Participant's employment terminates for any other reason whatsoever. Consequently, upon Participant's termination for any of the reasons set forth above, Participant may automatically lose any rights to the Option or to purchase Shares upon exercise of the Option.

Exchange Control Information. Participant must declare the acquisition and sale of Shares to the Dirección General de Comercio y Inversiones (the "***DGCI***") for statistical purposes. Because Participant will not sell the shares through the use of a Spanish financial institution, Participant must make the declaration him or herself by filing a D-6 form with the DGCI. Generally, the D-6 form must be filed each January while the shares are owned; however, if the value of the Shares acquired or disposed of or the amount of the sale proceeds exceeds €1,502,530 (or if Participant holds 10% or more of the share capital of the Company), the declaration must be filed within one month of the acquisition or disposition, as applicable. Further, Participant is required to declare electronically to the Bank of Spain any securities accounts (including brokerage accounts held abroad), as well as the shares held in such accounts if the value of the transactions during the prior tax year or the balances in such accounts as of December 31 of the prior tax year exceed €1,000,000.

Securities Law Information. The Option grant described in the Agreement does not qualify under Spanish regulations as a security. No "offer of securities to the public," as defined under Spanish law, has taken place or will take place in the Spanish territory in connection with the grant of the Option. The Agreement has not been, nor will it be, registered with the *Comisión Nacional del Mercado de Valores*, and does not constitute a public offering or prospectus.

Foreign Asset/Account Reporting Information. To the extent Participant holds shares and/or has bank accounts outside Spain with a value in excess of €50,000 (for each type of asset) as of December 31 each year, Participant will be required to report information on such assets on Participant's tax return (tax form 720) for such year. After such shares and/or accounts are initially reported, the reporting obligation will apply for subsequent years only if the value of any previously-reported shares or accounts increases by more than €20,000.

UNITED KINGDOM

Terms and Conditions

Tax Withholding. The following provisions supplement Section 3.5 of the Stock Option Agreement:

Without limitation to Section 3.5 of the Stock Option Agreement, Participant agrees that Participant is liable for all Tax-Related Items and hereby covenants to pay all such Tax-Related Items as and when requested by the Company or other affiliate of the Company for which Participant renders services (the "***Service Recipient***") or by Her Majesty's Revenue and Customs ("***HMRC***") (or any other tax authority or any other relevant authority). Participant also agrees to indemnify and keep indemnified the Company and the Service Recipient against any Tax-Related Items that they are required to pay or withhold or have paid or will pay to HMRC (or any other tax authority or any other relevant authority) on Participant's behalf.

Notwithstanding the foregoing, if Participant is a director or executive officer (within the meaning of Section 13(k) of the Exchange Act), Participant understands that he or she may not be able to indemnify the Company or the Service Recipient for the amount of Tax-Related Items not collected from or paid by Participant because the indemnification could be considered to be a loan. In this case, any income tax not collected within ninety (90) days of the end of the U.K. tax year in which an event giving rise to the Tax-Related Items occurs may constitute a benefit to Participant on which additional income tax and employee NICs may be payable. Participant understands that he or she will be responsible for reporting and paying any income tax due on this additional benefit directly to HMRC under the self-assessment regime and for reimbursing the Company and/or the Service Recipient (as appropriate) for the value of employee NICs due on this additional benefit which the Company or the Service Recipient may recover from Participant by any of the means referred to in Section 4.4 of the Stock Option Agreement.

Exhibit 10.3(c)

DUOLINGO, INC.
2021 INCENTIVE AWARD PLAN

RESTRICTED STOCK UNIT AWARD GRANT NOTICE

Duolingo, Inc., a Delaware corporation, (the "***Company***"), pursuant to its 2021 Incentive Award Plan, as may be amended from time to time (the "***Plan***"), hereby grants to the holder listed below ("***Participant***"), an award of restricted stock units ("***Restricted Stock Units***" or "***RSUs***"). Each vested Restricted Stock Unit represents the right to receive, in accordance with the Restricted Stock Unit Award Agreement attached hereto as **Exhibit A** (the "***Agreement***"), including any special provisions for Participant's country of residence, if any, set forth in the Appendix for Participant's Country (the "***Country Provisions***"), one share of Common Stock ("***Share***"). This award of Restricted Stock Units is subject to all of the terms and conditions set forth herein and in the Agreement, the Country Provisions (if applicable) and the Plan, each of which are incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Restricted Stock Unit Award Grant Notice, the Country Provisions and the Agreement.

Participant:	[_____]
Grant Date:	[_____]
Total Number of RSUs:	[_____]
Vesting Commencement Date:	[_____]
Vesting Schedule:	[_____]
Termination:	If Participant experiences a Termination of Service, all RSUs that have not become vested on or prior to the date of such Termination of Service will thereupon be automatically forfeited by Participant without payment of any consideration therefor.

If the Company uses an electronic capitalization table system (such as Shareworks) and the fields in this Grant Notice are blank or the information is otherwise provided in a different format electronically, the blank fields and other information will be deemed to come from the electronic capitalization system and is considered part of this Grant Notice.

By his or her signature and the Company's signature below, Participant agrees to be bound by the terms and conditions of the Plan, the Agreement and this Grant Notice. Participant has reviewed the Plan, the Agreement and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of the Plan, the Agreement and this Grant Notice. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, the Agreement or this Grant Notice. In addition, by signing below, Participant also agrees that the Company, in its sole discretion, may satisfy any withholding obligations in accordance with Section 2.6(b) of the Agreement by (i) withholding shares of Common Stock otherwise issuable to Participant upon vesting of the RSUs, (ii) instructing a broker on Participant's behalf to sell shares of Common Stock otherwise

issuable to Participant upon vesting of the RSUs and submit the proceeds of such sale to the Company, or (iii) using any other method permitted by Section 2.6(b) of the Agreement or the Plan.

DUOLINGO, INC.:		**PARTICIPANT:**	
By:	_____	By:	_____
Print Name:	_____	Print Name:	_____
Title:	_____		
Address:	_____	Address:	_____

EXHIBIT A
TO RESTRICTED STOCK UNIT AWARD GRANT NOTICE

RESTRICTED STOCK UNIT AWARD AGREEMENT

Pursuant to the Restricted Stock Unit Award Grant Notice (the "***Grant Notice***") to which this Restricted Stock Unit Award Agreement (this "***Agreement***") is attached, Duolingo, Inc., a Delaware corporation (the "***Company***"), has granted to Participant the number of restricted stock units ("***Restricted Stock Units***" or "***RSUs***") set forth in the Grant Notice under the Company's 2021 Incentive Award Plan, as may be amended from time to time (the "***Plan***"). Each Restricted Stock Unit represents the right to receive one share of Common Stock (a "***Share***") upon vesting.

ARTICLE I.

GENERAL

1.1 Defined Terms. Capitalized terms not specifically defined herein shall have the meanings specified in the Plan and the Grant Notice.

1.2 Incorporation of Terms of Plan. The RSUs are subject to the terms and conditions of the Plan, which are incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan shall control. If the Country Provisions apply to Participant, in the event of a conflict between the terms of this Agreement, the Grant Notice or the Plan and the Country Provisions, the terms of the Country Provisions shall control.

ARTICLE II.

GRANT OF RESTRICTED STOCK UNITS

2.1 Grant of RSUs. Pursuant to the Grant Notice and upon the terms and conditions set forth in the Plan, this Agreement and the Country Provisions (if applicable), effective as of the Grant Date set forth in the Grant Notice, the Company hereby grants to Participant an award of RSUs under the Plan in consideration of Participant's past and/or continued employment with or service to the Company or any Subsidiary and for other good and valuable consideration, subject to adjustments as provided in Article IX of the Plan.

2.2 Unsecured Obligation to RSUs. Unless and until the RSUs have vested in the manner set forth in Article II hereof, Participant will have no right to receive Common Stock or other property under any such RSUs. Prior to actual payment of any vested RSUs, such RSUs will represent an unsecured obligation of the Company, payable (if at all) only from the general assets of the Company.

2.3 Vesting Schedule. Subject to Section 2.5 hereof, the RSUs shall vest and become nonforfeitable with respect to the applicable portion thereof according to the vesting schedule set forth in the Grant Notice (rounding down to the nearest whole Share). Notwithstanding the foregoing and the Grant Notice, but subject to Section 2.5 hereof, in the event of a Change in Control, the RSUs shall be treated pursuant to Section 9.2 and 9.3 of the Plan.

2.4 Consideration to the Company. In consideration of the grant of the award of RSUs pursuant hereto, Participant agrees to render faithful and efficient services to the Company and its Subsidiaries, as applicable.

2.5 Forfeiture, Termination and Cancellation upon Termination of Service. Notwithstanding any contrary provision of this Agreement or the Plan, upon Participant's Termination of Service for any

or no reason, all Restricted Stock Units which have not vested prior to or in connection with such Termination of Service shall thereupon automatically be forfeited, terminated and cancelled as of the applicable termination date without payment of any consideration by the Company, and Participant, or Participant's beneficiary or personal representative, as the case may be, shall have no further rights hereunder. No portion of the RSUs which has not become vested as of the date on which Participant incurs a Termination of Service shall thereafter become vested, except as may otherwise be provided by the Administrator or as set forth in a written agreement between the Company (or any Subsidiary that is the employer of Participant) and Participant.

2.6 Issuance of Common Stock upon Vesting.

(a) As soon as administratively practicable following the vesting of any Restricted Stock Units pursuant to Section 2.3 hereof, but in no event later than 30 days after such vesting date (for the avoidance of doubt, this deadline is intended to comply with the "short term deferral" exemption from Section 409A of the Code), the Company shall deliver to Participant (or any transferee permitted under Section 3.2 hereof) either, as determined by the Company, in its sole discretion, (i) a number of Shares or (ii) a cash payment in the amount equal to the Fair Market Value, as of the date of vesting, of a number of Shares equal to the number of RSUs subject to this Award that vest on the applicable vesting date. Notwithstanding the foregoing, in the event Shares are not issued pursuant to Section 10.7 of the Plan, the Shares shall be issued pursuant to the preceding sentence as soon as administratively practicable after the Administrator determines that Shares can again be issued in accordance with such Section.

(b) As set forth in Section 10.5 of the Plan, the Company shall have the authority and the right to deduct or withhold, or to require Participant to remit to the Company, an amount sufficient to satisfy all applicable Tax-Related Items required by law to be withheld with respect to any taxable event arising in connection with the Restricted Stock Units. The Company shall not be obligated to deliver any Shares to Participant or Participant's legal representative unless and until Participant or Participant's legal representative shall have paid or otherwise satisfied in full the amount of all Tax-Related Items applicable to the taxable income of Participant resulting from the grant or vesting of the Restricted Stock Units or the issuance of Shares.

2.7 Conditions to Delivery of Shares. The Shares deliverable hereunder may be either previously authorized but unissued Shares, treasury Shares or issued Shares which have then been reacquired by the Company. Such Shares shall be fully paid and nonassessable. The Company shall not be required to issue Shares deliverable hereunder prior to fulfillment of the conditions set forth in Section 10.7 of the Plan.

2.8 Rights as Stockholder. The holder of the RSUs shall not be, nor have any of the rights or privileges of, a stockholder of the Company, including, without limitation, voting rights and rights to dividends, in respect of the RSUs and any Shares underlying the RSUs and deliverable hereunder unless and until such Shares shall have been issued by the Company and held of record by such holder (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company). No adjustment shall be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Article IX of the Plan.

ARTICLE III.

OTHER PROVISIONS

3.1 Administration. The Administrator shall have the power to interpret the Plan and this Agreement and to adopt such rules for the administration, interpretation and application of the Plan as are

consistent therewith and to interpret, amend or revoke any such rules. All actions taken and all interpretations and determinations made by the Administrator in good faith shall be final and binding upon Participant, the Company and all other interested persons. No member of the Committee or the Board shall be personally liable for any action, determination or interpretation made in good faith with respect to the Plan, this Agreement or the RSUs.

3.2 Transferability. The RSUs shall be subject to the restrictions on transferability set forth in Section 10.1 of the Plan.

3.3 Tax Consultation. Participant understands that Participant may suffer adverse tax consequences in connection with the RSUs granted pursuant to this Agreement (and the Shares issuable with respect thereto). Participant represents that Participant has consulted with any tax consultants Participant deems advisable in connection with the RSUs and the issuance of Shares with respect thereto and that Participant is not relying on the Company for any tax advice.

3.4 Binding Agreement. Subject to the limitation on the transferability of the RSUs contained herein, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

3.5 Adjustments Upon Specified Events. The Administrator may accelerate the vesting of the RSUs in such circumstances as it, in its sole discretion, may determine. Participant acknowledges that the RSUs are subject to adjustment, modification and termination in certain events as provided in this Agreement and Article IX of the Plan.

3.6 Notices. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company in care of the Secretary of the Company at the Company's principal office, and any notice to be given to Participant shall be addressed to Participant at Participant's last address reflected on the Company's records. By a notice given pursuant to this Section 3.6, either party may hereafter designate a different address for notices to be given to that party. Any notice shall be deemed duly given when sent via email or when sent by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service (or similar non-U.S. entity).

3.7 Participant's Representations. If the Shares issuable hereunder have not been registered under the Securities Act or any applicable state laws on an effective registration statement at the time of such issuance, Participant shall, if required by the Company, concurrently with such issuance, make such written representations as are deemed necessary or appropriate by the Company or its counsel.

3.8 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

3.9 Governing Law. The laws of the State of Delaware shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws. By entering into this Agreement, Participant irrevocably and unconditionally consents to submit to the exclusive jurisdiction of the courts of the State of Delaware and of the United States of America, in each case located in the State of Delaware, for any action arising out of or relating to this Agreement and the Plan (and agrees not to commence any litigation relating thereto except in such courts), and further agrees that service of any process, summons, notice or document by U.S. registered mail to the address contained in the records of the Company shall be effective service of process for any litigation brought against it in any such court. By entering into this Agreement, Participant irrevocably and unconditionally waives any objection to the

laying of venue of any litigation arising out of the Plan or this Agreement in the courts of the State of Delaware or the United States of America, in each case located in the State of Delaware, and further irrevocably and unconditionally waives and agrees not to plead or claim in any such court that any such litigation brought in any such court has been brought in an inconvenient forum. By entering into this Agreement, Participant irrevocably and unconditionally waives, to the fullest extent permitted by applicable law, any and all rights to trial by jury in connection with any litigation arising out of or relating to the Plan or this Agreement.

3.10 Conformity to Securities Laws. Participant acknowledges that the Plan and this Agreement are intended to conform to the extent necessary with all provisions of the Securities Act and the Exchange Act and any other Applicable Law. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the RSUs are granted, only in such a manner as to conform to Applicable Law. To the extent permitted by Applicable Law, the Plan and this Agreement shall be deemed amended to the extent necessary to conform to such Applicable Law.

3.11 Amendment, Suspension and Termination. To the extent permitted by the Plan, this Agreement may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Administrator or the Board; *provided, however,* that, except as may otherwise be provided by the Plan, no amendment, modification, suspension or termination of this Agreement shall adversely affect the RSUs in any material way without the prior written consent of Participant.

3.12 Successors and Assigns. The Company may assign any of its rights and delegate any of its obligations under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth in Section 3.2 hereof, this Agreement shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns.

3.13 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if Participant is subject to Section 16 of the Exchange Act, then the Plan, the RSUs and this Agreement shall be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3 of the Exchange Act) that are requirements for the application of such exemptive rule. To the extent permitted by Applicable Law, this Agreement shall be deemed amended to the extent necessary to conform to such applicable exemptive rule.

3.14 Not a Contract of Service Relationship. Nothing in this Agreement or in the Plan shall confer upon Participant any right to commence or continue to serve as an Employee or other Service Provider or shall interfere with or restrict in any way the rights of the Company and its Subsidiaries, which rights are hereby expressly reserved, to discharge or terminate the services of Participant at any time for any reason whatsoever, with or without Cause, except to the extent expressly provided otherwise by Applicable Law or in a written agreement between the Company or a Subsidiary (as applicable) and Participant.

3.15 Entire Agreement. The Plan, the Grant Notice and this Agreement (including the Country Provisions) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof, *provided* that the RSUs shall be subject to any accelerated vesting provisions in any written agreement between Participant and the Company (or any Subsidiary who is the employer of Participant) or a Company plan pursuant to which Participant is eligible to participate, in each case, in accordance with the terms therein.

3.16 Section 409A. This Award is not intended to constitute "nonqualified deferred compensation" within the meaning of Section 409A of the Code (together with any Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the date hereof, "***Section 409A***"). However, notwithstanding any other provision of the Plan, the Grant Notice or this Agreement, if at any time the Administrator determines that this Award (or any portion thereof) may be subject to Section 409A, the Administrator shall have the right in its sole discretion (without any obligation to do so or to indemnify Participant or any other person for failure to do so) to adopt such amendments to the Plan, the Grant Notice or this Agreement, or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, as the Administrator determines are necessary or appropriate for this Award either to be exempt from the application of Section 409A or to comply with the requirements of Section 409A.

3.17 Limitation on Participant's Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and shall not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. Participant shall have only the rights of a general unsecured creditor of the Company and its Subsidiaries with respect to amounts credited and benefits payable, if any, with respect to the RSUs, and rights no greater than the right to receive the Shares as a general unsecured creditor with respect to RSUs, as and when payable hereunder.

3.18 Rules Particular To Specific Countries.

(a) *Generally*. Participant shall, if required by the Administrator, enter into an election with the Company or a Subsidiary (in a form approved by the Company) under which any liability to the Company's (or a Subsidiary's) Tax-Related Items, including, but not limited to, National Insurance Contributions ("***NICs***") and the Fringe Benefit Tax, is transferred to and met by Participant.

(b) *Tax Indemnity*. Participant shall indemnify and keep indemnified the Company and any of its subsidiaries from and against any Tax-Related Items.

3.19 Special Country Provisions for RSUs Granted to Participants. The RSUs shall be subject to the Country Provisions, if any, for Participant's country of residence, as set forth in the Country Provisions. If Participant relocates to one of the countries included in the Country Provisions during the life of the RSUs, the special provisions for such country shall apply to Participant, to the extent the Company determines that the application of such provisions is necessary or advisable in order to comply with local law or facilitate the administration of the Plan. The Company reserves the right to impose other requirements on the RSUs and the Shares issuable upon settlement of the RSUs, to the extent the Company determines it is necessary or advisable in order to comply with local laws or facilitate the administration of the Plan, and to require Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

* * * * *

APPENDIX
TO
RESTRICTED STOCK UNIT AWARD AGREEMENT

Special Country Provisions for RSUs for Participants

This Appendix includes special terms and conditions applicable to Participants in the countries below. These terms and conditions are in addition to those set forth in the Restricted Stock Unit Agreement (the "***Agreement***") and the Plan, and to the extent there are any inconsistencies between these terms and conditions and those set forth in the Agreement, these terms and conditions shall prevail. Any capitalized term used in this Appendix without definition shall have the meaning ascribed to such term in the Plan or the Agreement, as applicable.

In accepting the RSUs, Participant acknowledges, understands and agrees that:

- the Plan is established voluntarily by the Company, it is discretionary in nature, and may be amended, suspended or terminated by the Company at any time, to the extent permitted by the Plan;
- the grant of the RSUs is voluntary and occasional and does not create any contractual or other right to receive future grants of restricted stock units, or benefits in lieu of restricted stock units, even if restricted stock units have been granted in the past;
- all decisions with respect to future restricted stock units or other grants, if any, will be at the sole discretion of the Company;
- Participant is voluntarily participating in the Plan;
- for labor law purposes, the RSUs and the Common Stock subject to the RSUs are an extraordinary item that does not constitute wages of any kind for services of any kind rendered to the Company or to Participant's service entity, and the award of the RSUs is outside the scope of Participant's service contract, if any;
- for labor law purposes, the RSUs and the Common Stock subject to the RSUs are not part of normal or expected wages or salary for any purposes, including, but not limited to, calculation of any severance, resignation, termination, redundancy, dismissal, end of service payments, bonuses, holiday pay, long-service awards, pension or retirement benefits or similar payments and in no event should be considered as compensation for, or relating in any way to, past services for the Company, any Subsidiary, Participant's employer, its parent, or any affiliate of the Company;
- the RSUs and the Common Stock subject to the RSUs are not intended to replace any pension rights or compensation;
- neither the RSUs nor any provision of this Agreement, the Plan or the policies adopted pursuant to the Plan confer upon Participant any right with respect to service or continuation of current service and shall not be interpreted to form a service contract or relationship with the Company or any subsidiary or affiliate;
- the future value of the underlying Common Stock is unknown and cannot be predicted with certainty; and
- the value of the Common Stock acquired upon vesting of the RSUs may increase or decrease in value.

Securities Law Notice: Unless otherwise noted, neither the Company nor the Shares are registered with any local stock exchange or under the control of any local securities regulator outside the United States. The Agreement (of which this Appendix is a part), the Plan, and any other communications or materials that Participant may receive regarding participation in the Plan do not constitute advertising or an offering of securities outside the United States, and the issuance of securities described in any Plan-related documents is not intended for public offering or circulation in Participant's jurisdiction.

General Provisions

Data Privacy. Participant acknowledges and agrees to the data privacy provisions set forth in Section 11.8 of the Plan.

Notifications. This Appendix also includes information relating to exchange control and other issues of which Participant should be aware with respect to his or her participation in the Plan. The information is based on the exchange control, securities and other laws in effect in the respective countries as of July 12, 2021. Such laws are often complex and change frequently. As a result, the Company strongly recommends that Participant not rely on the information herein as the only source of information relating to the consequences of participation in the Plan because the information may be out of date at the time the RSUs vest or Shares acquired under the Plan are sold. In addition, the information is general in nature and may not apply to the particular situation of Participant, and the Company is not in a position to assure Participant of any particular result. Accordingly, Participant is advised to seek appropriate professional advice as to how the relevant laws in his or her country may apply to his or her situation. Finally, Participant understands that if Participant is a citizen or resident of a country other than the one in which he or she is currently residing or working, the information contained herein may not be applicable to Participant.

English Language. By participating in the Plan, Participant acknowledges that Participant is proficient in the English language, or has consulted with an advisor who is sufficiently proficient in English, so as to allow him or her to understand the terms and conditions of the Plan and the Agreement applicable to Participant's country of residence. If Participant has received the Agreement and the Plan applicably to his or her country of residence or any other document related to the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

Currency. Participant understands that, any amounts related to the RSUs will be denominated in U.S. dollars and will be converted to any local currency using a prevailing exchange rate in effect at the time such conversion is performed, as determined by the Company. Participant understands and agrees that neither the Company nor any affiliate shall be liable for any foreign exchange rate fluctuation between Participant's local currency and the U.S. dollar that may affect the value of the RSUs, or of any amounts due to Participant or as a result of the subsequent sale of any Shares acquired under the RSUs.

Foreign Asset/Account Reporting; Exchange Controls. Participant's country of residence may have certain foreign asset and/or account reporting or exchange control requirements which may affect his or her ability to acquire or hold Shares under the Agreement or cash received (including proceeds arising from the sale of Shares) in a brokerage or bank account outside Participant's country. Participant may be required to report such accounts, assets or transactions to the tax or other authorities in his or her country. Participant may also be required to repatriate sale proceeds or other funds received as a result of his/her participation in the Plan to his or her country through a designated broker or bank and/or within a certain time after receipt. Participant is responsible for ensuring compliance with such regulations and should consult with his or her personal legal advisor for any details.

No Advice Regarding Grant. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding Participant's participation in the Plan or the Agreement or any receipt of the RSUs or sale of Shares acquired upon settlement of the RSUs. Participant should consult his or her own personal tax, legal and financial advisors regarding his or her participation in the Plan and the Agreement before taking any action related to the RSUs or the Shares.

Imposition of Other Requirements. The Company reserves the right to impose other requirements on Participant, on the RSUs and/or any Shares issuable upon settlement of the RSUs, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

CANADA

Terms and Conditions

Settlement. Notwithstanding any discretion in the Plan or anything to the contrary in this Agreement, this grant of RSUs shall only be settled in Shares. This provision is without prejudice to the application of Section 2.6(b) of the Agreement.

Termination of Service. The following provision supplements Section 2.5 of the Agreement:

For purposes of the RSUs, Participant's Termination of Service is deemed to occur (regardless of the reason for the termination and whether or not later found to be invalid or in breach of Applicable Law in the jurisdiction where Participant is rendering services or the terms of Participant's employment or other service agreement, if any) on the date (the "***Termination Date***") that is the earliest of (1) the termination date of Participant's status as a Service Provider, (2) the date Participant receives written notice of termination of Participant's status as a Service Provider, or (3) the date Participant is no longer actively employed by or actively providing services to the Company or any of its Subsidiaries regardless of any notice period or period of pay in lieu of such notice mandated under Applicable Law (including, but not limited to, statutory law, regulatory law and/or common law) in the jurisdiction where Participant is rendering service or the terms of Participant's employment or other service agreement, if any. The Administrator shall have the exclusive discretion to determine when Participant is no longer actively providing services for purposes of the RSUs (including whether Participant may still be considered to be providing services while on a leave of absence) and, hence, the Termination Date.

Notwithstanding the foregoing, if applicable employment standards legislation explicitly requires continued participation in the Plan during a statutory notice period, Participant acknowledges that his or her right to participate in the Plan, if any, will terminate effective as of the last day of Participant's minimum statutory notice period, but Participant will not earn or be entitled to pro-rata vesting if the vesting date falls after the end of Participant's statutory notice period, nor will Participant be entitled to any compensation for lost vesting.

The following provisions apply if Participant resides in Quebec:

Consent to Receive Information in English. The parties acknowledge that it is their express wish that the Agreement, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English.

Consentement Pour Recevoir Des Informations en Anglais. Les parties reconnaissent avoir exigé la rédaction en anglais de la convention, ainsi que de tous documents, avis et procédures judiciaires, exécutés, donnés ou intentés en vertu de, ou liés directement ou indirectement, à la présente convention.

Notifications

Securities Law Information. The sale or other disposal of Shares acquired under the Plan will take place only outside of Canada through the facilities of a stock exchange on which the Shares are listed.

Foreign Asset/Account Reporting Information. Participant is required to report any foreign specified property on form T1135 (Foreign Income Verification Statement) if the total value of the foreign specified property exceeds C$100,000 at any time in the year. Foreign specified property includes Shares acquired under the Plan, and may include the RSUs. The RSUs must be reported (generally at a nil cost) if the $100,000 cost threshold is exceeded because of other foreign property Participant holds. If Shares are acquired, their cost generally is the adjusted cost base ("***ACB***") of the Shares. The ACB ordinarily would equal the fair market value of the Shares at the time of acquisition, but if Participant owns other Shares, this ACB may have to be averaged with the ACB of the other Shares. The form must be filed by April 30 of the following year. Participant should consult with his or her personal legal advisor to ensure compliance with applicable reporting obligations.

CHINA

Terms and Conditions

*The following provisions apply only to Participants who are subject to exchange control restrictions imposed by the State Administration of Foreign Exchange ("**SAFE**"), as determined by the Company in its sole discretion:*

Award Conditioned on Satisfaction of Regulatory Obligations. In addition to the vesting schedule in the Grant Notice, settlement of the RSUs is also conditioned on the Company's completion of a registration of the Plan with SAFE and on the continued effectiveness of such registration (the "***SAFE Registration Requirement***"). If, or to the extent, the Company is unable to complete the registration or maintain the registration, no shares subject to the RSUs for which a registration cannot be completed or maintained shall be issued. In this case, the Company retains the discretion to settle any RSUs for which the vesting schedule in the Grant Notice, but not the SAFE Registration Requirement, has been met in cash paid through local payroll in an amount equal to the market value of the Shares subject to the RSUs less any Tax-Related Items; provided, however, that in case the Company is able to complete a SAFE registration with respect to any RSUs, the cash payment for RSUs not covered by the SAFE registration shall not be made until the initial SAFE registration has been completed.

Stock Must Remain With Company's Designated Broker. Participant agrees to hold any Shares received upon settlement of the RSUs with the Company's designated broker until the shares are sold. The limitation shall apply to all shares issued to Participant under the Plan, whether or not Participant remains a Service Provider.

Forced Sale of Shares. The Company has the discretion to arrange for the sale of the Shares issued upon settlement of the RSUs, either immediately upon settlement or at any time thereafter. In any event, if Participant experiences a termination of service with the Company or a Subsidiary, Participant will be required to sell all shares acquired upon settlement of the RSUs within such time period as required by the Company in accordance with SAFE requirements. Any shares remaining in the brokerage account at the end of this period shall be sold by the broker (on behalf of Participant and Participant hereby authorizes such sale). Participant agrees to sign any additional agreements, forms and/or consents that reasonably may be requested by the Company (or the Company's designated broker) to effectuate the sale of shares (including, without limitation, as to the transfer of the sale proceeds and other exchange control matters noted below) and shall otherwise cooperate with the Company with respect to such matters. Participant

acknowledges that neither the Company nor the designated broker is under any obligation to arrange for the sale of shares at any particular price (it being understood that the sale will occur in the market) and that broker's fees and similar expenses may be incurred in any such sale. In any event, when the shares are sold, the sale proceeds, less any withholding for Tax-Related Items, any broker's fees or commissions, and any similar expenses of the sale will be remitted to Participant in accordance with applicable exchange control laws and regulations.

Exchange Control Restrictions. Participant understands and agrees that Participant will be required to immediately repatriate to China the proceeds from the sale of any shares acquired under the Plan and any cash dividends paid on such shares. Participant further understands that such repatriation of proceeds may need to be effected through a special bank account established by the Company (or a Subsidiary), and Participant hereby consents and agrees that any sale proceeds and cash dividends may be transferred to such special account by the Company (or a Subsidiary) on Participant's behalf prior to being delivered to Participant and that no interest shall be paid with respect to funds held in such account.

The proceeds may be paid to Participant in U.S. dollars or local currency at the Company's discretion. If the proceeds are paid to Participant in U.S. dollars, Participant understands that a U.S. dollar bank account in China must be established and maintained so that the proceeds may be deposited into such account. If the proceeds are paid to Participant in local currency, Participant acknowledges that the Company (or its Subsidiaries) are under no obligation to secure any particular exchange conversion rate and that the Company (or its Subsidiaries) may face delays in converting the proceeds to local currency due to exchange control restrictions. Participant agrees to bear any currency fluctuation risk between the time the shares are sold and the net proceeds are converted into local currency and distributed to Participant. Participant further agrees to comply with any other requirements that may be imposed by the Company (or its Subsidiary) in the future in order to facilitate compliance with exchange control requirements in China.

Administration. The Company (or its Subsidiaries) shall not be liable for any costs, fees, lost interest or dividends or other losses that Participant may incur or suffer resulting from the enforcement of the terms of this Appendix or otherwise from the Company's operation and enforcement of the Plan, the Agreement, the Grant Notice and the RSUs in accordance with any applicable laws, rules, regulations and requirements.

Notifications

Exchange Control Information. Chinese residents may be required to report to SAFE all details of their foreign financial assets and liabilities (including Shares acquired under the Plan), as well as details of any economic transactions conducted with non-Chinese residents.

GERMANY

Notifications

Exchange Control Information. Cross-border payments in excess of €12,500 must be reported monthly to the German Federal Bank. If Participant receives cross-border payments in excess of €12,500 in connection with the sale of securities (including Shares acquired under the Plan) or the receipt of dividends paid on such Shares, Participant must report by the fifth day of the month following the month in which the payment was received. The report must be filed electronically. The form of report can be accessed via the German Federal Bank's website at www.bundesbank.de and is available in both German and English.

Foreign Asset/Account Reporting Information. If the acquisition of Shares under the Plan leads to a "qualified participation" at any point during the calendar year, Participant will need to report the acquisition when Participant files his or her tax return for the relevant year. A "qualified participation" is attained if (i) the value of the Shares acquired exceeds EUR 150,000 or (ii) in the unlikely event Participant holds Shares exceeding 10% of the total Common Stock. However, if Shares are listed on a recognized U.S. stock exchange and Participant owns less than 1% of the total Common Stock, this requirement will not apply.

SPAIN

Terms and Conditions

Nature of Grant. The following provision supplements Sections 2.5 and the general provisions of this Appendix:

By accepting this grant of RSUs, Participant consents to participation in the Plan and acknowledges that Participant has received a copy of the Plan.

Participant understands that the Company has unilaterally, gratuitously, and in its sole discretion decided to grant RSUs under the Plan to Service Providers throughout the world. The decision is a limited decision that is entered into upon the express assumption and condition that any grant will not bind the Company or any Subsidiary or other affiliate of the Company, other than to the extent set forth in this Agreement. Consequently, Participant understands that the RSUs are granted on the assumption and condition that the RSUs and any Shares acquired at settlement of the RSUs are not part of any employment or service agreement (either with the Company or any Subsidiary or other affiliate of the Company), and shall not be considered a mandatory benefit, salary for any purposes (including severance compensation), or any other right whatsoever. In addition, Participant understands that this grant of RSUs would not be made but for the assumptions and conditions referred to above; thus, Participant acknowledges and freely accepts that, should any or all of the assumptions be mistaken or should any of the conditions not be met for any reason, then any award of or right to the RSUs shall be null and void.

Further, Participant understands that Participant will not be entitled to continue vesting in any RSUs once Participant experiences a Termination of Service. This will be the case, for example, even in the event of a termination of Participant by reason of, but not limited to, resignation, retirement, disciplinary dismissal adjudged to be with cause, disciplinary dismissal adjusted or recognized to be without cause, individual or collective dismissal or objective grounds, whether adjudged or recognized to be without cause, material modification of the terms of employment or service under Article 41 of the Workers' Statute, relocation under Article 40 of the Workers' Statute, Article 50 of the Workers' Statute, unilateral withdrawal by the Company or any Subsidiary or other affiliate of the Company and under Article 10.3 of the Royal Decree 1382/1985. Participant acknowledges that Participant has read and specifically accepts the conditions referred to in Sections 2.5 and the general provisions of this Appendix.

Notifications

Securities Law Information. No "offer to the public," as defined under Spanish law, has taken place or will take place in the Spanish territory in connection with the RSUs. The Plan, this Agreement, and any other documents evidencing this grant of RSUs have not been, nor will they be, registered with the *Comisión Nacional del Mercado de Valores* (the Spanish securities regulator), and none of those documents constitutes a public offering prospectus.

UNITED KINGDOM

Terms and Conditions

Responsibility for Taxes. The following provision supplements Section 2.6(b) of the Award Agreement:

Without limitation to Section 2.6(b) of the Award Agreement, Participant agrees that Participant is liable for all Tax-Related Items and hereby covenants to pay all such Tax-Related Items as and when requested by the Company or other affiliate of the Company for which Participant renders services (the "***Service Recipient***") or by Her Majesty's Revenue and Customs ("***HMRC***") (or any other tax authority or any other relevant authority). Participant also agrees to indemnify and keep indemnified the Company or Service Recipient against any Tax-Related Items that they are required to pay or withhold or have paid or will pay to HMRC (or any other tax authority or any other relevant authority) on Participant's behalf.

Notwithstanding the foregoing, if Participant is a director or executive officer (within the meaning of Section 13(k) of the Exchange Act), the terms of the immediately foregoing provision will not apply in case the indemnification is viewed as a loan. In this case, any income tax not collected within ninety (90) days of the end of the U.K. tax year in which an event giving rise to the Tax-Related Items occurs may constitute a benefit to Participant on which additional income tax and employee NICs may be payable. Participant understands that he or she will be responsible for reporting and paying any income tax due on this additional benefit directly to HMRC under the self-assessment regime and for reimbursing the Company and/or the Service Recipient for the value of employee NICs due on this additional benefit which the Company or Service Recipient may collect by any of the means referred to in Section 2.6(b) of the Award Agreement.

DUOLINGO, INC.
2021 EMPLOYEE STOCK PURCHASE PLAN

ARTICLE 1
PURPOSE

The Plan's purpose is to assist employees of the Company and its Designated Subsidiaries in acquiring a stock ownership interest in the Company, and to help such employees provide for their future security and to encourage them to remain in the employment of the Company and its Subsidiaries.

The Plan consists of two components: the Section 423 Component and the Non-Section 423 Component. The Section 423 Component is intended to qualify as an "employee stock purchase plan" under Section 423 of the Code and shall be administered, interpreted and construed in a manner consistent with the requirements of Section 423 of the Code. In addition, this Plan authorizes the grant of Options under the Non-Section 423 Component, which need not qualify as Options granted pursuant to an "employee stock purchase plan" under Section 423 of the Code; such Options granted under the Non-Section 423 Component shall be granted pursuant to separate Offerings containing such sub-plans, appendices, rules or procedures as may be adopted by the Administrator and designed to achieve tax, securities laws or other objectives for Eligible Employees and the Designated Subsidiaries in locations outside of the United States. Except as otherwise provided herein, the Non-Section 423 Component will operate and be administered in the same manner as the Section 423 Component. Offerings intended to be made under the Non-Section 423 Component will be designated as such by the Administrator at or prior to the time of such Offering.

For purposes of this Plan, the Administrator may designate separate Offerings under the Plan, the terms of which need not be identical, in which Eligible Employees will participate, even if the dates of the applicable Offering Period(s) in each such Offering is identical, provided that the terms of participation are the same within each separate Offering under the Section 423 Component as determined under Section 423 of the Code. Solely by way of example and without limiting the foregoing, the Company could, but shall not be required to, provide for simultaneous Offerings under the Section 423 Component and the Non-Section 423 Component of the Plan.

ARTICLE 2
PURPOSE

As used in the Plan, the following words and phrases have the meanings specified below, unless the context clearly indicates otherwise:

2.1 "***Administrator***" means the Committee, or such individuals to which authority to administer the Plan has been delegated under Section 7.1 hereof.

2.2 "***Agent***" means the brokerage firm, bank or other financial institution, entity or person(s), if any, engaged, retained, appointed or authorized to act as the agent of the Company or an Employee with regard to the Plan.

2.3 "***Board***" means the Board of Directors of the Company.

2.4 "***Code***" means the U.S. Internal Revenue Code of 1986, as amended, and all regulations, guidance, compliance programs and other interpretative authority issued thereunder.

2.5 "***Committee***" means the Compensation Committee of the Board.

2.6 "***Common Stock***" means the Class A common stock of the Company.

2.7 "***Company***" means Duolingo, Inc., a Delaware corporation, or any successor.

2.8 "***Compensation***" of an Employee means the regular earnings or base salary paid to the Employee from the Company on each Payday as compensation for services to the Company or any Designated Subsidiary, before deduction for any salary deferral contributions made by the Employee to any tax-qualified or nonqualified deferred compensation plan, including overtime, shift differentials, vacation pay, salaried production schedule premiums, holiday pay, jury duty pay, funeral leave pay, paid time off, military pay, prior week adjustments and weekly bonus, but excluding bonuses and commissions, education or tuition reimbursements, imputed income arising under any group insurance or benefit program, travel expenses, business and moving reimbursements, including tax gross ups and taxable mileage allowance, income received in connection with any stock options, restricted stock, restricted stock units or other compensatory equity awards and all contributions made by the Company or any Designated Subsidiary for the Employee's benefit under any employee benefit plan now or hereafter established. For any Participants in non-U.S. jurisdictions, any equivalent amounts of the foregoing compensation shall be determined by the Administrator. Compensation shall be calculated before deduction of any income or employment tax withholdings, but such amounts shall be withheld from the Employee's net income.

2.9 "***Designated Subsidiary***" means each Subsidiary, including any Subsidiary in existence on the Effective Date and any Subsidiary formed or acquired following the Effective Date, that has been designated by the Board or Committee from time to time in its sole discretion as eligible to participate in the Plan, in accordance with Section 7.2 hereof, such designation to specify whether such participation is in the Section 423 Component or Non-Section 423 Component. A Designated Subsidiary may participate in either the Section 423 Component or Non-Section 423 Component, but not both; *provided* that a Subsidiary that, for U.S. tax purposes, is disregarded from the Company or any Subsidiary that participates in the Section 423 Component shall automatically constitute a Designated Subsidiary that participates in the Section 423 Component. The designation by the Administrator of Designated Subsidiaries and changes in such designations by the Administrator shall not require stockholder approval. Only Subsidiary Corporations may be designated as Designated Subsidiaries for purposes of the Section 423 Component, and if an entity does not so qualify, it shall automatically be deemed to constitute a Designated Subsidiary that participates in the Non-Section 423 Component

2.10 "***Effective Date***" means the date immediately prior to the Public Trading Date.

2.11 "***Eligible Employee***" means, except as otherwise provided by the Administrator or in an Offering Document, an Employee:

(a) who is customarily scheduled to work at least 20 hours per week;

(b) whose customary employment is more than five months in a calendar year; and

(c) who, after the granting of the Option, would not be deemed for purposes of Section 423(b)(3) of the Code to possess 5% or more of the total combined voting power or value of all classes of stock of the Company or any Subsidiary.

For purposes of clause (c), the rules of Section 424(d) of the Code with regard to the attribution of stock ownership shall apply in determining the stock ownership of an individual, and stock which an Employee may purchase under outstanding options shall be treated as stock owned by the Employee.

Notwithstanding the foregoing, the Administrator may exclude from participation in the Section 423 Component as an Eligible Employee:

(x) any Employee that is a "highly compensated employee" of the Company or any Designated Subsidiary (within the meaning of Section 414(q) of the Code), or that is such a "highly compensated employee" (A) with compensation above a specified level, (B) who is an officer or (C) who is subject to the disclosure requirements of Section 16(a) of the Exchange Act; or

(y) any Employee who is a citizen or resident of a foreign jurisdiction (without regard to whether they are also a citizen of the United States or a resident alien (within the meaning of Section 7701(b)(1)(A) of the Code)) if either (A) the grant of the Option is prohibited under the laws of the jurisdiction governing such Employee, or (B) compliance with the laws of the foreign jurisdiction would cause the Section 423 Component, any Offering thereunder or an Option granted thereunder to violate the requirements of Section 423 of the Code;

provided that any exclusion in clauses (x) or (y) shall be applied in an identical manner under each Offering to all Employees of the Company and all Designated Subsidiaries, in accordance with Treas. Reg. § 1.423-2(e). Notwithstanding the foregoing, with respect to the Non-Section 423 Component, the first sentence in this definition shall apply in determining who is an "Eligible Employee," except (a) the Administrator may limit eligibility further within the Company or a Designated Subsidiary so as to only designate some Employees of the Company or a Designated Subsidiary as Eligible Employees, and (b) to the extent the restrictions in the first sentence in this definition are not consistent with applicable local laws, the applicable local laws shall control.

2.12 "***Employee***" means an individual who renders services to a Designated Subsidiary in the status of an employee, and, with respect to the Section 423 Component, a person who is an officer or other employee (as defined in accordance with Section 3401(c) of the Code) of the Company or any Designated Subsidiary. The Company shall determine in good faith and in the exercise of its discretion whether an individual has become or has ceased to be an Employee and the effective date of such individual's attainment or termination of such status. For purposes of an individual's participation in, or other rights under the Plan, all such determinations by the Company shall be final, binding and conclusive, notwithstanding that any court of law or governmental agency subsequently makes a contrary determination. For purposes of the Plan, the employment relationship shall be treated as continuing intact while the individual is on sick leave or other leave of absence approved by the Company or a Designated Subsidiary (which, for purposes of the Section 423 Component, must meet the requirements of Treas. Reg. § 1.421-7(h)(2)). For purposes of the Section 423 Component, where the period of an approved leave of absence exceeds three months, or such other period specified in Treas. Reg. § 1.421-1(h)(2), and the individual's right to reemployment is not provided either by statute or contract, the employment relationship shall be deemed to have terminated for purposes of the Plan on the first day immediately following such three-month period, or such other period specified in Treas. Reg. § 1.421-1(h)(2).

2.13 "***Enrollment Date***" means the first date of each Offering Period.

2.14 "***Exercise Date***" means the last day of each Purchase Period, except as provided in Section 5.2 hereof.

2.15 "***Exchange Act***" means the Securities Exchange Act of 1934, as amended.

2.16 "***Fair Market Value***" means, as of any date, the value of Common Stock determined as follows:

(a) If the Common Stock is (i) listed on any established securities exchange (such as the New York Stock Exchange or Nasdaq Stock Market), (ii) listed on any national market system or (iii) listed, quoted or traded on any automated quotation system, its Fair Market Value shall be the closing sales price for a share of Common Stock as quoted on such exchange or system for such date or, if there is no closing sales price for a share of Common Stock on the date in question, the closing sales price for a share of Common Stock on the last preceding date for which such quotation exists, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;

(b) If the Common Stock is not listed on an established securities exchange, national market system or automated quotation system, but the Common Stock is regularly quoted by a recognized securities dealer, its Fair Market Value shall be the mean of the high bid and low asked prices for such date or, if there are no high bid and low asked prices for a share of Common Stock on such date, the high bid and low asked prices for a share of Common Stock on the last preceding date for which such information exists, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; or

(c) If the Common Stock is neither listed on an established securities exchange, national market system or automated quotation system nor regularly quoted by a recognized securities dealer, its Fair Market Value shall be established by the Administrator in good faith (and, with respect to the initial Offering Period of the Plan, as set forth in the Offering Document for the initial Offering Period).

2.17 "***Grant Date***" means the first day of an Offering Period (or, with respect to the initial Offering Period of the Plan, such date set forth in the Offering Document approved by the Administrator with respect to the initial Offering Period).

2.18 "***New Exercise Date***" has the meaning set forth in Section 5.2(b) hereof.

2.19 "***Non-Section 423 Component***" means those Offerings under the Plan, together with the sub-plans, appendices, rules or procedures, if any, adopted by the Administrator as a part of this Plan, in each case, pursuant to which Options may be granted to non-U.S. Eligible Employees that need not satisfy the requirements for Options granted pursuant to an "employee stock purchase plan" that are set forth under Section 423 of the Code.

2.20 "***Offering***" means an offer under the Plan of an Option that may be exercised during an Offering Period as further described in Section 4 hereof. Unless otherwise specified by the Administrator, each Offering to the Eligible Employees of the Company or a Designated Subsidiary shall be deemed a separate Offering, even if the dates and other terms of the applicable Offering Periods of each such Offering are identical and the provisions of the Plan will separately apply to each Offering. To the extent permitted by Treas. Reg. § 1.423-2(a)(1), the terms of each separate Offering under the Section 423 Component need not be identical, provided that the terms of the Section 423 Component and an Offering thereunder together satisfy Treas. Reg. § 1.423-2(a)(2) and (a)(3).

2.21 "***Offering Period***" means such period of time commencing on such date(s) as determined by the Board or Committee, in its discretion, and with respect to which Options shall be granted to Participants. The duration and timing of Offering Periods may be established or changed by the Board or Committee at any time, in its sole discretion. Notwithstanding the foregoing, in no event may an Offering Period exceed 27 months.

2.22 "***Option***" means the right to purchase shares of Common Stock pursuant to the Plan during each Offering Period.

2.23 "***Option Price***" means the purchase price of a share of Common Stock hereunder as provided in Section 4.2 hereof.

2.24 "***Parent***" means any entity that is a parent corporation of the Company within the meaning of Section 424 of the Code.

2.25 "***Participant***" means any Eligible Employee who elects to participate in the Plan.

2.26 "***Payday***" means the regular and recurring established day for payment of Compensation to an Employee of the Company or any Designated Subsidiary.

2.27 "***Plan***" means this 2021 Employee Stock Purchase Plan, including both the Section 423 Component and Non-Section 423 Component and any other sub-plans or appendices hereto, as amended from time to time.

2.28 "***Plan Account***" means a bookkeeping account established and maintained by the Company in the name of each Participant.

2.29 "***Purchase Period***" means such period of time commencing on such dates as determined by the Board or Committee, in its discretion, within each Offering Period. The duration and timing of Purchase Periods may be established or changed by the Board or Committee at any time, in its sole discretion. Notwithstanding the foregoing, in no event may a Purchase Period exceed the duration of the Offering Period under which it is established.

2.30 "***Section 409A***" means Section 409A of the Code and the regulations promulgated thereunder by the United States Treasury Department, as amended or as may be amended from time to time.

2.31 "***Section 423 Component***" means those Offerings under the Plan that are intended to meet the requirements under Section 423(b) of the Code.

2.32 "***Subsidiary***" means (a) any Subsidiary Corporation, and (b) with respect to any Offering pursuant to the Non-Section 423 Component only, Subsidiary may also include any corporate or noncorporate entity in which the Company has a direct or indirect equity interest or significant business relationship.

2.33 "***Subsidiary Corporation***" shall mean any corporation, other than the Company, in an unbroken chain of corporations beginning with the Company if, at the time of the determination, each of the corporations other than the last corporation in an unbroken chain owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain, or any other entity that is a subsidiary corporation of the Company within the meaning of Section 424 of the Code.

2.34 "***Treas. Reg.***" means U.S. Department of the Treasury regulations.

2.35 "***Withdrawal Election***" has the meaning set forth in Section 6.1(a) hereof.

ARTICLE 3
PARTICIPATION

3.1. Eligibility.

(a) Any Eligible Employee who is employed by the Company or a Designated Subsidiary on a given Enrollment Date for an Offering Period shall be eligible to participate in the Plan during such Offering Period, subject to the requirements of Articles 4 and 5 hereof, and, for the Section 423 Component, the limitations imposed by Section 423(b) of the Code.

(b) No Eligible Employee shall be granted an Option under the Section 423 Component which permits the Participant's rights to purchase shares of Common Stock under the Plan, and to purchase stock under all other employee stock purchase plans of the Company, any Parent or any Subsidiary subject to Section 423 of the Code, to accrue at a rate which exceeds $25,000 of fair market value of such stock (determined at the time such Option is granted) for each calendar year in which such Option is outstanding at any time. The limitation under this Section 3.1(b) shall be applied in accordance with Section 423(b)(8) of the Code.

3.2. Election to Participate; Payroll Deductions

(a) Except as provided in Sections 3.2(e) and 3.3 hereof or in an applicable Offering Document, an Eligible Employee may become a Participant in the Plan only by means of payroll deduction. Each individual who is an Eligible Employee as of an Offering Period's Enrollment Date may elect to participate in such Offering Period and the Plan by delivering to the Company a payroll deduction authorization no later than the period of time prior to the applicable Enrollment Date that is determined by the Administrator, in its sole discretion.

(b) Subject to Section 3.1(b) hereof and except as may otherwise be determined by the Administrator and/or as set forth in the Offering Document, payroll deductions (i) shall equal at least 1% of the Participant's Compensation as of each Payday of the Offering Period following the Enrollment Date, but not more than 15% of the Participant's Compensation as of each Payday of the Offering Period following the Enrollment Date; and (ii) will be expressed as a whole number percentage. Amounts deducted from a Participant's Compensation with respect to an Offering Period pursuant to this Section 3.2 shall be deducted each Payday through payroll deduction and credited to the Participant's Plan Account.

(c) Unless otherwise determined by the Administrator and/or as set forth in the Offering Document, following at least one payroll deduction, a Participant may decrease (to as low as zero) the amount deducted from such Participant's Compensation only once during an Offering Period upon ten calendar days' prior written notice to the Company. Unless otherwise determined by the Administrator and/or as set forth in the Offering Document, a Participant may not increase the amount deducted from such Participant's Compensation during an Offering Period.

(d) Upon the completion of an Offering Period, each Participant in such Offering Period shall automatically participate in the immediately following Offering Period at the same payroll deduction percentage or fixed amount as in effect at the termination of such Offering Period, unless such Participant delivers to the Company a different election with respect to the successive Offering Period in accordance with Section 3.2(a) hereof, or unless such Participant becomes ineligible for participation in the Plan.

(e) Notwithstanding any other provisions of the Plan to the contrary, in non-U.S. jurisdictions where participation in the Plan through payroll deductions is prohibited, the Administrator

may provide that an Eligible Employee may elect to participate through contributions to the Participant's account under the Plan in a form acceptable to the Administrator in lieu of or in addition to payroll deductions; provided, however, that, for any Offering under the Section 423 Component, the Administrator must determine that any alternative method of contribution is applied on an equal and uniform basis to all Eligible Employees in the Offering.

(f) To determine which Designated Subsidiaries shall participate in the Non-Section 423 Component and which shall participate in the Section 423 Component.

3.3. Leave of Absence. During leaves of absence approved by the Company meeting the requirements of Treas. Reg. § 1.421-1(h)(2), a Participant may continue participation in the Plan by making cash payments to the Company on the Participant's normal payday equal to the Participant's authorized payroll deduction.

ARTICLE 4
PURCHASE OF SHARES

4.1 Grant of Option. The Company may make one or more Offerings under the Plan, which may be successive or overlapping with one another, until the earlier of: (i) the date on which the shares of Common Stock available under the Plan have been sold or (ii) the date on which the Plan is suspended or terminates. The Administrator shall designate the terms and conditions of each Offering in writing, including without limitation, the Offering Period and the Purchase Periods, as set forth in an offering document (the "***Offering Document***"). Each Participant shall be granted an Option with respect to an Offering Period on the applicable Grant Date. Subject to the limitations of Section 3.1(b) hereof, the number of shares of Common Stock subject to a Participant's Option shall be determined by dividing (a) such Participant's payroll deductions accumulated prior to an Exercise Date and retained in the Participant's Plan Account on such Exercise Date by (b) the applicable Option Price; *provided* that, unless otherwise set forth in the Offering Document, in no event shall a Participant be permitted to purchase during each Offering Period more than 100,000 shares of Common Stock (subject to any adjustment pursuant to Section 5.2 hereof). The Administrator and/or the Offering Document may, for future Offering Periods, increase or decrease, in its absolute discretion, the maximum number of shares of Common Stock that a Participant may purchase during such future Offering Periods. Each Option shall expire on the last Exercise Date for the applicable Offering Period immediately after the automatic exercise of the Option in accordance with Section 4.3 hereof, unless such Option terminates earlier in accordance with Article 6 hereof.

4.2 Option Price. The "***Option Price***" per share of Common Stock to be paid by a Participant upon exercise of the Participant's Option on an Exercise Date for an Offering Period shall equal 85% of the lesser of the Fair Market Value of a share of Common Stock on (a) the applicable Grant Date and (b) the applicable Exercise Date, or such other price designated by the Administrator; *provided* that in no event shall the Option Price per share of Common Stock be less than the par value per share of the Common Stock; *provided further*, that no Option Price shall be designated by the Administrator that would cause the Section 423 Component to fail to meet the requirements under Section 423(b) of the Code.

4.3 Purchase of Shares.

(a) On each Exercise Date for an Offering Period, each Participant shall automatically and without any action on such Participant's part be deemed to have exercised the Participant's Option to purchase at the applicable per share Option Price the largest number of whole shares of Common Stock which can be purchased with the amount in the Participant's Plan Account.

Except as may otherwise be provided by the Administrator with respect to any Offering and/or as set forth in the Offering Document, any balance less than the per share Option Price that is remaining in the Participant's Plan Account (after exercise of such Participant's Option) as of the Exercise Date shall be carried forward to the next Purchase Period or Offering Period, unless the Participant has elected to withdraw from the Plan pursuant to Section 6.1 hereof or, pursuant to Section 6.2 hereof, such Participant has ceased to be an Eligible Employee. Any balance not carried forward to the next Purchase Period or Offering Period in accordance with the prior sentence shall be promptly refunded to the applicable Participant. In no event shall an amount greater than or equal to the per share Option Price as of an Exercise Date be carried forward to the next Purchase Period or Offering Period.

(b) As soon as practicable following each Exercise Date, the number of shares of Common Stock purchased by such Participant pursuant to Section 4.3(a) hereof shall be delivered (either in share certificate or book entry form), in the Company's sole discretion, to either (i) the Participant or (ii) an account established in the Participant's name at a stock brokerage or other financial services firm designated by the Company. If the Company is required to obtain from any commission or agency authority to issue any such shares of Common Stock, the Company shall seek to obtain such authority. Inability of the Company to obtain from any such commission or agency authority which counsel for the Company deems necessary for the lawful issuance of any such shares shall relieve the Company from liability to any Participant except to refund to the Participant such Participant's Plan Account balance, without interest thereon. The Company may require that such shares of Common Stock be retained with a particular broker or agent for a designated period of time and/or may establish other procedures to permit tracking of qualifying and disqualifying dispositions of such shares of Common Stock.

4.4 Automatic Termination of Offering Period. If the Fair Market Value of a share of Common Stock on any Exercise Date (except the final scheduled Exercise Date of any Offering Period) is lower than the Fair Market Value of a share of Common Stock on the Grant Date for an Offering Period, then such Offering Period shall terminate on such Exercise Date after the automatic exercise of the Option in accordance with Section 4.3 hereof, and each Participant shall automatically be enrolled in the Offering Period that commences immediately following such Exercise Date and such Participant's payroll deduction authorization shall remain in effect for such Offering Period.

4.5 Transferability of Rights. An Option granted under the Plan shall not be transferable, other than by will or the applicable laws of descent and distribution, and is exercisable during the Participant's lifetime only by the Participant. No option or interest or right to the Option shall be available to pay off any debts, contracts or engagements of the Participant or the Participant's successors in interest or shall be subject to disposition by pledge, encumbrance, assignment or any other means whether such disposition be voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempt at disposition of the Option shall have no effect.

ARTICLE 5
PROVISIONS RELATING TO COMMON STOCK

5.1. Common Stock Reserved. Subject to adjustment as provided in Section 5.2 hereof, the maximum number of shares of Common Stock that shall be made available for sale under the Plan shall be the sum of (a) 1,119,000, and (b) an increase commencing on January 1, 2022 and continuing annually on the anniversary thereof through (and including) January 1, 2031, equal to the lesser of (A) 1% of the shares of Common Stock outstanding on the last day of the immediately preceding calendar year and (B) such smaller number of shares of Common Stock as determined by the Board or the Committee; provided, however, no more than 8,390,521 Shares may be issued under the Plan. Shares made available

for sale under the Plan may be authorized but unissued shares, treasury shares of Common Stock, or reacquired shares reserved for issuance under the Plan. All or any portion of such maximum number of shares may be issued under the Section 423 Component.

5.2. Adjustments Upon Changes in Capitalization, Dissolution, Liquidation, Merger or Asset Sale.

(a) Changes in Capitalization. Subject to any required action by the stockholders of the Company, the number of shares of Common Stock which have been authorized for issuance under the Plan but not yet placed under Option, as well as the price per share and the number of shares of Common Stock covered by each Option under the Plan which has not yet been exercised shall be proportionately adjusted for any increase or decrease in the number of issued shares of Common Stock resulting from a stock split, reverse stock split, stock dividend, combination or reclassification of the Common Stock, or any other increase or decrease in the number of shares of Common Stock effected without receipt of consideration by the Company; *provided*, *however*, that conversion of any convertible securities of the Company shall not be deemed to have been "effected without receipt of consideration." Such adjustment shall be made by the Administrator, whose determination in that respect shall be final, binding and conclusive. Except as expressly provided herein, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number or price of shares of Common Stock subject to an Option.

(b) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, the Offering Periods then in progress shall be shortened by setting a new Exercise Date (the "***New Exercise Date***"), and shall terminate immediately prior to the consummation of such proposed dissolution or liquidation, unless provided otherwise by the Administrator. The New Exercise Date shall be before the date of the Company's proposed dissolution or liquidation. The Administrator shall notify each Participant in writing prior to the New Exercise Date, that the Exercise Date for the Participant's Option has been changed to the New Exercise Date and that the Participant's Option shall be exercised automatically on the New Exercise Date, unless prior to such date the Participant has withdrawn from the Offering Period as provided in Section 6.1 hereof or the Participant has ceased to be an Eligible Employee as provided in Section 6.2 hereof.

(c) Merger or Asset Sale. In the event of a proposed sale of all or substantially all of the assets of the Company, or the merger of the Company with or into another corporation, each outstanding Option shall be assumed or an equivalent Option substituted by the successor corporation or a Parent or Subsidiary of the successor corporation. If the successor corporation refuses to assume or substitute for the Option, any Offering Periods then in progress shall be shortened by setting a New Exercise Date and any Offering Periods then in progress shall end on the New Exercise Date. The New Exercise Date shall be before the date of the Company's proposed sale or merger. The Administrator shall notify each Participant in writing prior to the New Exercise Date, that the Exercise Date for the Participant's Option has been changed to the New Exercise Date and that the Participant's Option shall be exercised automatically on the New Exercise Date, unless prior to such date the Participant has withdrawn from the Offering Period as provided in Section 6.1 hereof or the Participant has ceased to be an Eligible Employee as provided in Section 6.2 hereof.

5.3. Insufficient Shares. If the Administrator determines that, on a given Exercise Date, the number of shares of Common Stock with respect to which Options are to be exercised may exceed the number of shares of Common Stock remaining available for sale under the Plan on such Exercise Date,

the Administrator shall make a pro rata allocation of the shares of Common Stock available for issuance on such Exercise Date in as uniform a manner as shall be practicable and as it shall determine in its sole discretion to be equitable among all Participants exercising Options to purchase Common Stock on such Exercise Date, and unless additional shares are authorized for issuance under the Plan, no further Offering Periods shall take place and the Plan shall terminate pursuant to Section 7.5 hereof. If an Offering Period is so terminated, then the balance of the amount credited to the Participant's Plan Account which has not been applied to the purchase of shares of Common Stock shall be paid to such Participant in one lump sum in cash within 30 days after such Exercise Date, without any interest thereon.

5.4. Rights as Stockholders. With respect to shares of Common Stock subject to an Option, a Participant shall not be deemed to be a stockholder of the Company and shall not have any of the rights or privileges of a stockholder. A Participant shall have the rights and privileges of a stockholder of the Company when, but not until, shares of Common Stock have been deposited in the designated brokerage account following exercise of the Participant's Option.

ARTICLE 6
TERMINATION OF PARTICIPATION

6.1 Cessation of Contributions; Voluntary Withdrawal.

(a) A Participant may cease payroll deductions during an Offering Period and elect to withdraw from the Plan by delivering written notice of such election to the Company in such form and at such time prior to the Exercise Date for such Offering Period as may be established by the Administrator (a "***Withdrawal Election***"). A Participant electing to withdraw from the Plan may elect to either (i) withdraw all of the funds then credited to the Participant's Plan Account as of the date on which the Withdrawal Election is received by the Company, in which case amounts credited to such Plan Account shall be returned to the Participant in one lump-sum payment in cash within 30 days after such election is received by the Company, without any interest thereon, and the Participant shall cease to participate in the Plan and the Participant's Option for such Offering Period shall terminate; or (ii) exercise the Option for the maximum number of whole shares of Common Stock on the applicable Exercise Date with any remaining Plan Account balance returned to the Participant in one lump-sum payment in cash within 30 days after such Exercise Date, without any interest thereon, and after such exercise cease to participate in the Plan. Upon receipt of a Withdrawal Election, the Participant's payroll deduction authorization and the Participant's Option shall terminate.

(b) A Participant's withdrawal from the Plan shall not have any effect upon the Participant's eligibility to participate in any similar plan which may hereafter be adopted by the Company or in succeeding Offering Periods which commence after the termination of the Offering Period from which the Participant withdraws.

(c) Except as otherwise permitted by the Administrator and/or as set forth in the Offering Document, a Participant who ceases contributions to the Plan during any Offering Period shall not be permitted to resume contributions to the Plan during that Offering Period.

6.2 Termination of Eligibility. Upon a Participant's ceasing to be an Eligible Employee, for any reason, such Participant's Option for the applicable Offering Period shall automatically terminate, the Participant shall be deemed to have elected to withdraw from the Plan, and such Participant's Plan Account shall be paid to such Participant or, in the case of the Participant's death, to the person or persons entitled thereto pursuant to applicable law, within 30 days after such cessation of being an Eligible Employee, without any interest thereon. If a Participant transfers employment from the Company or any Designated Subsidiary participating in the Section 423 Component to any Designated Subsidiary

participating in the Non-Section 423 Component, such transfer shall not be treated as a termination of employment, but the Participant shall immediately cease to participate in the Section 423 Component; however, any contributions made for the Offering Period in which such transfer occurs shall be transferred to the Non-Section 423 Component, and such Participant shall immediately join the then-current Offering under the Non-Section 423 Component upon the same terms and conditions in effect for the Participant's participation in the Section 423 Component, except for such modifications otherwise applicable for Participants in such Offering. A Participant who transfers employment from any Designated Subsidiary participating in the Non-Section 423 Component to the Company or any Designated Subsidiary participating in the Section 423 Component shall not be treated as terminating the Participant's employment and shall remain a Participant in the Non-Section 423 Component until the earlier of (i) the end of the current Offering Period under the Non-Section 423 Component, or (ii) the Enrollment Date of the first Offering Period in which the Participant is eligible to participate following such transfer. Notwithstanding the foregoing, the Administrator may establish different rules to govern transfers of employment between companies participating in the Section 423 Component and the Non-Section 423 Component, consistent with the applicable requirements of Section 423 of the Code.

ARTICLE 7
GENERAL PROVISIONS

7.1 Administration.

(a) The Plan shall be administered by the Committee, which shall be composed of members of the Board. The Committee may delegate administrative tasks under the Plan to the services of an Agent or Employees to assist in the administration of the Plan, including establishing and maintaining an individual securities account under the Plan for each Participant.

(b) It shall be the duty of the Administrator to conduct the general administration of the Plan in accordance with the provisions of the Plan. The Administrator shall have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To establish and terminate Offerings;

(ii) To determine when and how Options shall be granted and the provisions and terms of each Offering (which need not be identical);

(iii) To select Designated Subsidiaries in accordance with Section 7.2 hereof;

(iv) To impose a mandatory holding period pursuant to which Participants may not dispose of or transfer shares of Common Stock purchased under the Plan for a period of time determined by the Administrator in its discretion; and

(v) To construe and interpret the Plan, the terms of any Offering and the terms of the Options and to adopt such rules for the administration, interpretation, and application of the Plan as are consistent therewith and to interpret, amend or revoke any such rules. The Administrator, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan, any Offering or any Option, in a manner and to the extent it shall deem necessary or expedient to administer the Plan, subject to Section 423 of the Code for the Section 423 Component.

(c) The Administrator may adopt rules or procedures relating to the operation and administration of the Plan to accommodate the specific requirements of local laws and procedures. Without limiting the generality of the foregoing, the Administrator is specifically authorized to adopt

rules and procedures regarding handling of participation elections, payroll deductions, payment of interest, conversion of local currency, payroll tax, withholding procedures and handling of stock certificates which vary with local requirements. In its absolute discretion, the Board may at any time and from time to time exercise any and all rights and duties of the Administrator under the Plan.

(d) The Administrator may adopt sub-plans applicable to particular Designated Subsidiaries or locations, which sub-plans may be designed to be outside the scope of Section 423 of the Code. The rules of such sub-plans may take precedence over other provisions of this Plan, with the exception of Section 5.1 hereof, but unless otherwise superseded by the terms of such sub-plan, the provisions of this Plan shall govern the operation of such sub-plan.

(e) All expenses and liabilities incurred by the Administrator in connection with the administration of the Plan shall be borne by the Company. The Administrator may, with the approval of the Committee, employ attorneys, consultants, accountants, appraisers, brokers or other persons. The Administrator, the Company and its officers and directors shall be entitled to rely upon the advice, opinions or valuations of any such persons. All actions taken and all interpretations and determinations made by the Administrator in good faith shall be final and binding upon all Participants, the Company and all other interested persons. No member of the Board or Administrator shall be personally liable for any action, determination or interpretation made in good faith with respect to the Plan or the options, and all members of the Board or Administrator shall be fully protected by the Company in respect to any such action, determination, or interpretation.

7.2 Designation of Subsidiary Corporations. The Board or Administrator shall designate from time to time the Subsidiaries that shall constitute Designated Subsidiaries, and determine whether such Designated Subsidiaries shall participate in the Section 423 Component or Non-Section 423 Component. The Board or Administrator may designate a Subsidiary, or terminate the designation of a Subsidiary, without the approval of the stockholders of the Company.

7.3 Reports. Individual accounts shall be maintained for each Participant in the Plan. Statements of Plan Accounts shall be made available to Participants at least annually, which statements shall set forth the amounts of payroll deductions, the Option Price, the number of shares purchased and the remaining cash balance, if any.

7.4 No Right to Employment. Nothing in the Plan shall be construed to give any person (including any Participant) the right to remain in the employ of the Company, a Parent or a Subsidiary or to affect the right of the Company, any Parent or any Subsidiary to terminate the employment of any person (including any Participant) at any time, with or without cause, which right is expressly reserved.

7.5 Amendment and Termination of the Plan.

(a) The Board may, in its sole discretion, amend, suspend or terminate the Plan at any time and from time to time. To the extent necessary to comply with Section 423 of the Code (or any successor rule or provision), with respect to the Section 423 Component, or any other applicable law, regulation or stock exchange rule, the Company shall obtain stockholder approval of any such amendment to the Plan in such a manner and to such a degree as required by Section 423 of the Code or such other law, regulation or rule.

(b) If the Administrator determines that the ongoing operation of the Plan may result in unfavorable financial accounting consequences, the Administrator may, to the extent permitted under Section 324 of the Code, for the Section 423 Component, in its discretion and, to the extent necessary or

desirable, modify or amend the Plan to reduce or eliminate such accounting consequence including, but not limited to:

(i) altering the Option Price for any Offering Period including an Offering Period underway at the time of the change in Option Price;

(ii) shortening any Offering Period so that the Offering Period ends on a new Exercise Date, including an Offering Period underway at the time of the Administrator action; and

(iii) allocating shares of Common Stock.

Such modifications or amendments shall not require stockholder approval or the consent of any Participant.

(c) Upon termination of the Plan, the balance in each Participant's Plan Account shall be refunded as soon as practicable after such termination, without any interest thereon.

7.6 Use of Funds; No Interest Paid. All funds received by the Company by reason of purchase of shares of Common Stock under the Plan shall be included in the general funds of the Company free of any trust or other restriction and may be used for any corporate purpose, except for funds contributed under Offerings in which the local law of a non-U.S. jurisdiction requires that contributions to the Plan by Participants be segregated from the Company's general corporate funds and/or deposited with an independent third party for Participants in non-U.S. jurisdictions. No interest shall be paid to any Participant or credited under the Plan, except as may be required by local law in a non-U.S. jurisdiction. If the segregation of funds and/or payment of interest on any Participant's account is so required, such provisions shall apply to all Participants in the relevant Offering except to the extent otherwise permitted by U.S. Treasury Regulation Section 1.423-2(f). With respect to any Offering under the Non-Section 423 Component, the payment of interest shall apply as determined by the Administrator (but absent any such determination, no interest shall apply).

7.7 Term; Approval by Stockholders. No Option may be granted during any period of suspension of the Plan or after termination of the Plan. The Plan shall be submitted for the approval of the Company's stockholders within 12 months after the date of the Board's initial adoption of the Plan. Options may be granted prior to such stockholder approval; *provided*, *however*, that such Options shall not be exercisable prior to the time when the Plan is approved by the stockholders; *provided*, *further* that if such approval has not been obtained by the end of the 12-month period, all Options previously granted under the Plan shall thereupon terminate and be canceled and become null and void without being exercised.

7.8 Effect Upon Other Plans. The adoption of the Plan shall not affect any other compensation or incentive plans in effect for the Company, any Parent or any Subsidiary. Nothing in the Plan shall be construed to limit the right of the Company, any Parent or any Subsidiary (a) to establish any other forms of incentives or compensation for Employees of the Company or any Parent or any Subsidiary, or (b) to grant or assume Options otherwise than under the Plan in connection with any proper corporate purpose, including, but not by way of limitation, the grant or assumption of options in connection with the acquisition, by purchase, lease, merger, consolidation or otherwise, of the business, stock or assets of any corporation, firm or association.

7.9 Conformity to Securities Laws. Notwithstanding any other provision of the Plan, the Plan and the participation in the Plan by any individual who is then subject to Section 16 of the Exchange Act shall be subject to any additional limitations set forth in any applicable exemption rule under Section

16 of the Exchange Act (including any amendment to Rule 16b-3 of the Exchange Act) that are requirements for the application of such exemptive rule. To the extent permitted by applicable law, the Plan shall be deemed amended to the extent necessary to conform to such applicable exemptive rule.

7.10 Notice of Disposition of Shares. Each Participant in the Section 423 Component shall give the Company prompt notice of any disposition or other transfer of any shares of Common Stock, acquired pursuant to the exercise of an Option granted under the Section 423 Component, if such disposition or transfer is made (a) within two years after the applicable Grant Date or (b) within one year after the transfer of such shares of Common Stock to such Participant upon exercise of such Option. The Company may direct that any certificates evidencing shares acquired pursuant to the Plan refer to such requirement.

7.11 Tax Withholding. The Company or any Parent or any Subsidiary shall be entitled to require payment in cash or deduction from other compensation payable to each Participant of any sums required by federal, state or local tax law to be withheld with respect to any purchase of shares of Common Stock under the Plan or any sale of such shares.

7.12 Governing Law. The Plan and all rights and obligations thereunder shall be construed and enforced in accordance with the laws of the State of Delaware, without regard to the conflict of law rules thereof or of any other jurisdiction.

7.13 Notices. All notices or other communications by a Participant to the Company under or in connection with the Plan shall be deemed to have been duly given when received in the form specified by the Company at the location, or by the person, designated by the Company for the receipt thereof.

7.14 Conditions To Issuance of Shares.

(a) Notwithstanding anything herein to the contrary, the Company shall not be required to issue or deliver any certificates or make any book entries evidencing shares of Common Stock pursuant to the exercise of an Option by a Participant, unless and until the Board or the Committee has determined, with advice of counsel, that the issuance of such shares of Common Stock is in compliance with all applicable laws, regulations of governmental authorities and, if applicable, the requirements of any securities exchange or automated quotation system on which the shares of Common Stock are listed or traded, and the shares of Common Stock are covered by an effective registration statement or applicable exemption from registration. In addition to the terms and conditions provided herein, the Board or the Committee may require that a Participant make such reasonable covenants, agreements, and representations as the Board or the Committee, in its discretion, deems advisable in order to comply with any such laws, regulations, or requirements.

(b) All certificates for shares of Common Stock delivered pursuant to the Plan and all shares of Common Stock issued pursuant to book entry procedures are subject to any stop-transfer orders and other restrictions as the Committee deems necessary or advisable to comply with federal, state, or foreign securities or other laws, rules and regulations and the rules of any securities exchange or automated quotation system on which the shares of Common Stock are listed, quoted, or traded. The Committee may place legends on any certificate or book entry evidencing shares of Common Stock to reference restrictions applicable to the shares of Common Stock.

(c) The Committee shall have the right to require any Participant to comply with any timing or other restrictions with respect to the settlement, distribution or exercise of any Option, including a window-period limitation, as may be imposed in the sole discretion of the Committee.

(d) Notwithstanding any other provision of the Plan, unless otherwise determined by the Committee or required by any applicable law, rule or regulation, the Company may, in lieu of delivering to any Participant certificates evidencing shares of Common Stock issued in connection with any Option, record the issuance of shares of Common Stock in the books of the Company (or, as applicable, its transfer agent or stock plan administrator).

7.15 Equal Rights and Privileges. All Eligible Employees of the Company (or of any Designated Subsidiary) granted Options pursuant to an Offering under the Section 423 Component shall have equal rights and privileges under this Plan to the extent required under Section 423 of the Code so that the Section 423 Component qualifies as an "employee stock purchase plan" within the meaning of Section 423 of the Code. Any provision of the Section 423 Component that is inconsistent with Section 423 of the Code shall, without further act or amendment by the Company or the Board, be reformed to comply with the equal rights and privileges requirement of Section 423 of the Code. Eligible Employees participating in the Non-Section 423 Component need not have the same rights and privileges as Eligible Employees participating in the Section 423 Component.

7.16 Rules Particular to Specific Countries. Notwithstanding anything herein to the contrary, the terms and conditions of the Plan with respect to Participants who are tax residents of a particular non-U.S. country or who are foreign nationals or employed in non-U.S. jurisdictions may be subject to an addendum to the Plan in the form of an appendix or sub-plan (which appendix or sub-plan may be designed to govern Offerings under the Section 423 Component or the Non-Section 423 Component, as determined by the Administrator). To the extent that the terms and conditions set forth in an appendix or sub-plan conflict with any provisions of the Plan, the provisions of the appendix or sub-plan shall govern. The adoption of any such appendix or sub-plan shall be pursuant to Section 7.1 above. Without limiting the foregoing, the Administrator is specifically authorized to adopt rules and procedures, with respect to Participants who are foreign nationals or employed in non-U.S. jurisdictions, regarding the exclusion of particular Subsidiaries from participation in the Plan, eligibility to participate, the definition of Compensation, handling of payroll deductions or other contributions by Participants, payment of interest, conversion of local currency, data privacy security, payroll tax, withholding procedures, establishment of bank or trust accounts to hold payroll deductions or contributions. Without limiting the foregoing, the Administrator is specifically authorized to adopt rules and procedures, with respect to Participants who are foreign nationals or employed in non-U.S. jurisdictions, regarding the exclusion of particular Subsidiaries from participation in the Plan, eligibility to participate, the definition of Compensation, handling of payroll deductions or other contributions by Participants, payment of interest, conversion of local currency, data privacy security, payroll tax, withholding procedures, establishment of bank or trust accounts to hold payroll deductions or contributions. Without limiting the generality of the foregoing, the Administrator is specifically authorized to adopt rules and procedures regarding the exclusion of particular Subsidiaries from participation in the Plan, eligibility to participate, the definition of Compensation, handling of payroll deductions or other contributions by Participants, payment of interest, conversion of local currency, data privacy security, payroll tax, withholding procedures, establishment of bank or trust accounts to hold payroll deductions or contributions, determination of beneficiary designation requirements, and handling of stock certificates. The Administrator also is authorized to determine that, to the extent permitted by U.S. Treasury Regulation Section 1.423-2(f), the terms of a purchase right granted under the Plan or an Offering to citizens or residents of a non-U.S. jurisdiction will be less favorable than the terms of purchase rights granted under the Plan or the same Offering to Employees resident solely in the U.S. To the extent any sub-plan or appendix or other changes approved by the Administrator are inconsistent with the requirements of Section 423 of the Code or would jeopardize the tax-qualified status of the Section 423 Component, the change shall cause the Designated Subsidiaries affected thereby to be considered Designated Subsidiaries in a separate Offering under the

Non-Section 423 Component instead of the Section 423 Component. To the extent any Employee of a Designated Subsidiary in the Section 423 Component is a citizen or resident of a foreign jurisdiction (without regard to whether they are also a U.S. citizen or a resident alien (within the meaning of Section 7701(b)(1)(A) of the Code)) and compliance with the laws of the foreign jurisdiction would cause the Section 423 Component, any Offering or the option to violate the requirements of Section 423 of the Code, such Employee shall be considered a Participant in a separate Offering under the Non-Section 423 Component.

Notwithstanding any other provisions of the Plan to the contrary, in non-U.S. jurisdictions where participation in the Plan through payroll deductions is prohibited, the Administrator may provide that an Eligible Employee may elect to participate through contributions to his or her account under the Plan in a form acceptable to the Administrator in lieu of or in addition to payroll deductions; provided, however, that, for any Offering under the Section 423 Component, the Administrator must determine that any alternative method of contribution is applied on an equal and uniform basis to all Eligible Employees in the Offering.

7.17 Transfer of Employment. A transfer of employment from one Designated Subsidiary to another shall not be treated as a termination of employment. If a Participant transfers employment from the Company or any Designated Subsidiary participating in the Section 423 Component to a Designated Subsidiary participating in the Non-Section 423 Component, he or she shall immediately cease to participate in the Section 423 Component; however, any payroll deductions made for the Offering Period in which such transfer occurs shall be transferred to the Non-Section 423 Component, and such Participant shall immediately join the then current Offering under the Non-Section 423 Component upon the same terms and conditions in effect for his or her participation in the Section 423 Component, except for such modifications otherwise applicable for Participants in such Offering. A Participant who transfers employment from a Designated Subsidiary participating in the Non-Section 423 Component to the Company or any Designated Subsidiary participating in the Section 423 Component shall remain a Participant in the Non-Section 423 Component until the earlier of (i) the end of the current Offering Period under the Non-Section 423 Component, or (ii) the Enrollment Date of the first Offering Period in which he or she is eligible to participate following such transfer. Notwithstanding the foregoing, the Administrator may establish different rules to govern transfers of employment between companies participating in the Section 423 Component and the Non-Section 423 Component, consistent with the applicable requirements of Section 423 of the Code.

7.18 Section 409A. The Section 423 Component of the Plan and the Options granted pursuant to Offerings thereunder are intended to be exempt from the application of Section 409A. Neither the Non-Section 423 Component nor any Option granted pursuant to an Offering thereunder is intended to constitute or provide for "nonqualified deferred compensation" within the meaning of Section 409A. Notwithstanding any provision of the Plan to the contrary, if the Administrator determines that any Option granted under the Plan may be or become subject to Section 409A or that any provision of the Plan may cause an Option granted under the Plan to be or become subject to Section 409A, the Administrator may adopt such amendments to the Plan and/or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions as the Administrator determines are necessary or appropriate to avoid the imposition of taxes under Section 409A, either through compliance with the requirements of Section 409A or with an available exemption therefrom.

* * * * *

Exhibit 10.5

Duolingo, Inc.
###
###

October 10, 2011

Luis von Ahn
###
###

Re: Employment Terms

Dear Mr. von Ahn:

Duolingo, Inc, a Delaware corporation (the "Company"), is pleased to offer you employment in the exempt position of President & Chief Executive Officer, in which you will be responsible for such duties as are normally associated with such position or as otherwise determined by your supervisor. You will report to the Board of Directors of the Company and will be headquartered in our facility located in Pittsburgh, Pennsylvania.

You will be paid a base salary at the annual rate of $90,000, less payroll deductions and all required withholdings. Your salary will be payable in accordance with the Company's standard payroll policies (subject to required tax withholding and other authorized deductions).

In addition to your base salary, the Company has issued to you an aggregate of 3,750,000 shares of the Company's common stock, par value $0.0001 (the "Shares") pursuant to that certain Founder Stock Purchase Agreement, dated as of August 25, 2011, between you and the Company, a copy of which is attached hereto as Exhibit A (the "Purchase Agreement"). The Shares are subject to the terms and conditions of the Purchase Agreement. You shall be eligible to participate in the Company's basic employment benefits generally available to all Company employees, as may exist now or in the future. You shall be eligible to participate in all incentive, savings and retirement plans, practices, policies and programs maintained or sponsored by the Company from time to time for the benefit of its employees generally. You will be eligible for standard benefits, such as medical insurance, sick leave, vacations and holidays to the extent applicable generally to other employees of the Company. Details about these benefits will be provided in an Employee Handbook and in Summary Plan Descriptions, which will be prepared by the Company and made available for your review in due course.

During your employment, you will devote your full business efforts and time to the Company and will not engage in any other employment, consulting or other business activity that would create a conflict of interest with the Company, except that you may continue your current coursework with Carnegie Mellon University prior to December 31, 2011. As a condition of employment, you will be required to sign and comply with a Proprietary Information and Invention Assignment Agreement, a copy of which is attached hereto as Exhibit B, which,

among other things, prohibits unauthorized use or disclosure of Company proprietary information, sign and return a satisfactory I-9 Immigration form providing sufficient documentation establishing your employment eligibility in the United States, and provide satisfactory proof of your identity as required by United States law. Your employment is further subject to satisfactory completion of a background check. By signing below, you represent that your performance of services to the Company will not violate any duty which you may have to any other person or entity (such as a present or former employer), including obligations concerning providing services (whether or not competitive) to others, confidentiality of proprietary information and assignment of inventions, ideas, patents or copyrights, and you agree that you will not do anything in the performance of services hereunder that would violate any such duty.

Notwithstanding any of the above, your employment with the Company is “at will”. This means you may terminate your employment with the Company at any time and for any reason whatsoever simply by notifying the Company. Likewise, the Company may terminate your employment at any time and for any reason whatsoever, with or without cause or advance notice. The at-will nature of our employment relationship cannot be changed except in a writing signed by the Chief Executive Officer of the Company.

If you accept this offer, this letter and the Proprietary Information and Invention Assignment Agreement shall constitute the complete agreement between you and Company with respect to the terms and conditions of your employment. Any prior or contemporaneous representations (whether oral or written) not contained in this letter or the Proprietary Information and Invention Assignment Agreement or contrary to those contained in this letter or the Proprietary Information and Invention Assignment Agreement that may have been made to you are expressly cancelled and superseded by this offer.

(signature page follows)

Please sign and date this letter, and return it to me by October 10, 2011 if you wish to accept employment at the Company under the terms described above. If you accept our offer, we would like you to commence your employment with us as soon as practicable.

We look forward to your favorable reply and to a productive and enjoyable work relationship.

Sincerely,

DUOLINGO, INC.

By: /s/ Patrick A. Pohlen
Patrick A. Pohlen
Secretary

Accepted by:

/s/ Luis von Ahn
Luis von Ahn

October 10, 2011

Exhibit 10.6

Duolingo, Inc.
5541 Walnut Street, 3rd floor
Pittsburgh, PA 15232

November 14, 2011

Severin Hacker
###
###

Re: Employment Terms

Dear Mr. Hacker:

Duolingo, Inc., a Delaware corporation (the "Company"), is pleased to offer you employment in the exempt position of Chief Technology Officer, in which you will be responsible for such duties as are normally associated with such position or as otherwise determined by your supervisor. Your start date will be January 1, 2012 and you will report to Luis von Ahn, the Chief Executive Officer of the Company and will be headquartered in our facility located in Pittsburgh, Pennsylvania.

You will be paid a base salary at the annual rate of $90,000, less payroll deductions and all required withholdings. Your salary will be payable in accordance with the Company's standard payroll policies (subject to required tax withholding and other authorized deductions).

In addition to your base salary, the Company has issued to you an aggregate of 3,750,000 shares of the Company's common stock, par value $0.0001 (the "Shares") pursuant to that certain Founder Stock Purchase Agreement, dated as of August 25, 2011, between you and the Company, a copy of which is attached hereto as Exhibit A (the "Purchase Agreement"). The Shares are subject to the terms and conditions of the Purchase Agreement. You shall be eligible to participate in the Company's basic employment benefits generally available to all Company employees, as may exist now or in the future. You shall be eligible to participate in all incentive, savings and retirement plans, practices, policies and programs maintained or sponsored by the Company from time to time for the benefit of its employees generally. You will be eligible for standard benefits, such as medical insurance, sick leave, vacations and holidays to the extent applicable generally to other employees of the Company. Details about these benefits will be provided in an Employee Handbook and in Summary Plan Descriptions, which will be prepared by the Company and made available for your review in due course.

During your employment, you will devote your full business efforts and time to the Company and will not engage in any other employment, consulting or other business activity that would create a conflict of interest with the Company. As a condition of employment, you will be

required to sign and comply with a Proprietary Information and Invention Assignment Agreement, a copy of which is attached hereto as Exhibit B, which, among other things, prohibits unauthorized use or disclosure of Company proprietary information, sign and return a satisfactory I-9 Immigration form providing sufficient documentation establishing your employment eligibility in the United States, and provide satisfactory proof of your identity as required by United States law. Your employment is further subject to satisfactory completion of a background check. By signing below, you represent that your performance of services to the Company will not violate any duty which you may have to any other person or entity (such as a present or former employer), including obligations concerning providing services (whether or not competitive) to others, confidentiality of proprietary information and assignment of inventions, ideas, patents or copyrights, and you agree that you will not do anything in the performance of services hereunder that would violate any such duty.

Notwithstanding any of the above, your employment with the Company is "at will." This means you may terminate your employment with the Company at any time and for any reason whatsoever simply by notifying the Company. Likewise, the Company may terminate your employment at any time and for any reason whatsoever, with or without cause or advance notice. The at-will nature of our employment relationship cannot be changed except in a writing signed by the Chief Executive Officer of the Company.

If you accept this offer, this letter and the Proprietary Information and Invention Assignment Agreement shall constitute the complete agreement between you and Company with respect to the terms and conditions of your employment. Any prior or contemporaneous representations (whether oral or written) not contained in this letter or the Proprietary Information and Invention Assignment Agreement or contrary to those contained in this letter or the Proprietary Information and Invention Assignment Agreement that may have been made to you are expressly cancelled and superseded by this offer.

(signature page follows)

Please sign and date this letter, and return it to me if you wish to accept employment at the Company under the terms described above. If you accept our offer, we would like you to commence your employment with us as soon as practicable.

We look forward to your favorable reply and to a productive and enjoyable work relationship.

Sincerely,

DUOLINGO, INC.

By: /s/ Luis von Ahn
Luis von Ahn
President & Chief Executive Officer

Accepted by:

/s/ Severin Hacker
Severin Hacker

Date: 11/14/2011

SIGNATURE PAGE TO OFFER LETTER

Exhibit 10.7

Duolingo, Inc.
5900 Penn Avenue, 2nd Floor
Pittsburgh, PA 15206
Main Office: 412-567-6602

December 5, 2019

Matthew Skaruppa

Employment Terms

Dear Matt

Duolingo, Inc., a Delaware corporation (the "Company"), is pleased to offer you employment in the exempt position of **Chief Financial Officer**, in which you will be responsible for such duties as are normally associated with such position or as otherwise determined by your supervisor to the extent not materially inconsistent with your title and/or role. This offer is contingent on you being legally eligible to work in the U.S. Your start date will be no later than **March 2, 2020** (the date you actually commence employment, the "Commencement Date"). You will report to **Luis von Ahan**, the Company's CEO, and will be headquartered in **New York City** with travel to our Pittsburgh headquarters in 2020 as outlined in Exhibit B.

You will be paid a base salary at the annual rate of **$375,000**, less payroll deductions and all required withholdings. Your salary will be payable in accordance with the Company's standard payroll policies (subject to required tax withholding and other authorized deductions).

As an additional incentive to join the Company, subject to approval by the Board of Directors, you will be granted an option (the "Option") as soon as administratively practicable following your commencement of employment (the date of the first meeting of Duolingo's Board of Directors in 2020 will be March 12, 2020) and, in any event, no later than the second Board meeting on June 10, 2020 to purchase that number of shares of Company common stock calculated by dividing $7,700,000 by the difference between $39.57, which is the per share price Series F Preferred Stock was sold to investors, and the fair market value of a share of common stock on the date of grant, as determined in reliance on a valuation obtained by the Company in order to satisfy the safe harbor under Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"). The Option will be granted under the Company's 2011 Equity Incentive Plan, as amended (the "Plan"), and have a per share exercise price equal to the fair market value of the Company's common stock on the date of grant, as determined by the Board of Directors of the Company (the "Board") in reliance on a valuation obtained by the Company in order to satisfy the safe harbor under Section 409A of the Code. Subject to the terms and conditions of the Plan and the Company's standard form of stock option agreement, twenty-five percent (25%) of the shares subject to the Option shall vest one year after the Commencement Date, and 1/48th of the Shares subject to the Option shall vest in equal monthly installments thereafter, with such vesting subject to your continuous employment by the Company except as otherwise set forth in this offer letter.

Duolingo will pay you a **one-time signing bonus of $150,000.** The signing bonus will be paid to you, less withholding taxes, within 30 days of the Commencement Date. Notwithstanding the foregoing, $75,000 of the signing bonus will not be earned to any extent until the first anniversary of your Commencement Date with the Company. In the event that your employment with the Company terminates prior to the first anniversary of the Commencement Date for Cause or you resign without Good Reason, you agree to repay to the Company the $75,000 of the signing bonus that is unearned as of the date you terminate employment. By your signature on this employment agreement, you authorize the company, to the extent permitted by law, to withhold this amount from any severance and other final pay you receive upon termination of employment.

You shall be eligible to participate in the Company's basic employment benefits generally available to all Company employees, as may exist now or in the future. You shall be eligible to participate in all incentive, savings and retirement plans, practices, policies and programs maintained or sponsored by the Company from time to time for the benefit of its employees generally. You will be eligible for standard benefits, such as medical insurance, sick leave, vacations and holidays to the extent applicable generally to other employees of the Company. Details about these benefits will be provided and in Summary Plan Descriptions, which will be prepared by the Company and made available for your review in due course.

During your employment, you will be a full-time employee of the Company and will not engage in any other employment, consulting or other business activity that would create a conflict of interest with the Company. Notwithstanding the foregoing, you may**,** during your employment with the Company: (i) serve as Director for Telamon Corporation; and (ii) with the Company's written approval, serve on any boards of any entities that do not compete with the Company, in each case of (i) and (ii), as long as such activities do not interfere with the performance of your duties hereunder or otherwise conflict with the interests of the Company, in each case, as may be determined by the Board, in its sole discretion. As a condition of employment, you will be required to sign and comply with a Proprietary Information and Invention Assignment Agreement, a copy of which is attached hereto as Exhibit A, which, among other things, prohibits unauthorized use or disclosure of Company proprietary information, sign and return a satisfactory I-9 Immigration form providing sufficient documentation establishing your employment eligibility in the United States, and provide satisfactory proof of your identity as required by United States law. By signing below, you represent that, to the best of your knowledge, your performance of services to the Company will not violate any duty which you may have to any other person or entity (such as a present or former employer), including obligations concerning providing services (whether or not competitive) to others, confidentiality of proprietary information and assignment of inventions, ideas, patents or copyrights, and you agree that you will not do anything in the performance of services hereunder that would knowingly violate any such duty.

Notwithstanding any of the above, your employment with the Company is "at will." This means you may terminate your employment with the Company at any time and for any reason whatsoever simply by notifying the Company. Likewise, the Company may terminate your employment at any time and for any reason whatsoever, with or without cause or advance notice.

The at-will nature of our employment relationship cannot be changed except in a writing signed by the Chief Executive Officer of the Company.

Without limiting the foregoing, if your experience a Covered Termination (as defined below), then, if you deliver to the Company a general release of claims in a form acceptable to the Company (but which shall not contain any greater restrictive covenants than to which you are then subject and which shall not release your rights to indemnification and/or advancement, if any, nor your rights to vested benefits) that becomes effective and irrevocable within sixty (60) days following the date of the Covered Termination, in addition to paying you all earned but unpaid Base Salary through the date of your Covered Termination and any other amounts required by applicable law, the Company will (i) continue to pay to you your Base Salary for six months after the date of the Covered Termination, such payment to be made in accordance with the Company's standard payroll procedures commencing on the first payroll date after the release is effective and irrevocable (with the first installment inclusive of any installments that would have been made had the release been effective and irrevocable on the date of the Covered Termination, (ii) directly pay or reimburse you for any payments you make for COBRA coverage for you and your covered dependents from the date of the Covered Termination through the earlier of (a) the six month anniversary of the Covered Termination or (b) the date you or your covered dependents become eligible for healthcare coverage from another employer and (iii), solely to the extent the Covered Termination occurs during the period commencing three months prior to a Change in Control (as defined in the Plan) and ending on the first anniversary of the Change in Control, the vesting of each outstanding stock option and other equity award held by you as of the date of your Covered Termination will be accelerated with respect to one hundred, percent (100%) of the shares of Company common stock subject thereto as of immediately prior to your Covered Termination (collectively, (i), (ii) and (iii), the "Separation Benefits"). In the event of a conflict between the terms of any agreement entered into to evidence a stock option or other equity award and subsection (iii) of this paragraph, subsection (iii) of this paragraph shall control and each such agreement shall be deemed to incorporate subsection (iii) of this paragraph.

For the purposes of this letter, "Cause" shall mean your (i) material breach of any of your obligations contained in this letter, including your willful failure or refusal to perform the job duties and responsibilities assigned to you by the Company, if any material breach described herein remains uncured after thirty (30) days have elapsed following the date on which the Company gives you advance written notice of such breach which shall be provided to you within sixty (60) days of the initial occurrence of the event or action giving rise to Cause; (ii) commission of any felony or crime involving moral turpitude; (iii) participation in a fraud, act of material dishonesty or misappropriation or similar conduct against the Company; (iv) conduct that is materially injurious to the Company or its affiliates or subsidiaries, monetarily or otherwise; (v) improper disclosure of the Company's confidential or proprietary information except as required by law; or (vi) obtaining a direct or indirect personal benefit from the transfer or use of the Company's trade secrets or intellectual property other than on the Company's behalf or as required by law.

For the purposes of this letter, "Good Reason" shall mean any of the following events without your written consent: (i) any material breach of the terms of this letter by the Company;

(ii) a material reduction or diminution in your title, duties, role, reporting line, and/or responsibilities; (iii) any material change in the principal location of your employment that increases your one-way commute by more than ten (10) miles; (iv) any reduction by the Company of your base salary under this letter of ten percent (10%) or more, provided, however, that if the Company institutes a Company-wide reduction in salaries for other executive management team members, such reduction on the same terms shall not be deemed "material" for this subsection (iv). Notwithstanding the foregoing, your resignation shall not constitute a resignation for "Good Reason" unless (X) you provide advance written notice of such resignation to the Company within sixty (60) days of the initial occurrence of the event or action giving rise to Good Reason, (Y) such written notice specifies that your resignation is effective not less than thirty (30) days, nor more than sixty (60) days, after the date of the written notice, and (Z) the Company fails to remedy the basis for Good Reason prior to the date of resignation specified in the written notice.

For the purposes of this letter, "Covered Termination" shall mean your resignation from employment with the Company for Good Reason or the termination of your employment by the Company other than for Cause, in each case, that constitutes a "separation from service" within the meaning of Section 409A of the Code.

The intent of the parties is that any payments and benefits provided under this Agreement remain exempt from the provisions of Section 409A of the Code to the maximum extent permitted and, to the extent subject to Section 409A of the Code, this Agreement shall be interpreted in a manner that complies with Section 409A of the Code and the treasury regulations, guidance, and exemptions promulgated thereunder (collectively Code Section 409A) so as not to subject you to the payment of the tax, interest and any tax penalty that may be imposed under Code Section 409A. Accordingly, to the maximum extent permitted, all provisions of this letter shall be construed, interpreted, and administered in a manner consistent and in compliance with Code Section 409A. In furtherance thereof, to the extent that any provision hereof would otherwise result in you being subject to payment of tax, interest and tax penalty under Section 409A, the Company and you agree to amend this letter in a manner that brings this letter into compliance with Code Section 409A and preserves to the maximum extent possible the economic value of the relevant payment or benefit under this letter to you.

If you accept this offer, this letter and the Proprietary Information and Invention Assignment Agreement shall constitute the complete agreement between you and Company with respect to the terms and conditions of your employment. Any prior or contemporaneous representations (whether oral or written) not contained in this letter or the Proprietary Information and Invention Assignment Agreement or contrary to those contained in this letter or the Proprietary Information and Invention Assignment Agreement that may have been made to you are expressly cancelled and superseded by this offer.

Please sign and date this letter, and return it to me by **December 6, 2019** if you wish to accept employment at the Company under the terms described above.

We look forward to your favorable reply and to a productive and enjoyable work relationship.

Sincerely,

DUOLINGO, INC.

By:

Luis von Ahn
President & Chief Executive Officer
/s/ Luis von Ahn

Accepted by:

Matt Skaruppa
/s/ Matt Skaruppa

Date: 12/5/19

Exhibit 10.8

Duolingo, Inc.
5900 Penn Avenue, 2nd floor
Pittsburgh, PA 15206
Main Office: 412-567-6602

July 29th, 2016

Bob Meese

Employment Terms

Dear **Bob:**

Duolingo, Inc., a Delaware corporation (the "Company"), is pleased to offer you employment in the exempt position of **VP of Business,** in which you will be responsible for such duties as are normally associated with such position or as otherwise determined by your supervisor. Your start date will be **September 6th, 2016.** You will report to **Luis von Ahn**, the Company's **Chief Executive Officer**, and will be headquartered in **Pittsburgh, PA**.

You will be paid a base salary at the annual rate of **$200,000**, less payroll deductions and all required withholdings. Your salary will be payable in accordance with the Company's standard payroll policies (subject to required tax withholding and other authorized deductions). As an additional incentive to join the Company, subject to approval by the Board of Directors, you will be granted an unvested option to purchase **220,000 shares** of common stock of the Company pursuant to the Company's 2011 Equity Incentive Plan (as amended, the "Plan"), at a per share exercise price equal to the fair market value of the Company's common stock on the date of grant (the "Option"). Subject to the terms and conditions of the Plan and the Company's standard form of stock option agreement, twenty-five percent (25%) of the shares subject to the Option shall vest one year after the Commencement Date, and 1/48th of the Shares subject to the Option shall vest in equal monthly installments thereafter, with such vesting subject to your continuous employment by the Company. Duolingo will also reimburse your actual moving expenses, up to $2,500.00 USD, incurred as a result of the relocation.

You shall be eligible to participate in the Company's basic employment benefits generally available to all Company employees, as may exist now or in the future. You shall be eligible to participate in all incentive, savings and retirement plans, practices, policies and programs maintained or sponsored by the Company from time to time for the benefit of its employees generally. You will be eligible for standard benefits, such as medical insurance, sick leave, vacations and holidays to the extent applicable generally to other employees of the Company. Details about these benefits will be provided and in Summary Plan Descriptions, which will be prepared by the Company and made available for your review in due course.

During your employment, you will be a full-time employee of the Company and will not engage in any other employment, consulting or other business activity that would create a conflict of interest with the Company. As a condition of employment, you will be required to sign and comply with a Proprietary Information and Invention Assignment Agreement, a copy of which is attached hereto as Exhibit A, which, among other things, prohibits unauthorized use or disclosure of Company proprietary information, sign and return a satisfactory I-9 Immigration form providing sufficient documentation establishing your employment eligibility in the United States, and provide satisfactory proof of your identity as required by United States law. Your employment is further subject to satisfactory completion of a background check. By signing below, you represent that your performance of services to the Company will not violate any duty which you may have to any other person or entity (such as a present or former employer), including obligations concerning providing services (whether or not competitive) to others, confidentiality of proprietary information and assignment of inventions, ideas, patents or copyrights, and you agree that you will not do anything in the performance of services hereunder that would violate any such duty.

Notwithstanding any of the above, your employment with the Company is "at will." This means you may terminate your employment with the Company at any time and for any reason whatsoever simply by notifying the Company. Likewise, the Company may terminate your employment at any time and for any reason whatsoever, with or without cause or advance notice. The at-will nature of our employment relationship cannot be changed except in a writing signed by the Chief Executive Officer of the Company.

If you accept this offer, this letter and the Proprietary Information and Invention Assignment Agreement shall constitute the complete agreement between you and Company with respect to the terms and conditions of your employment. Any prior or contemporaneous representations (whether oral or written) not contained in this letter or the Proprietary Information and Invention Assignment Agreement or contrary to those contained in this letter or the Proprietary Information and Invention Assignment Agreement that may have been made to you are expressly cancelled and superseded by this offer.

(signature page follows)

Please sign and date this letter, and return it to me by **August 5th, 2016** if you wish to accept employment at the Company under the terms described above.

We look forward to your favorable reply and to a productive and enjoyable work relationship.

Sincerely,

DUOLINGO, INC.

By: /s/ Luis von Ahn

Luis von Ahn
President & Chief Executive Officer

Accepted by:

Bob Meese

/s/ Bob Meese

Date: July 29, 2016

Exhibit 10.9

Duolingo, Inc.
5533 Walnut Street, 3rd floor
Pittsburgh, PA 15232
Main Office: 412-567-6602

February 17, 2015

Natalie Glance

Re: Employment Terms

Dear Natalie Glance:

Duolingo, Inc., a Delaware corporation (the "Company"), is pleased to offer you employment in the exempt position of **Engineering Director,** in which you will be responsible for such duties as are normally associated with such position or as otherwise determined by your supervisor. Your start date will be **February 27, 2015**. You will report to Luis von Ahn, the Company's Chief Executive Officer, and will be headquartered in Pittsburgh, PA.

You will be paid a base salary at the annual rate of **$185,000**, less payroll deductions and all required withholdings. Your salary will be payable in accordance with the Company's standard payroll policies (subject to required tax withholding and other authorized deductions). As an additional incentive to join the Company, subject to approval by the Board of Directors, you will be granted an unvested option to purchase **200,000 shares** of common stock of the Company pursuant to the Company's 2011 Equity Incentive Plan (as amended, the "Plan"), at a per share exercise price equal to the fair market value of the Company's common stock on the date of grant (the "Option"). Subject to the terms and conditions of the Plan and the Company's standard form of stock option agreement, twenty-five percent (25%) of the shares subject to the Option shall vest one year after the Commencement Date, and 1/48th of the Shares subject to the Option shall vest in equal monthly installments thereafter, with such vesting subject to your continuous employment by the Company.

You shall be eligible to participate in the Company's basic employment benefits generally available to all Company employees, as may exist now or in the future. You shall be eligible to participate in all incentive, savings and retirement plans, practices, policies and programs maintained or sponsored by the Company from time to time for the benefit of its employees generally. You will be eligible for standard benefits, such as medical insurance, sick leave, vacations and holidays to the extent applicable generally to other employees of the Company. Details about these benefits will be provided and in Summary Plan Descriptions, which will be prepared by the Company and made available for your review in due course.

During your employment, you will be a full-time employee of the Company and will not engage in any other employment, consulting or other business activity that would create a conflict of interest with the Company. As a condition of employment, you will be required to sign and comply with a Proprietary Information and Invention Assignment Agreement, a copy of which is attached hereto as Exhibit A, which, among other things, prohibits unauthorized use or

disclosure of Company proprietary information, sign and return a satisfactory I-9 Immigration form providing sufficient documentation establishing your employment eligibility in the United States, and provide satisfactory proof of your identity as required by United States law. Your employment is further subject to satisfactory completion of a background check. By signing below, you represent that your performance of services to the Company will not violate any duty which you may have to any other person or entity (such as a present or former employer), including obligations concerning providing services (whether or not competitive) to others, confidentiality of proprietary information and assignment of inventions, ideas, patents or copyrights, and you agree that you will not do anything in the performance of services hereunder that would violate any such duty.

Notwithstanding any of the above, your employment with the Company is “at will.” This means you may terminate your employment with the Company at any time and for any reason whatsoever simply by notifying the Company. Likewise, the Company may terminate your employment at any time and for any reason whatsoever, with or without cause or advance notice. The at-will nature of our employment relationship cannot be changed except in a writing signed by the Chief Executive Officer of the Company.

If you accept this offer, this letter and the Proprietary Information and Invention Assignment Agreement shall constitute the complete agreement between you and Company with respect to the terms and conditions of your employment. Any prior or contemporaneous representations (whether oral or written) not contained in this letter or the Proprietary Information and Invention Assignment Agreement or contrary to those contained in this letter or the Proprietary Information and Invention Assignment Agreement that may have been made to you are expressly cancelled and superseded by this offer.

(signature page follows)

Please sign and date this letter, and return it to me by **February 20, 2015** if you wish to accept employment at the Company under the terms described above.

We look forward to your favorable reply and to a productive and enjoyable work relationship.

Sincerely,

DUOLINGO, INC.

By: /s/ Luis von Ahn
Luis von Ahn
President & Chief Executive Officer

Accepted by:

/s/ Natalie Glance
NATALIE GLANCE
Date: February 17, 2015

Exhibit 10.10

Duolingo, Inc.
5900 Penn Avenue, 2nd floor
Pittsburgh, PA 15206
Main Office: 412-567-6602

January 6, 2020

Stephen Chen

Employment Terms

Dear Steve:

Duolingo, Inc., a Delaware corporation (the "Company"), is pleased to offer you employment in the exempt position of **General Counsel**, in which you will be responsible for such duties as are normally associated with such position or as otherwise determined by your supervisor. This offer is contingent on you being legally eligible to work in the U.S. Your start date will be March 2, 2020. You will report to **Luis von Ahn**, the Company's **CEO**, and will be headquartered in **Pittsburgh, PA**.

You will be paid a base salary at the annual rate of **$360,000**, less payroll deductions and all required withholdings. Your salary will be payable in accordance with the Company's standard payroll policies (subject to required tax withholding and other authorized deductions). As an additional incentive to join the Company, subject to approval by the Board of Directors, you will be granted an unvested option to purchase **140,000 shares** of common stock of the Company pursuant to the Company's 2011 Equity Incentive Plan (as amended, the "Plan"), at a per share exercise price equal to the fair market value of the Company's common stock on the date of grant (the "Option"). Subject to the terms and conditions of the Plan and the Company's standard form of stock option agreement, twenty-five percent (25%) of the shares subject to the Option shall vest one year after the Commencement Date, and 1/48th of the Shares subject to the Option shall vest in equal monthly installments thereafter, with such vesting subject to your continuous employment by the Company. Duolingo will also reimburse your actual moving expenses incurred as a result of the relocation (in accordance with our policy but in any case will cover the costs to move the furnishings of your primary residence in California to Pittsburgh and the costs of moving up to two vehicles from California to Pittsburgh) and will provide the further relocation assistance as set forth on Exhibit B.

Duolingo will pay you a **one-time signing bonus of $75,000**. The signing bonus will be paid to you, less withholding taxes, within 30 days of the Commencement Date. Notwithstanding the foregoing, **$60,000** of the signing bonus will not be earned to any extent until the first anniversary of your Commencement Date with the Company. In the event that your employment with the Company terminates prior to the first anniversary of the Commencement Date for Cause or you resign without Good Reason, you agree to repay to the Company the **$60,000** of the signing bonus that is unearned as of the date you terminate employment. By your signature on this employment agreement, you authorize the company, to

the extent permitted by law, to withhold this amount from any severance and other final pay you receive upon termination of employment.

You shall be eligible to participate in the Company's basic employment benefits generally available to all Company employees, as may exist now or in the future. You shall be eligible to participate in all incentive, savings and retirement plans, practices, policies and programs maintained or sponsored by the Company from time to time for the benefit of its employees generally. You will be eligible for standard benefits, such as medical insurance, sick leave, vacations and holidays to the extent applicable generally to other employees of the Company. Details about these benefits will be provided and in Summary Plan Descriptions, which will be prepared by the Company and made available for your review in due course.

During your employment, you will be a full-time employee of the Company and will not engage in any other employment, consulting or other business activity that would create a conflict of interest with the Company. As a condition of employment, you will be required to sign and comply with a Proprietary Information and Invention Assignment Agreement, a copy of which is attached hereto as Exhibit A, which, among other things, prohibits unauthorized use or disclosure of Company proprietary information, sign and return a satisfactory I-9 Immigration form providing sufficient documentation establishing your employment eligibility in the United States, and provide satisfactory proof of your identity as required by United States law. By signing below, you represent that your performance of services to the Company will not violate any duty which you may have to any other person or entity (such as a present or former employer), including obligations concerning providing services (whether or not competitive) to others, confidentiality of proprietary information and assignment of inventions, ideas, patents or copyrights, and you agree that you will not do anything in the performance of services hereunder that would violate any such duty.

Notwithstanding any of the above, your employment with the Company is "at will." This means you may terminate your employment with the Company at any time and for any reason whatsoever simply by notifying the Company. Likewise, the Company may terminate your employment at any time and for any reason whatsoever, with or without cause or advance notice. The at-will nature of our employment relationship cannot be changed except in writing signed by the Chief Executive Officer of the Company.

Without limiting the foregoing, if your experience a Covered Termination (as defined below), then, if you deliver to the Company a general release of claims in a form acceptable to the Company (but which shall not contain any greater restrictive covenants than to which you are then subject and which shall not release your rights to indemnification and/or advancement, if any, nor your rights to vested benefits) that becomes effective and irrevocable within sixty (60) days following the date of the Covered Termination, in addition to paying you all earned but unpaid Base Salary through the date of your Covered Termination and any other amounts required by applicable law, the Company will (i) continue to pay to you your Base Salary for six months after the date of the Covered Termination, such payment to be made in accordance with the Company's standard payroll procedures commencing on the first payroll date after the release is effective and irrevocable (with the first installment inclusive of any installments that would

have been made had the release been effective and irrevocable on the date of the Covered Termination, (ii) directly pay or reimburse you for any payments you make for COBRA coverage for you and your covered dependants from the date of the Covered Termination through the earlier of (a) the six month anniversary of the Covered Termination or (b) the date you or your covered dependents become eligible for healthcare coverage from another employer and (iii), solely to the extent the Covered Termination occurs during the period commencing three months prior to a Change in Control (as defined in the Plan) and ending on the first anniversary of the Change in Control, the vesting of each outstanding stock option and other equity award held by you as of the date of your Covered Termination will be accelerated with respect to one hundred percent (100%) of the shares of Company common stock subject thereto as of immediately prior to your Covered Termination (collectively, (i), (ii) and (iii), the "Separation Benefits"). In the event of a conflict between the terms of any agreement entered into to evidence a stock option or other equity award and subsection (iii) of this paragraph, subsection (iii) of this paragraph shall control and each such agreement shall be deemed to incorporate subsection (iii) of this paragraph.

For the purposes of this letter, "Cause" shall mean your: (i) material breach of any of your obligations contained in this letter, including your willful failure or refusal to perform the job duties and responsibilities assigned to you by the Company, if any material breach described herein remains uncured after thirty (30) days have elapsed following the date on which the Company gives you advance written notice of such breach which shall be provided to you within sixty (60) days of the initial occurrence of the event or action giving rise to Cause; (ii) commission of any felony or crime involving moral turpitude; (iii) participation in a fraud, act of material dishonesty or misappropriation or similar conduct against the Company; (iv) conduct that is materially injurious to the Company or its affiliates or subsidiaries, monetarily or otherwise; (v) improper disclosure of the Company's confidential or proprietary information except as required by law; or (vi) obtaining a direct or indirect personal benefit from the transfer or use of the Company's trade secrets or intellectual property other than on the Company's behalf or as required by law.

For the purposes of this letter, "Good Reason" shall mean any of the following events without your written consent: (i) any material breach of the terms of this letter by the Company; (ii) a material reduction or diminution in your title, duties, role, reporting line, and/or responsibilities; (iii) any material change in the principal location of your employment that increases your one-way commute by more than ten (10) miles; (iv) any reduction by the Company of your base salary under this letter of ten percent (10%) or more, provided, however, that if the Company institutes a Company-wide reduction in salaries for other executive management team members, such reduction on the same terms shall not be deemed "material" for this subsection (iv). Notwithstanding the foregoing, your resignation shall not constitute a resignation for "Good Reason" unless (X) you provide advance written notice of such resignation to the Company within sixty (60) days of the initial occurrence of the event or action giving rise to Good Reason, (Y) such written notice specifies that your resignation is effective not less than thirty (30) days, nor more than sixty (60) days, after the date of the written notice, and (Z) the Company fails to remedy the basis for Good Reason prior to the date of resignation specified in the written notice.

For the purposes of this letter, “Covered Termination” shall mean your resignation from employment with the Company for Good Reason or the termination of your employment by the Company other than for Cause, in each case, that constitutes a “separation from service” within the meaning of Section 409A of the Code.

The intent of the parties is that any payments and benefits provided under this Agreement remain exempt from the provisions of Section 409A of the Code to the maximum extent permitted and, to the extent subject to Section 409A of the Code, this Agreement shall be interpreted in a manner that complies with Section 409A of the Code and the treasury regulations, guidance, and exemptions promulgated thereunder (collectively Code Section 409A) so as not to subject you to the payment of the tax, interest and any tax penalty that may be imposed under Code Section 409A. Accordingly, to the maximum extent permitted, all provisions of this letter shall be construed, interpreted, and administered in a manner consistent and in compliance with Code Section 409A. In furtherance thereof, to the extent that any provision hereof would otherwise result in you being subject to payment of tax, interest and tax penalty under Section 409A, the Company and you agree to amend this letter in a manner that brings this letter into compliance with Code Section 409A and preserves to the maximum extent possible the economic value of the relevant payment or benefit under this letter to you.

If you accept this offer, this letter and the Proprietary Information and Invention Assignment Agreement shall constitute the complete agreement between you and Company with respect to the terms and conditions of your employment. Any prior or contemporaneous representations (whether oral or written) not contained in this letter or the Proprietary Information and Invention Assignment Agreement or contrary to those contained in this letter or the Proprietary Information and Invention Assignment Agreement that may have been made to you are expressly cancelled and superseded by this offer.

(signature page follows)

Please sign and date this letter, and return it to me by **January 10, 2020** if you wish to accept employment at the Company under the terms described above.

We look forward to your favorable reply and to a productive and enjoyable work relationship.

Sincerely,

DUOLINGO, INC.

By:

Luis von Ahn
President & Chief Executive Officer

/s/ Luis von Ahn

Accepted by:

Stephen Chen

/s/ Stephen Chen

Date: 1/7/2020

DUOLINGO, INC.
NON-EMPLOYEE DIRECTOR COMPENSATION PROGRAM

This Duolingo, Inc. (the "***Company***") Non-Employee Director Compensation Program (this "***Program***") has been adopted under the Company's 2021 Incentive Award Plan (the "***Plan***") and shall be effective upon the closing of the Company's initial public offering of its common stock (the "***IPO***"). Capitalized terms not otherwise defined herein shall have the meaning ascribed in the Plan.

Cash Compensation

Effective upon the IPO, annual retainers will be paid in the following amounts to Non-Employee Directors:

Board Service

Non-Employee Director:	$30,000
Non-Executive Chair:	$25,000

Committee Service

	Chair	Non-Chair
Audit Committee Member	$20,000	$10,000
Compensation Committee Member	$12,000	$6,000
Nominating and Corporate Governance Committee Member	$8,000	$4,000

All annual retainers are additive and will be paid in cash quarterly in arrears promptly following the end of the applicable calendar quarter, but in no event more than 30 days after the end of such quarter. If a Non-Employee Director does not serve as a Non-Employee Director, or in the applicable positions described above, for an entire calendar quarter, the retainer paid to such Non-Employee Director shall be prorated for the portion of such calendar quarter actually served as a Non-Employee Director, or in such position, as applicable.

Equity Compensation

Initial RSU Award:	Each Non-Employee Director who is initially elected or appointed to serve on the Board after the IPO shall be granted under the Plan or any other applicable Company equity incentive plan then-maintained by the Company an award of that number of restricted stock units ("***RSUs***") calculated by dividing (i) $300,000 by (ii) the closing trading price of a share of Company Class A common stock (the "***Common Stock***") as of the grant date or, if the grant date is not a trading day, the trading day immediately preceding the grant date (the "***Initial RSU Award***"). The Initial RSU Award will be automatically granted on the date on which such Non-Employee Director commences service on the Board, and will vest as to one-third of the shares subject thereto on each anniversary of the applicable grant date such that the shares subject to the Initial RSU Award are fully vested on the third anniversary of the grant date, in each case, subject to the Non-Employee Director continuing to serve on the Board through the applicable vesting date.
Annual RSU Award:	Each Non-Employee Director who (i) has been serving on the Board for at least six months as of each meeting of the Company's stockholders after the IPO (each, an "***Annual Meeting***") and (ii) will continue to serve as a Non-Employee Director immediately following such meeting, shall be granted under the Plan or any other applicable Company equity incentive plan then-maintained by the Company an award of that number of RSUs calculated by dividing (i) $160,000 by (ii) the closing trading price of a share of Common Stock as of the grant date or, if the grant date is not a trading day, the trading day immediately preceding the grant date (the "***Annual RSU Award***"). The Annual RSU Award will be automatically granted on the date of the applicable Annual Meeting, and will vest in full on the earlier of (i) the first anniversary of the grant date or (ii) immediately before the Annual Meeting following the grant date, subject to the Non-Employee Director continuing to serve on the Board through such vesting date.

Except as otherwise determined by the Board, no portion of an Initial RSU Award or Annual RSU Award which is unvested at the time of a Non-Employee Director's termination of service on the Board shall become vested.

An individual who terminates employment with the Company or any Subsidiary and remains, or on the date of such termination becomes, a Director will not be automatically granted an Initial

RSU Award, but to the extent that the Director is otherwise eligible, will be eligible to receive, after termination from employment with the Company or any Subsidiary, Annual RSU Awards as described above.

Change in Control

Upon a Change in Control of the Company, all outstanding equity awards granted under the Plan and any other equity incentive plan maintained by the Company that are held by a Non-Employee Director shall become fully vested and/or exercisable, irrespective of any other provisions of the Non-Employee Director's Award Agreement.

Reimbursements

The Company shall reimburse each Non-Employee Director for all reasonable, documented, out-of-pocket travel and other business expenses incurred by such Non-Employee Director in the performance of his or her duties to the Company in accordance with the Company's applicable expense reimbursement policies and procedures as in effect from time to time.

Miscellaneous

The other provisions of the Plan shall apply to the RSUs granted automatically under this Program, except to the extent such other provisions are inconsistent with this Program. All applicable terms of the Plan apply to this Program as if fully set forth herein, and all grants of RSUs hereby are subject in all respects to the terms of the Plan. The grant of RSUs under this Program shall be made solely by and subject to the terms set forth in an Award Agreement in a form to be approved by the Board and duly executed by an executive officer of the Company.

*** * * * ***

Exhibit 10.12

DUOLINGO, INC.

INDEMNIFICATION AGREEMENT

This Indemnification Agreement, dated as of _____ __, 2021 (this "***Agreement***"), is made by and between Duolingo, Inc. (the "***Company***") and _____ ("***Indemnitee***").

RECITALS

A. It is essential to the Company to retain and attract the most capable persons available as directors, officers, employees and agents.

B. Indemnitee is a director, officer, employee or agent of the Company or serves at the request of the Company as a director, officer, employee, member, manager, trustee or agent of another corporation, limited liability company, partnership, joint venture, trust or other entity or enterprise.

C. Both the Company and Indemnitee recognize the increased risk of litigation and other claims being asserted against directors, officers, employees and agents of the Company and those serving at the request of the Company, in particular, in respect of the numerous jurisdictions in which the Company and its affiliates operate.

D. The Company's Board of Directors (the "***Board***") has determined that the increased difficulty in attracting and retaining such persons is detrimental to the best interests of the Company and its stockholders and that the Company should act to assure such persons that there will be increased certainty of protection from such risk in the future.

E. Indemnitee's willingness to serve as a director, officer, employee or agent of the Company, or to serve at the request of the Company as a director, officer, employee, member, manager, trustee or agent of any other corporation, limited liability company, partnership, joint venture, trust or other entity or enterprise, is predicated, in substantial part, upon the Company's willingness to indemnify him/her in accordance with the principles reflected above, to the fullest extent permitted by the laws of the state of Delaware, and upon the other undertakings set forth in this Agreement.

F. Therefore, in recognition of the need to provide Indemnitee with substantial protection against personal liability, in order to procure Indemnitee's continued service as a director, officer, employee or agent of the Company, or at its request, as a director, officer, employee, member, manager, trustee or agent of any other corporation, limited liability company, partnership, joint venture, trust or other entity or enterprise, and to enhance Indemnitee's ability to serve the Company in an effective manner, and in order to provide such protection pursuant to express contract rights (intended to be enforceable irrespective of, among other things, any amendment to the Company's certificate of incorporation or bylaws (collectively, the "***Constituent Documents***"), any Change-in-Control or Business Combination relating to the Company), the Company wishes to provide in this Agreement for the indemnification of, and the advancement of Expenses (as defined in Section 1(d)) to, Indemnitee as set forth in this Agreement and, as applicable, for the continued coverage of Indemnitee under the Company's applicable insurance policies.

G. This Agreement is a supplement to and in furtherance of the Constituent Documents and any resolutions adopted pursuant thereto, and shall not be deemed to be a substitute therefore, nor diminish or abrogate any rights of Indemnitee thereunder.

H. In light of the considerations referred to in the preceding recitals, it is the Company's intention and desire that the provisions of this Agreement be construed liberally, subject to their express terms, to maximize the protections to be provided to Indemnitee hereunder.

AGREEMENT:

NOW, THEREFORE, in consideration of Indemnitee continuing to serve the Company directly, or at its request, and intending to be legally bound hereby, the parties hereto agree as follows:

1. Certain Definitions. In addition to terms defined elsewhere herein, the following terms have the following meanings when used in this Agreement with initial capital letters:

(a) "***Beneficial Owner***" as defined in Rule 13d-3 under Securities Exchange Act of 1934, as amended.

(b) "***Change in Control***" means the earliest to occur after the date of this Agreement of any of the following events:

(i) any "person" (as such term is used in Section 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended), other than a trustee or other fiduciary holding securities under an employee benefit plan of the Company acting in such capacity or an entity owned directly or indirectly by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company prior to such transaction, becomes the Beneficial Owner, directly or indirectly, of securities of the Company representing more than 50% of the total voting power represented by the Company's then outstanding Voting Stock,

(ii) the consummation of a reorganization, merger or consolidation of the Company, or sale or other disposition of all or substantially all of the assets of the Company or the acquisition of assets of another entity or enterprise, or other transaction (each, a "***Business Combination***"), unless, in each case, immediately following such Business Combination, the Beneficial Owners of the then outstanding shares of Voting Stock of the Company immediately prior to such Business Combination beneficially own, directly or indirectly, more than 60% of the combined voting power of the then outstanding shares of Voting Stock of the entity surviving or resulting from (or acquiring assets in) such Business Combination, with the power to elect at least a majority of the Board or other governing body of such surviving or resulting entity,

(iii) during any period of two (2) consecutive years, Incumbent Directors cease for any reason to constitute at least a majority of the members of the Board, or

(iv) approval by the stockholders of the Company of a complete liquidation or dissolution of the Company.

(c) "***Claim***" means (i) any threatened, asserted, pending or completed claim, demand, action, suit or proceeding, whether civil, criminal, administrative, arbitrative, investigative or other, and whether made pursuant to federal, state or any other law, and whether brought by or in the right of the Company or otherwise; and (ii) any inquiry or investigation (including any internal investigation), whether made, instituted or conducted by the Company or any other party, including without limitation any federal, state or other governmental entity.

(d) "***Disinterested Director***" means a director of the Company who is not and was not a party to the Claim in respect of which indemnification is sought by Indemnitee.

(e) "***Expenses***" means, without limitation, reasonable attorneys' fees and expenses; retainers; disbursements of counsel; court costs; filing fees; transcript costs; fees and expenses of experts; fees and expenses of witnesses; fees and expenses of accountants and other consultants (excluding public relations consultants unless approved in advance by the Company); travel expenses; duplicating and imaging costs; printing and binding costs; telephone charges; facsimile transmission charges; computer legal research costs; postage; delivery service fees; fees and expenses of third-party vendors; the premium, security for, and other costs associated with any bond (including supersedeas or appeal bonds, injunction bonds, cost bonds, appraisal bonds or their equivalents), in each case incurred in connection

with prosecuting, defending, preparing to prosecute or defend, investigating, being or preparing to be a witness in, or otherwise participating in, a Claim (including, without limitation, any judicial or arbitration Claim brought to enforce Indemnitee's rights under, or to recover damages for breach of, this Agreement), as well as all other "expenses" within the meaning of that term as used in Section 145 of the General Corporation Law of the State of Delaware and all other disbursements or expenses of types customarily and reasonably incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, being or preparing to be a witness in, or otherwise participating in, actions, suits, or proceedings similar to or of the same type as the Claim with respect to which such disbursements or expenses were incurred; but, notwithstanding anything in the foregoing to the contrary, 'Expenses' shall not include amounts of judgments, penalties, or fines actually levied against Indemnitee in connection with any Claim.

(a) "***Incumbent Directors***" means the individuals who, as of the date hereof, are Directors of the Company and any individual becoming a Director subsequent to the date hereof whose election, nomination for election by the Company's stockholders, or appointment, was approved by a vote of at a majority of the then Incumbent Directors (either by a specific vote or by approval of the proxy statement of the Company in which such person is named as a nominee for director, without objection to such nomination).

(b) "***Indemnifiable Claim***" means any Claim based upon, arising out of or resulting from (whether Indemnitee is or was subject to, a target or subject of, a party to or witness or other participant in, or is or was threatened to be made subject to, a target or subject of, a party to or witness or other participant in such Claim) (i) Indemnitee's status as a current or former director, officer, employee or agent of the Company or, (ii) Indemnitee's current or former status as a director, officer, employee, member, manager, trustee or agent of any other corporation, limited liability company, partnership, joint venture, trust or other entity or enterprise, whether or not for profit, to the extent Indemnitee is or was serving in such capacity at the request of the Company. For the avoidance of doubt, an Indemnifiable Claim can relate to any matter, time frame, incident, act or failure to act that occurs or occurred based upon, arising out of or resulting from Indemnitee's current or former status as a director, officer, employee, member, manager, trustee or agent of the Company or any other corporation, limited liability company, partnership, joint venture, trust or other entity or enterprise, whether or not for profit, to the extent Indemnitee is or was serving in such capacity at the request of the Company.

(c) "***Indemnifiable Losses***" means any and all Losses relating to, arising out of or resulting from any Indemnifiable Claim, to the fullest extent permitted to be paid by the laws of the State of Delaware in effect on the date hereof or as such laws may from time to time hereafter be amended to increase the scope of such permitted indemnification.

(d) "***Independent Counsel***" means a law firm, or a member of a law firm, that is experienced in matters of corporation law and neither presently is, nor in the past five years has been, retained to represent: (i) the Company or Indemnitee in any matter material to either such party (other than with respect to matters concerning Indemnitee under this Agreement, or of other indemnitees under similar indemnification agreements), or (ii) any other party to the Indemnifiable Claim giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term "Independent Counsel" shall not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Company or Indemnitee in an action to determine Indemnitee's rights under this Agreement.

(e) "***Losses***" means any and all Expenses, damages, losses, liabilities, judgments, fines, penalties (whether civil, criminal or other), sanctions and amounts paid in settlement with the approval of the Company in accordance with Section 14 hereof, including without limitation all interest, assessments and other charges paid or payable in connection with or in respect of any Indemnifiable Claim and any income taxes paid or to be paid by Indemnitee (net of deductions attributable to such taxes paid) as a result of the payment by the Company of such Losses or advancement of Expenses.

(f) "***Subsidiary***" means an entity in which the Company directly or indirectly beneficially owns 50% or more of the outstanding Voting Stock.

(g) "***Voting Stock***" means securities entitled to vote generally in the election of directors (or similar governing bodies).

2. Indemnification Obligation. Subject to Section 7, the Company shall indemnify, defend and hold harmless Indemnitee, to the fullest extent permitted by the laws of the State of Delaware in effect on the date hereof or as such laws may from time to time hereafter be amended to increase the scope of such permitted indemnification, against any and all Indemnifiable Claims and Indemnifiable Losses; *provided*, *however*, that, except as provided in Section 5, Indemnitee shall not be entitled to indemnification pursuant to this Agreement in connection with any Claim initiated by Indemnitee against the Company or any director or officer of the Company and the Company shall not be required to indemnify Indemnitee in connection with prosecuting such Claim (or any part thereof) or in defending any counterclaim, cross-claim, affirmative defense, or like claim of the Company in connection with such Claim (or part thereof) unless (i) the Board has authorized or consented to the initiation of such Claim, or (ii) the Claim is one to enforce Indemnitee's rights under this Agreement (including an action pursued by Indemnitee to secure a determination that Indemnitee should be indemnified under applicable law). For purposes of this Section 2 and Section 3, a compulsory counterclaim by Indemnitee against the Company in connection with a Claim initiated against Indemnitee by the Company shall not be considered a Claim (or part thereof) initiated against the Company by Indemnitee, and Indemnitee shall have all rights of indemnification and advancement of Expenses with respect to any such compulsory counterclaim in accordance with and subject to the terms of this Agreement. Notwithstanding anything to the contrary herein, except as provided herein with respect to indemnification of Expenses in connection with whole or partial success on the merits or otherwise in defending any Claim, the Company shall not be required to indemnify Indemnitee in connection with any claim made against Indemnitee for (i) an accounting of profits made from the purchase and sale (or sale and purchase) by Indemnitee of securities of the Company within the meaning of Section 16(b) of the Securities Exchange Act of 1934 or similar provisions of state statutory law or common law, or (ii) any reimbursement of the Company by Indemnitee of any bonus or other incentive-based or equity-based compensation or of any profits realized by Indemnitee from the sale of securities of the Company, as required in each case under the Securities Exchange Act of 1934 (including any such reimbursements that arise from an accounting restatement of the Company pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"), or the payment to the Company of profits arising from the purchase and sale by Indemnitee of securities in violation of Section 306 of the Sarbanes-Oxley Act).

3. Advancement of Expenses. Indemnitee shall have the right to advancement by the Company prior to the final disposition of any Indemnifiable Claim of any and all Expenses relating to any Indemnifiable Claim actually and reasonably paid or incurred by Indemnitee. Indemnitee's right to such advancement is not subject to the satisfaction of any standard of conduct. Without limiting the generality or effect of the foregoing, Indemnitee shall submit to the Company a written request therefor, including a brief description (based upon information then available to Indemnitee) of such Indemnifiable Claim for which advancement is sought and the Expenses to be advanced. Unless otherwise agreed between the Company and Indemnitee, Indemnitee shall provide the Company with a written invoice once per month requesting payment of applicable Expenses. Within ten business days immediately following the receipt of any invoice for advancement of Expenses from Indemnitee, and provided the Company does not dispute, in good faith, all or any portion of such Expenses, the Company shall, in accordance with such request, (a) pay such Expenses on behalf of Indemnitee including, to the extent the Company disputes any portion of such Expenses, such portion the Company does not dispute, (b) advance to Indemnitee funds in an amount sufficient to pay such Expenses including, to the extent the Company disputes any portion of such Expenses, such portion the Company does not dispute, or (c) reimburse Indemnitee for such Expenses including, to the extent the Company disputes any portion of such Expenses, such portion the Company does not dispute; *provided* that Indemnitee shall repay, without interest, any amounts actually

advanced to Indemnitee that, at the final disposition of the Indemnifiable Claim to which the advance related, were in excess of amounts paid or payable by Indemnitee in respect of Expenses relating to such Indemnifiable Claim. In connection with any such payment, advancement or reimbursement, Indemnitee shall execute and deliver to the Company an undertaking, which need not be secured and shall be accepted without reference to Indemnitee's ability to repay the Expenses, by or on behalf of Indemnitee, to repay any Expenses paid, advanced or reimbursed by the Company if, following the final disposition of such Claim, Indemnitee shall have been determined, pursuant to Section 7, not to be entitled to indemnification hereunder. Notwithstanding anything in this Agreement to the contrary, Indemnitee shall not be entitled to advancement of Expenses pursuant to this Agreement in connection with any Claim initiated by Indemnitee against the Company or any director or officer of the Company, and the Company shall not be required to advance Expenses to Indemnitee in connection with prosecuting such Claim (or any part thereof) or in defending any counterclaim, cross-claim, affirmative defense, or like claim of the Company in connection with such Claim (or part thereof) unless (i) the Board has authorized or consented to the initiation of such Claim or (ii) the Claim is one to enforce Indemnitee's rights under this Agreement (including an action pursued by Indemnitee to secure a determination that Indemnitee should be indemnified under applicable law). The Indemnitee shall qualify for advances upon the execution and delivery to the Company of this Agreement, which shall constitute an undertaking providing that the Indemnitee undertakes to the fullest extent permitted by law to repay the advance (without interest) if and to the extent that it is ultimately determined by a court of competent jurisdiction in a final judgment, not subject to further appeal, that Indemnitee is not entitled to be indemnified by the Company. No other form of undertaking shall be required other than the execution of this Agreement. Without limiting the generality or effect of the foregoing, within thirty days after any request by Indemnitee, the Company shall, in accordance with such request (but without duplication), (A) pay such Expenses on behalf of Indemnitee, (B) advance to Indemnitee funds in an amount sufficient to pay such Expenses, or (C) reimburse Indemnitee for such Expenses.

4. Indemnification for Additional Expenses. The Company shall also indemnify against any Expenses actually and reasonably paid or incurred by Indemnitee in connection with any Claim made in good faith by Indemnitee for (a) indemnification or reimbursement or advance payment of Expenses by the Company under any provision of this Agreement, or under any other agreement or provision of the Constituent Documents now or hereafter in effect relating to Indemnifiable Claims, and/or (b) recovery under any directors' and officers' liability insurance policies maintained by the Company, in each case, only to the extent Indemnitee ultimately is determined to be entitled to such indemnification, reimbursement, advance or insurance recovery, as the case may be. If requested by Indemnitee, the Company shall reimburse Indemnitee for, or advance to Indemnitee, within ten business days of such request, any Expenses actually and reasonably paid or incurred by Indemnitee or which Indemnitee reasonably determines in good faith he or she is reasonably likely to actually and reasonably pay or incur in connection with any Claim made in good faith by Indemnitee for the matters set forth in clause (a) and/or clause (b) of the immediately preceding sentence; *provided, however,* that Indemnitee shall return, without interest, any such advance of Expenses (or portion thereof) which remains unspent at the final disposition of the Claim to which the advance related, *provided, further*, that Indemnitee shall be required to repay any Expenses paid, advanced or reimbursed by the Company if, following the final disposition of such Claim, Indemnitee ultimately is determined to not be entitled to such indemnification, reimbursement, advancement or insurance recovery, as the case may be.

5. Partial Indemnity. If Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of any Indemnifiable Loss but not for all of the total amount thereof, the Company shall nevertheless indemnify Indemnitee for the portion thereof to which Indemnitee is entitled.

6. Procedure for Notification. To obtain indemnification under this Agreement in respect of an Indemnifiable Claim or Indemnifiable Loss, Indemnitee shall promptly submit to the Company a written request therefor, including a brief description (based upon information then available to

Indemnitee) of such Indemnifiable Claim or Indemnifiable Loss. If, at the time of the receipt of such request, the Company has directors' and officers' liability or other applicable insurance in effect under which coverage for such Indemnifiable Claim or Indemnifiable Loss is potentially available, the Company shall give prompt written notice of such Indemnifiable Claim or Indemnifiable Loss to the applicable insurers in accordance with the procedures set forth in the applicable policies. The Company shall provide to Indemnitee a copy of such notice delivered to the applicable insurers, and copies of all subsequent material correspondence between the Company and such insurers regarding the Indemnifiable Claim or Indemnifiable Loss, in each case substantially concurrently with the delivery or receipt thereof by the Company. The failure by Indemnitee to timely notify the Company of any Indemnifiable Claim or Indemnifiable Loss shall not relieve the Company from any liability hereunder unless, and only to the extent that, the Company did not otherwise learn of such Indemnifiable Claim or Indemnifiable Loss and such failure results in forfeiture by the Company of substantial defenses, rights or insurance coverage.

7. Determination of Right to Indemnification.

(a) To the extent Indemnitee shall have been successful on the merits or otherwise in defense of any Indemnifiable Claim or any portion thereof or in defense of any issue or matter therein, including without limitation dismissal with or without prejudice, Indemnitee shall be indemnified against all Indemnifiable Losses relating to such Indemnifiable Claim in accordance with Section 2 and no Standard of Conduct Determination (as defined in Section 7(b)) shall be required. For these purposes and without limitation, Indemnitee will be deemed to have been "successful on the merits" in circumstances including but not limited to the termination of any Proceeding or of any claim, issue or matter therein, by the winning of a dismissal (with or without prejudice), motion for summary judgment, settlement (with or without court approval), or upon a plea of nolo contendere or its equivalent.

(b) To the extent that the provisions of Section 7(a) are inapplicable to an Indemnifiable Claim that shall have been finally disposed of, any determination of whether Indemnitee has satisfied any applicable standard of conduct under Delaware law that is a legally required condition to indemnification of Indemnitee hereunder against Indemnifiable Losses relating to such Indemnifiable Claim (a "***Standard of Conduct Determination***") shall be made as follows: (i) unless a Change of Control has occurred, (A) by a majority vote of the Disinterested Directors, even if less than a quorum of the Board, or (B) if there are no such Disinterested Directors, by Independent Counsel in a written opinion addressed to the Board, a copy of which shall be delivered to Indemnitee; and (ii) if a Change in Control has occurred, by Independent Counsel in a written opinion addressed to the Board, a copy of which shall be delivered to Indemnitee. Subject to the provisions governing indemnification and advancement of Expenses herein and to the fullest extent permitted by law, the Company shall indemnify and hold harmless Indemnitee against and, if requested by Indemnitee, shall reimburse Indemnitee for, or advance to Indemnitee, within ten business days of such request, any and all reasonable costs and expenses (including reasonable attorneys' and experts' fees and expenses) incurred by Indemnitee in cooperating with the person or persons making such Standard of Conduct Determination.

(c) The Company shall use its reasonable best efforts to cause any Standard of Conduct Determination required under Section 7(b) to be made as promptly as practicable. If the person or persons determined under Section 7 to make the Standard of Conduct Determination shall not have made a determination within 30 days after the later of (A) receipt by the Company of written notice from Indemnitee advising the Company of the final disposition of the applicable Indemnifiable Claim (the date of such receipt being the "***Notification Date***") and (B) the selection of an Independent Counsel, if such determination is to be made by Independent Counsel, then Indemnitee shall be deemed to have satisfied the applicable standard of conduct; *provided* that such 30-day period may be extended for a reasonable time, not to exceed an additional 30 days, if the person or persons making such determination in good faith requires such additional time to obtain or evaluate information relating thereto].

(d) If (i) Indemnitee shall be entitled to indemnification pursuant to Section 7(a), (ii) no determination of whether Indemnitee has satisfied any applicable standard of conduct under

Delaware law is a legally required condition to indemnification of Indemnitee hereunder against any Indemnifiable Losses, or (iii) Indemnitee has been determined or deemed pursuant to Section 7(b) or (c) to have satisfied any applicable standard of conduct under Delaware law which is a legally required condition to indemnification of Indemnitee, then the Company shall pay to Indemnitee, within ten business days after the later of (x) the Notification Date regarding the Indemnifiable Claim giving rise to the Indemnifiable Losses and (y) the earliest date on which the applicable criterion specified in clause (i), (ii) or (iii) is satisfied, an amount equal to such Indemnifiable Losses, to the fullest extent permitted by the laws of the State of Delaware in effect on the date hereof or as such laws may from time to time hereafter be amended to increase the scope of such permitted indemnification. Notwithstanding anything herein to the contrary, Indemnitee shall not be entitled to indemnification for, and the Company shall not be required to indemnify, defend or hold harmless Indemnitee against, any amounts paid in settlement in connection with any Claim brought by or in the right of the Company.

(e) If a Standard of Conduct Determination is to be made by Independent Counsel pursuant to Section 7(b)(i), the Independent Counsel shall be selected by the Board of Directors, and the Company shall give written notice to Indemnitee advising him or her of the identity of the Independent Counsel so selected. If a Standard of Conduct Determination is to be made by Independent Counsel pursuant to Section 7(b)(ii), the Independent Counsel shall be selected by Indemnitee, and Indemnitee shall give written notice to the Company advising it of the identity of the Independent Counsel so selected. In either case, Indemnitee or the Company, as applicable, may, within ten business days after receiving written notice of selection from the other, deliver to the other a written objection to such selection; *provided, however*, that such objection may be asserted only on the ground that the Independent Counsel so selected does not satisfy the criteria set forth in the definition of "Independent Counsel" in Section 1(h), and the objection shall set forth with particularity the factual basis of such assertion. Absent a proper and timely objection, the person or firm so selected shall act as Independent Counsel. If such written objection is properly and timely made and substantiated, (i) the Independent Counsel so selected may not serve as Independent Counsel unless and until such objection is withdrawn or a court has determined that such objection is without merit and (ii) the non-objecting party may, at its option, select an alternative Independent Counsel and give written notice to the other party advising such other party of the identity of the alternative Independent Counsel so selected, in which case the provisions of the two immediately preceding sentences and clause (i) of this sentence shall apply to such subsequent selection and notice. If applicable, the provisions of clause (ii) of the immediately preceding sentence shall apply to successive alternative selections. If no Independent Counsel that is permitted under the foregoing provisions of this Section 7(e) to make the Standard of Conduct Determination shall have been selected within 30 days after the Company gives its initial notice pursuant to the first sentence of this Section 7(e) or Indemnitee gives its initial notice pursuant to the second sentence of this Section 7(e), as the case may be, either the Company or Indemnitee may petition the Court of Chancery of the State of Delaware for resolution of any objection which shall have been made by the Company or Indemnitee to the other's selection of Independent Counsel and/or for the appointment as Independent Counsel of a person selected by the Court or by such other person as the Court shall designate, and the person or firm with respect to whom all objections are so resolved or the person or firm so appointed will act as Independent Counsel. In all events, the Company shall pay all of the reasonable fees and expenses of the Independent Counsel incurred in connection with the Independent Counsel's determination pursuant to Section 7(b).

8. Presumption of Entitlement.

(a) In making any Standard of Conduct Determination, the person or persons making such determination shall, to the fullest extent permitted by law, presume that Indemnitee has satisfied the applicable standard of conduct, and the Company may overcome such presumption only by its adducing clear and convincing evidence to the contrary. Any Standard of Conduct Determination that is adverse to Indemnitee may be challenged by Indemnitee in the Court of Chancery of the State of Delaware. No determination by the Company (including by its directors or any Independent Counsel) that Indemnitee has not satisfied any applicable standard of conduct shall be a defense to any Claim by Indemnitee for

indemnification or reimbursement or advance payment of Expenses by the Company hereunder or create a presumption that Indemnitee has not met any applicable standard of conduct.

(b) Subject to the provisions governing indemnification and advancement of Expenses herein, Indemnitee shall be entitled to indemnification for any action or omission to act undertaken (a) in good faith reliance upon the records of the Company or any of its subsidiaries, including its financial statements, or upon information, opinions, reports or statements furnished to Indemnitee by the officers or employees of the Company or any of its subsidiaries in the course of their duties, or by committees of the Board, or by any other person as to matters Indemnitee reasonably believes are within such other person's professional or expert competence, or (b) on behalf of the Company in furtherance of the interests of the Company in good faith in reliance upon, and in accordance with, the advice of legal counsel or accountants, provided such legal counsel or accountants were selected with reasonable care by or on behalf of the Company. In addition, the knowledge and/or actions, or failures to act, of any director, officer, agent or employee of the Company shall not be imputed to Indemnitee for purposes of determining the right to indemnity hereunder.

9. No Other Presumption. For purposes of this Agreement, the termination of any Claim by judgment, order, settlement (whether with or without court approval) or conviction, or upon a plea of *nolo contendere* or its equivalent, will not create a presumption that Indemnitee did not meet any applicable standard of conduct or that indemnification hereunder is otherwise not permitted. The Company acknowledges that a settlement or other disposition short of final judgment may be successful if it permits a party to avoid expense, delay, distraction, disruption and uncertainty. In the event that any Claim to which Indemnitee is a party is resolved in any manner other than by adverse judgment against Indemnitee (including, without limitation, settlement of such Claim with or without payment of money or other consideration) it shall be presumed that Indemnitee has been successful on the merits or otherwise in such action, suit or proceeding. Anyone seeking to overcome this presumption shall have the burden of proof and the burden of persuasion by clear and convincing evidence.

10. Non-Exclusivity. The rights of Indemnitee hereunder will be in addition to any other rights Indemnitee may have under the Constituent Documents, or the substantive laws of the Company's jurisdiction of incorporation, any other contract or otherwise (collectively, "***Other Indemnity Provisions***"); *provided*, *however*, that (a) to the extent that Indemnitee otherwise would have any greater right to indemnification under any Other Indemnity Provision, Indemnitee will be deemed to have such greater right hereunder and (b) to the extent that any change is made to any Other Indemnity Provision which permits any greater right to indemnification than that provided under this Agreement as of the date hereof, Indemnitee will be deemed to have such greater right hereunder. The Company will not adopt any amendment to any of the Constituent Documents the effect of which would be to deny, diminish or encumber Indemnitee's right to indemnification under this Agreement or any Other Indemnity Provision. For the avoidance of doubt, nothing in this Agreement shall reduce, diminish, abrogate or otherwise limit any rights to indemnification, exculpation or recovery to which Indemnitee may be entitled under the laws of any other jurisdiction. Without limitation of the foregoing, the Company hereby acknowledges that Indemnitee has certain rights to indemnification, advancement of expenses and/or insurance provided by [Name of VC Fund]. The Company hereby agrees that it (i) is, relative to [Name of VC Fund], the indemnitor of first resort (i.e., its obligations to Indemnitee under this Agreement are primary and any duplicative, overlapping or corresponding obligations of [Name of VC Fund] are secondary), (ii) shall be required to make all advances and other payments under this Agreement, and shall be fully liable therefor, without regard to any rights Indemnitee may have against [Name of VC Fund], and (iii) irrevocably waives, relinquishes and releases [Name of VC Fund] from any and all claims against [Name of VC Fund] for contribution, subrogation or any other recovery of any kind in respect thereof. The Company further agrees that no advancement or payment by [Name of VC Fund] on behalf of Indemnitee with respect to any claim for which Indemnitee has sought indemnification from the Company shall affect the foregoing and [Name of VC Fund] shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of Indemnitee against the Company. The

Company and Indemnitee agree that [Name of VC Fund] is an express third-party beneficiary of the terms of this Section 10.

11. Liability Insurance and Funding. To the extent applicable, for the duration of Indemnitee's service as a director and/or officer of the Company, and thereafter for so long as Indemnitee shall be subject to any pending or possible Indemnifiable Claim, the Company shall use commercially reasonable efforts (taking into account the scope and amount of coverage available relative to the cost thereof) to cause to be maintained in effect policies of directors' and officers' liability insurance providing coverage for directors and/or officers of the Company that is at least substantially comparable in scope and amount to that provided by the Company's current policies of directors' and officers' liability insurance. To the extent Indemnitee is a director or officer of the Company, upon Indemnitee's request, the Company shall provide Indemnitee with a copy of all directors' and officers' liability insurance applications, binders, policies, declarations, endorsements and other related materials, and shall provide Indemnitee with a reasonable opportunity to review and comment on the same. Without limiting the generality or effect of the two immediately preceding sentences and to the extent Indemnitee is a director or officer of the Company, the Company shall not discontinue or significantly reduce the scope or amount of coverage from one policy period to the next (i) without the prior approval thereof by a majority vote of the Incumbent Directors, even if less than a quorum, or (ii) if at the time that any such discontinuation or significant reduction in the scope or amount of coverage is proposed there are no Incumbent Directors, without the prior written consent of Indemnitee (which consent shall not be unreasonably withheld or delayed). In all policies of directors' and officers' liability insurance obtained by the Company, to the extent Indemnitee is a director or officer of the Company, Indemnitee shall be named as an insured in such a manner as to provide Indemnitee the same rights and benefits, subject to the same limitations, as are accorded to the Company's directors and officers most favorably insured by such policy. The Company may, but shall not be required to, create a trust fund, grant a security interest or use other means, including without limitation a letter of credit, to ensure the payment of such amounts as may be necessary to satisfy its obligations to indemnify and advance Expenses pursuant to this Agreement. Further, if requested by Indemnitee, within two business days of such request the Company will instruct the insurance carriers and the Company's insurance broker that they may communicate directly with Indemnitee regarding such claim.

12. Subrogation. In the event of payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the related rights of recovery of Indemnitee against other persons or entities (other than Indemnitee's successors), including any entity or enterprise referred to in clause (i) of the definition of "Indemnifiable Claim" in Section 1(f). Indemnitee shall execute all papers reasonably required to evidence such rights (all of Indemnitee's reasonable Expenses, including attorneys' fees and charges, related thereto to be reimbursed by or, at the option of Indemnitee, advanced by the Company).

13. No Duplication of Payments. The Company shall not be liable under this Agreement to make any payment to Indemnitee in respect of any Indemnifiable Losses to the extent Indemnitee has otherwise actually received payment (net of Expenses incurred in connection therewith) under any insurance policy, the Constituent Documents and Other Indemnity Provisions or otherwise.

14. Defense of Claims. The Company shall be entitled to participate in the defense of any Indemnifiable Claim or to assume the defense thereof, with counsel reasonably satisfactory to Indemnitee; *provided* that if Indemnitee reasonably believes in good faith, after consultation with counsel selected by Indemnitee, that (a) the use of counsel chosen by the Company to represent Indemnitee would present such counsel with an actual or potential conflict, (b) the named parties in any such Indemnifiable Claim (including any impleaded parties) include both the Company and Indemnitee and that there may be one or more legal defenses available to Indemnitee that are different from or in addition to those available to the Company, or (c) any such representation by such counsel would be precluded under the applicable standards of professional conduct then prevailing, then Indemnitee shall be entitled to retain separate

counsel (but not more than one law firm plus, if applicable, local counsel in respect of any particular Indemnifiable Claim) at the Company's reasonable expense. The Company shall not be liable to Indemnitee under this Agreement for any amounts paid in settlement of any threatened or pending Indemnifiable Claim effected without the Company's prior written consent. The Company shall not, without the prior written consent of Indemnitee, effect any settlement of any threatened or pending Indemnifiable Claim which Indemnitee is or could have been a party unless such settlement solely involves the payment of money and includes a complete and unconditional release of Indemnitee from all liability on any claims that are the subject matter of such Indemnifiable Claim. Neither the Company nor Indemnitee shall unreasonably withhold its consent to any proposed settlement; *provided* that Indemnitee may withhold consent to any settlement that does not provide a complete and unconditional release of Indemnitee.

15. Successors and Binding Agreement.

(a) The Company shall require any successor (whether direct or indirect, by purchase, merger, consolidation, reorganization or otherwise) to all or substantially all of the business or assets of the Company, by agreement in form and substance satisfactory to Indemnitee, in consultation with his or her counsel, expressly to assume and agree to perform this Agreement to the fullest extent permitted by law. This Agreement shall be binding upon and inure to the benefit of the Company and any successor to the Company, including without limitation any person acquiring directly or indirectly all or substantially all of the business or assets of the Company whether by purchase, merger, consolidation, reorganization or otherwise (and such successor will thereafter be deemed the "***Company***" for purposes of this Agreement), but shall not otherwise be assignable or delegable by the Company.

(b) This Agreement shall inure to the benefit of and be enforceable by Indemnitee's personal or legal representatives, executors, administrators, heirs, distributees, legatees and other successors.

(c) This Agreement is personal in nature and neither of the parties hereto shall, without the consent of the other, assign or delegate this Agreement or any rights or obligations hereunder except as expressly provided in Sections 15(a) and 15(b). Without limiting the generality or effect of the foregoing, Indemnitee's right to receive payments hereunder shall not be assignable, whether by pledge, creation of a security interest or otherwise, other than by a transfer by Indemnitee's will or by the laws of descent and distribution, and, in the event of any attempted assignment or transfer contrary to this Section 15(c), the Company shall have no liability to pay any amount so attempted to be assigned or transferred.

(d) This Agreement shall continue in effect regardless of whether Indemnitee continues to serve as a director, officer, employee or agent of the Company and/or at the request of the Company as a director, officer, employee, member, manager, trustee, or agent of any other corporation, limited liability company, partnership, joint venture, trust or other entity or enterprise.

16. Notices. For all purposes of this Agreement, all communications, including without limitation notices, consents, requests or approvals, required or permitted to be given hereunder shall be in writing and shall be deemed to have been duly given when hand delivered or dispatched by electronic facsimile transmission (with receipt thereof orally confirmed), or five business days after having been mailed by United States registered or certified mail, return receipt requested, postage prepaid or one business day after having been sent for next-day delivery by a nationally recognized overnight courier service, addressed to the Company (to the attention of the Secretary of the Company) and to Indemnitee at the addresses shown on the signature page hereto, or to such other address as any party may have furnished to the other in writing and in accordance herewith, except that notices of changes of address will be effective only upon receipt.

17. Governing Law. The validity, interpretation, construction and performance of this Agreement shall be governed by and construed in accordance with the substantive laws of the State of

Delaware, without giving effect to the principles of conflict of laws of such State. The Company and Indemnitee each hereby irrevocably consent to the jurisdiction of the Chancery Court of the State of Delaware for all purposes in connection with any action or proceeding which arises out of or relates to this Agreement and agree that any action instituted under this Agreement shall be brought only in the Chancery Court of the State of Delaware.

18. Validity. If any provision of this Agreement or the application of any provision hereof to any person or circumstance is held invalid, unenforceable or otherwise illegal, the remainder of this Agreement and the application of such provision to any other person or circumstance shall not be affected, and the provision so held to be invalid, unenforceable or otherwise illegal shall be reformed to the extent, and only to the extent, necessary to make it enforceable, valid or legal. In the event that any court or other adjudicative body shall decline to reform any provision of this Agreement held to be invalid, unenforceable or otherwise illegal as contemplated by the immediately preceding sentence, the parties thereto shall take all such action as may be necessary or appropriate to replace the provision so held to be invalid, unenforceable or otherwise illegal with one or more alternative provisions that effectuate the purpose and intent of the original provisions of this Agreement as fully as possible without being invalid, unenforceable or otherwise illegal.

19. Miscellaneous. No provision of this Agreement may be waived, modified or discharged unless such waiver, modification or discharge is agreed to in writing signed by Indemnitee and the Company. No waiver by either party hereto at any time of any breach by the other party hereto or compliance with any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time. No agreements or representations, oral or otherwise, expressed or implied with respect to the subject matter hereof have been made by either party that are not set forth expressly in this Agreement. References to Sections are to references to Sections of this Agreement.

20. Certain Interpretive Matters. No provision of this Agreement shall be interpreted in favor of, or against, either of the parties hereto by reason of the extent to which any such party or its counsel participated in the drafting thereof or by reason of the extent to which any such provision is inconsistent with any prior draft hereof or thereof.

21. Amendments, Etc. No supplement, modification or amendment of this Agreement shall be binding unless executed in writing by both of the parties hereto. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provisions hereof (whether or not similar) nor shall such waiver constitute a continuing waiver.

22. Monetary Damages Insufficient/Specific Performance. The Company and Indemnitee agree that a monetary remedy for breach of this Agreement may be inadequate, impracticable and difficult of proof, and further agree that such breach may cause Indemnitee irreparable harm. Accordingly, the parties hereto agree that Indemnitee may enforce this Agreement by seeking injunctive relief and/or specific performance hereof, without any necessity of showing actual damage or irreparable harm (having agreed that actual and irreparable harm will result in not forcing the Company to specifically perform its obligations pursuant to this Agreement) and that by seeking injunctive relief and/or specific performance, Indemnitee shall not be precluded from seeking or obtaining any other relief to which he may be entitled. The Company and Indemnitee further agree that Indemnitee shall be entitled to such specific performance and injunctive relief, including temporary restraining orders, preliminary injunctions and permanent injunctions, without the necessity of posting bonds or other undertaking in connection therewith. The Company acknowledges that in the absence of a waiver, a bond or undertaking may be required of Indemnitee by the Court, and the Company hereby waives any such requirement of a bond or undertaking. If Indemnitee seeks mandatory injunctive relief, it shall not be a defense to enforcement of the Company’s obligations set forth in this Agreement that Indemnitee has an adequate remedy at law for damages.

23. Counterparts. This Agreement may be executed in counterparts, each of which will be deemed to be an original but all of which together shall constitute one and the same agreement.

[***Remainder of Page Intentionally Left Blank***]

IN WITNESS WHEREOF, Indemnitee has executed and the Company has caused its duly authorized representative to execute this Agreement as of the date first above written.

Duolingo, Inc.

By: _____
(Signature)

_____
(Printed Name)

_____
(Title)

_____
(Signature of Indemnitee)

_____
(Printed Name of Indemnitee)

Address of Indemnitee:

_____

[SIGNATURE PAGE TO INDEMNIFICATION AGREEMENT]

Exhibit 10.13

EXCHANGE AGREEMENT

This EXCHANGE AGREEMENT (this "***Agreement***") is made and entered into as of [ ], 2021 by and among Duolingo, Inc., a Delaware corporation (the "***Company***"), and stockholders of the Company listed on Exhibit A hereto (collectively, "***Exchange Stockholders***").

RECITALS

WHEREAS, the Board of Directors of the Company (the "***Board***") has determined that it is in the best interests of the Company and its stockholders to implement a dual class structure in connection with the Company's proposed initial public offering of its capital stock in a firm commitment underwritten offering (the "***IPO***") pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "***Securities Act***");

WHEREAS, in connection with the IPO, the Board and the Company's stockholders approved an Amended and Restated Certificate of Incorporation of the Company (the "***Certificate of Incorporation***"), which, among other things, created two classes of common stock of the Company, Class A common stock, par value $0.0001 per share ("***Class A Common Stock***"), entitling holders to one (1) vote per share and Class B common stock, par value $0.0001 per share ("***Class B Common Stock***"), entitling holders to twenty (20) votes per share;

WHEREAS, effective upon the filing of the Certificate of Incorporation with the Secretary of State of the State of Delaware on the date hereof (the "***Effective Time***"), the Certificate of Incorporation further provided that the Company's common stock, par value $0.0001 per share ("***Common Stock***"), was reclassified as Class A Common Stock;

WHEREAS, the Exchange Stockholders hold shares of Class A Common Stock and the Board has determined that exchanging the shares of Class A Common Stock held by the Exchange Stockholders as set forth on Exhibit A hereto for shares of Class B Common Stock as part of the implementation of the dual class structure in connection with the IPO is advisable and in the best interest of the Company and all of its stockholders, including its stockholders other than the Exchange Stockholders; and

WHEREAS, the parties hereto intend that no gain or loss shall be recognized in the Exchange (as defined below) pursuant to Sections 368(a)(1)(E) and/or 1036 of the Internal Revenue Code of 1986, as amended (the "***Code***").

AGREEMENT

NOW, THEREFORE, in consideration of the above recitals and the mutual covenants made herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and accepted, the parties hereto agree as follows:

1. Exchange of Class A Common Stock.

1.1 Subject to the terms and conditions of this Agreement, effective upon the execution of this Agreement (the "***Exchange Effective Time***"), each Exchange Stockholder shall be deemed to have automatically transferred to the Company the shares of Class A Common Stock held by such Exchange Stockholder as set forth on Exhibit A hereto (the "***Class A Shares***") and the Company shall issue to each Exchange Stockholder shares of Class B Common Stock (the "***Class B Shares***"), at an exchange ratio of one (1) Class A Share for one (1) Class B Share (the "***Exchange***"). The number of

Class A Shares to be transferred and the number of Class B Shares to be received in the Exchange by each Exchange Stockholder are as set forth on Exhibit A hereto.

1.2 Concurrently herewith, each Exchange Stockholder is delivering to the Company such instruments of transfer or other documentation as may be reasonably required to evidence that the shares of Class A Common Stock held by such Exchange Stockholder have been duly transferred to the Company to be held in escrow until the Exchange Effective Time and such documents are automatically released without further action by the Company or the Exchange Stockholder at the Exchange Effective Time.

1.3 Upon the effectiveness of the Exchange, the Company shall deliver to each Exchange Stockholder such documentation as may be reasonably required to evidence that the Class B Shares have been duly issued and transferred to the applicable Exchange Stockholder.

2. Representations and Warranties.

2.1 Representations and Warranties of the Exchange Stockholders. Each Exchange Stockholder hereby represents and warrants to the Company, with respect to the transactions contemplated hereby, as follows:

(a) Ownership; Authority. Each Exchange Stockholder is, as of the Exchange Effective Time, the beneficial and legal owner of the Class A Shares exchanged hereunder, free and clear of all liens, encumbrances and restrictions (except for restrictions on transfer arising under applicable securities laws or as set forth or contemplated by this Agreement, the Certificate of Incorporation or any other agreements to which such Exchange Stockholder and the Company are a party). Each Exchange Stockholder has the full right, power and authority to enter into this Agreement and, assuming the waiver or inapplicability of any and all rights of first refusal or co-sale by the Company and the Company's stockholders that are applicable to the transactions contemplated hereby, to transfer, convey and exchange the Class A Shares in accordance with this Agreement. Assuming the due authorization, execution and delivery by the Company, this Agreement constitutes a valid and binding agreement of such Exchange Stockholder, enforceable against such Exchange Stockholder in accordance with its terms (subject to applicable bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and other laws affecting creditors' rights generally and general principles of equity). Upon consummation of the Exchange contemplated hereby, the Company will acquire from Exchange Stockholder good and marketable title to the Class A Shares, free and clear of any and all liens, encumbrances and restrictions (except for restrictions on transfer arising under applicable securities laws or as set forth or contemplated by this Agreement, the Certificate of Incorporation or any other agreements to which such Exchange Stockholder and the Company are a party, and subject to applicable bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and other laws affecting creditors' rights generally and general principles of equity).

(b) Governmental Authorization. The execution, delivery and performance by such Exchange Stockholder of this Agreement and the consummation of the transactions contemplated hereby require no action by or in respect of, or filing with, any governmental authority on the part of such Exchange Stockholder (excluding, for the avoidance of doubt compliance by the Company with any applicable requirements of any applicable state or federal securities laws). For purposes of this Agreement, "governmental authority" means any transnational, domestic or foreign federal, state or local governmental, regulatory or administrative authority, department, court, agency or official, including any political subdivision thereof.

(c) Non-contravention. The execution, delivery and performance by such Exchange Stockholder of this Agreement and the consummation of the transactions contemplated hereby do not and will not, assuming compliance with the matters referred to in Section 2.1(b), (a) violate any governing document, including any trust agreement, applicable to such Exchange Stockholder, (b) violate any law or order applicable to such Exchange Stockholder, (c) assuming the waiver or inapplicability of any and all rights of first refusal or co-sale held by the Company or the Company's stockholders that are applicable to the transactions contemplated hereby, require any consent or other action under, constitute a default under, or give rise to any right of termination, cancellation or acceleration of any obligation of such Exchange Stockholder or to the loss of any benefit to which such Exchange Stockholder is entitled under any provision of any agreement or other instrument binding upon such Exchange Stockholder, or (d) result in the creation or imposition of any lien on such Exchange Stockholder's Class B Shares, other than restrictions on transfer arising under applicable securities laws or as set forth or contemplated by this Agreement, the Certificate of Incorporation or any other agreements to which such Exchange Stockholder and the Company are a party.

(d) Restricted Securities; Rule 144. Such Exchange Stockholder understands that the Class B Shares are characterized as "restricted securities" under the Securities Act because such shares are being acquired from the Company in a transaction not involving a public offering and in exchange for shares acquired from the Company in a transaction not involving a public offering, and that under the Securities Act and the rules and regulations promulgated thereunder the Class B Shares may be resold without registration under the Securities Act only in certain limited circumstances, and subject to the restrictions under the Company's certificate of incorporation. Such Exchange Stockholder understands and hereby acknowledges that the Class B Shares must be held indefinitely unless subsequently registered under the Securities Act or an exemption from such registration is otherwise available. Such Exchange Stockholder is aware of the provisions of Rule 144 promulgated under the Securities Act, which permit limited resales of shares purchased in a transaction not involving a public offering, subject to the satisfaction of certain conditions.

(e) Legends. It is understood that any certificate or book entry position representing the Class B Shares and any securities issued in respect thereof or exchange therefor, shall bear legends in substantially the following form (in addition to any legend required under applicable state securities laws or agreements to which the Exchange Stockholder is a party):

> "THE SHARES EVIDENCED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR UNDER THE SECURITIES LAWS OF CERTAIN STATES. THESE SHARES MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED EXCEPT AS PERMITTED UNDER THE ACT AND APPLICABLE STATE SECURITIES LAWS PURSUANT TO REGISTRATION OR AN EXEMPTION THEREFROM. THE ISSUER OF THESE SHARES MAY REQUIRE AN OPINION OF COUNSEL SATISFACTORY TO THE ISSUER THAT SUCH OFFER, SALE OR TRANSFER, PLEDGE OR HYPOTHECATION OTHERWISE COMPLIES WITH THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS."

2.2 Representations and Warranties of the Company. The Company hereby represents and warrants to each Exchange Stockholder, with respect to the transactions contemplated hereby, as follows:

(a) Corporate Existence and Power. The Company is a corporation duly incorporated, validly existing and in good standing under the laws of the State of Delaware.

(b) Corporate Authorization. The execution, delivery and performance by the Company of this Agreement and the consummation of the transactions contemplated hereby are within the corporate powers of the Company and have been duly authorized by all necessary corporate action on the part of the Company and the Company's stockholders, subject to compliance with Section 2.2(c). Any and all rights of first refusal or co-sale held by the Company or the Company's stockholders that are applicable to the transactions contemplated hereby have been waived or are otherwise inapplicable. Assuming the due authorization, execution and delivery by each Exchange Stockholder, this Agreement constitutes a valid and binding agreement of the Company, enforceable against the Company in accordance with its terms (subject to applicable bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and other laws affecting creditors' rights generally and general principles of equity).

(c) Governmental Authorization. The execution, delivery and performance by the Company of this Agreement and the consummation of the transactions contemplated hereby require no action by or in respect of, or filing with, any governmental authority other than compliance by the Company with any applicable requirements of any applicable state or federal securities laws.

(d) Non-contravention. The execution, delivery and performance by the Company of this Agreement and the consummation of the transactions contemplated hereby do not and will not, assuming compliance with the matters referred to in Section 2.2(c), (a) violate the certificate of incorporation or bylaws of the Company, (b) violate any law or order applicable to the Company, (c) require any consent or other action by any person under, constitute a default under, or give rise to any right of termination, cancellation or acceleration of any right obligation of the Company or to the loss of any benefit to which the Company is entitled under any provision of any agreement or other instrument binding upon the Company or (d) result in the creation or imposition of any lien on the Class B Shares other than as set forth or contemplated by this Agreement or the Certificate of Incorporation.

3. Miscellaneous.

3.1 Waiver of Right of First Refusal. The Company hereby waives any preexisting rights of first refusal applicable to the transactions contemplated hereby.

3.2 Governing Law. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware, regardless of the laws that might otherwise govern under applicable principles of conflicts of law.

3.3 No Assignment. The terms and conditions of this Agreement, including all obligations and rights therein, may not be assigned.

3.4 Amend or Waive. This Agreement may be amended or terminated and the observance of any term hereof may be waived (either generally or in a particular instance and either retroactively or prospectively) only by a written instrument executed by each of the parties hereto.

3.5 Severability. The invalidity or unenforceability of any provision hereof shall in no way affect the validity or enforceability of any other provision.

3.6 Entire Agreement. This Agreement shall constitute the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other

written or oral agreement relating to the subject matter hereof existing among the parties are expressly canceled.

3.7 Counterparts; Facsimile. This Agreement may be executed and delivered by facsimile signature, including electronic signatures, and in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

3.8 Tax Consequences. The parties hereto intend that no gain or loss shall be recognized in the Exchange pursuant to Sections 368(a)(1)(E) and/or 1036 of the Code. The parties adopt this Agreement as a plan of reorganization within the meaning of Treasury Regulations Sections 1.368-2(g) and 1.368-3(a). Notwithstanding the foregoing, each Exchange Stockholder has reviewed with his own tax advisors the federal, state, local and foreign tax consequences of the Exchange, investment in the Class B Shares and the transactions contemplated by this Agreement. Each Exchange Stockholder is relying solely on such advisors and not on any statements or representations of the Company or any of its agents in connection with the transactions contemplated hereby, except for the representations and warranties of the Company expressly set forth in Section 2.2 above.

[*Signature page follows.*]

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be executed as of the date first written above.

DUOLINGO, INC.

By: _____
Name:
Title:

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be executed as of the date first written above.

LUIS VON AHN

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be executed as of the date first written above.

SEVERIN HACKER

SEVERIN HACKER, AS TRUSTEE OF
THE SBH TRUST DATED MARCH 10, 2020

EXHIBIT A

Exhibit A to Duolingo, Inc. Exchange Agreement

DUOLINGO, INC.

CHANGE IN CONTROL AND SEVERANCE AGREEMENT

This Change in Control and Severance Agreement (the "***Agreement***") is made and entered into by and between [_____] ("***Executive***") and Duolingo, Inc. (the "***Company***"). This Agreement shall become effective as of the closing of the initial public offering of the Company's Class A common stock (the "***Effective Date***").

R E C I T A L S

A. The Board of Directors of the Company (the "***Board***") recognizes that the possibility of an acquisition of the Company or an involuntary termination can be a distraction to Executive and can cause Executive to consider alternative employment opportunities. The Board has determined that it is in the best interests of the Company and its stockholders to assure that the Company will have the continued dedication and objectivity of Executive, notwithstanding the possibility, threat or occurrence of such an event.

B. The Board believes that it is in the best interests of the Company and its stockholders to provide Executive with an incentive to continue Executive's employment and to motivate Executive to maximize the value of the Company upon a Change in Control (as defined below) for the benefit of its stockholders.

C. The Board believes that it is imperative to provide Executive with severance benefits upon certain terminations of Executive's service to the Company that enhance Executive's financial security and provide incentive and encouragement to Executive to remain with the Company notwithstanding the possibility of such an event.

D. Unless otherwise defined herein, capitalized terms used in this Agreement are defined in Section 9 below.

The parties hereto agree as follows:

1. Term of Agreement. This Agreement shall become effective as of the Effective Date and terminate upon the date that all obligations of the parties hereto with respect to this Agreement have been satisfied.

2. At-Will Employment. The Company and Executive acknowledge that Executive's employment is and shall continue to be "at-will," as defined under applicable law. If Executive's employment terminates for any reason, Executive shall not be entitled to any payments, benefits, damages, awards or compensation other than as provided by this Agreement.

3. Covered Termination Other Than During a Change in Control Period. If Executive experiences a Covered Termination other than during a Change in Control Period, and if Executive

delivers to the Company a general release of all claims against the Company and its affiliates (a "***Release of Claims***") in a form acceptable to the Company that becomes effective and irrevocable within sixty (60) days, or such shorter period of time specified by the Company, following such Covered Termination, then in addition to any accrued but unpaid salary, bonus, benefitsand expense reimbursement payable in accordance with applicable law, the Company shall provide Executive with the following:

(a) Severance. Executive shall be entitled to receive a severance payment equal to [twelve (12) OR six (6)] months of Executive's base salary at the rate in effect immediately prior to the Termination Date payable in a cash lump sum, less applicable withholdings, on the first payroll date following the date the Release of Claims becomes effective and irrevocable.

(b) Continued Healthcare. If Executive elects to receive continued healthcare coverage pursuant to the provisions of the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("***COBRA***"), the Company shall directly pay, or reimburse Executive for, the premium for Executive and Executive's covered dependents during the period (the "***Non-CIC COBRA Period***") from the Termination Date through the earlier of (i) the [twelve (12) OR six (6)] month anniversary of the Termination Date and (ii) the date Executive and Executive's covered dependents, if any, become eligible for healthcare coverage under another employer's plan(s); *provided*, *however*, that if (1) any plan pursuant to which such benefits are provided is not, or ceases prior to the expiration of the continuation coverage period to be, exempt from the application of Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***"), under Treasury Regulation Section 1.409A-1(a)(5), (2) the Company is otherwise unable to continue to cover Executive or Executive's dependents under its group health plans, or (3) the Company cannot provide the benefit without violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then, in any such case, an amount equal to each remaining Company subsidy shall thereafter be paid to Executive in substantially equal monthly installments over the Non-CIC COBRA Period (or remaining portion thereof). After the Company ceases to pay or reimburse premiums pursuant to the preceding sentence, Executive may, if eligible, elect to continue healthcare coverage at Executive's expense in accordance the provisions of COBRA.

4. Covered Termination During a Change in Control Period. If Executive experiences a Covered Termination during a Change in Control Period, and if Executive delivers a Release of Claims in a commercially reasonable form delivered to Executive by the Company within ten (10) days following the Termination Date that becomes effective and irrevocable within sixty (60) days, or such shorter period of time specified by the Company, following such Covered Termination, then in addition to any accrued but unpaid salary, bonus, benefits and expense reimbursement payable in accordance with applicable law, the Company shall provide Executive with the following:

(a) Severance. Executive shall be entitled to receive an amount equal to the sum of (i) [eighteen (18) OR twelve (12)] of Executive's annual base salary and (ii) a pro-rated portion of Executive's target annual bonus assuming achievement of performance goals at target, with pro-ration determined based on the number of days in the performance period that have lapsed as of the

Termination Date, payable in a cash lump sum, less applicable withholdings, on the first payroll date following the date the Release of Claims becomes effective and irrevocable.

(b) Continued Healthcare. If Executive elects to receive continued healthcare coverage pursuant to the provisions of COBRA, the Company shall directly pay, or reimburse Executive for, the premium for Executive and Executive's covered dependents during the period (the "***CIC COBRA Period***") from the Termination Date through the earlier of (i) the [eighteen (18) OR twelve (12)] month anniversary of the Termination Date and (ii) the date Executive and Executive's covered dependents, if any, become eligible for healthcare coverage under another employer's plan(s)); *provided, however*, that if (1) any plan pursuant to which such benefits are provided is not, or ceases prior to the expiration of the continuation coverage period to be, exempt from the application of Section 409A of the Code under Treasury Regulation Section 1.409A-1(a)(5), (2) the Company is otherwise unable to continue to cover Executive or Executive's dependents under its group health plans, or (3) the Company cannot provide the benefit without violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), then, in any such case, an amount equal to each remaining Company subsidy shall thereafter be paid to Executive in substantially equal monthly installments over the CIC COBRA Period (or remaining portion thereof). After the Company ceases to pay or reimburse premiums pursuant to the preceding sentence, Executive may, if eligible, elect to continue healthcare coverage at Executive's expense in accordance the provisions of COBRA.

(c) Equity Awards. Except as otherwise provided in an individual equity award agreement, each outstanding and unvested equity award, including, without limitation, each stock option and restricted stock award, held by Executive that vests based solely on continued services shall automatically become vested and, if applicable, exercisable and any forfeiture restrictions or rights of repurchase thereon shall immediately lapse, in each case, with respect to one hundred percent (100%) of that number of unvested shares underlying Executive's equity awards as of the Termination Date.

Notwithstanding anything in this Section 4 to the contrary, in the event the Company fails to deliver to Executive a commericially reasonable form of Release of Claims within ten (10) days following the Termination Date, the requirement to timely deliver a Release of Claims under this Section 4 shall be deemed satisfied.

5. Certain Reductions. Notwithstanding anything herein to the contrary, the Company shall reduce Executive's severance benefits under this Agreement, in whole or in part, by any other severance benefits, pay in lieu of notice, or other similar benefits payable to Executive by the Company in connection with Executive's termination, including but not limited to payments or benefits pursuant to (a) any applicable legal requirement, including, without limitation, the Worker Adjustment and Retraining Notification Act, or (b) any Company agreement, arrangement, policy or practice relating to Executive's termination of employment with the Company. The benefits provided under this Agreement are intended to satisfy, to the greatest extent possible, any and all statutory obligations that may arise out of Executive's termination of employment. Such reductions

shall be applied on a retroactive basis, with severance benefits previously paid being recharacterized as payments pursuant to the Company's statutory obligation.

6. Deemed Resignation. Upon termination of Executive's employment for any reason, Executive shall be deemed to have resigned from all offices and directorships, if any, and then held with the Company or any of its affiliates, and, at the Company's request, Executive shall execute such documents as are necessary or desirable to effectuate such resignations.

7. Other Terminations. If Executive's service with the Company is terminated by the Company or by Executive for any or no reason other than as a Covered Termination, then Executive shall not be entitled to any benefits hereunder other than accrued but unpaid salary, bonus and expense reimbursement in accordance with applicable law and to elect any continued healthcare coverage as may be required under COBRA or similar state law.

8. Limitation on Payments. Notwithstanding anything in this Agreement to the contrary, if any payment or distribution Executive would receive pursuant to this Agreement or otherwise ("***Payment***") would (a) constitute a "parachute payment" within the meaning of Section 280G of the Code and (b) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "***Excise Tax***"), then such Payment shall either be (i) delivered in full, or (ii) delivered as to such lesser extent which would result in no portion of such Payment being subject to the Excise Tax, whichever of the foregoing amounts, taking into account the applicable federal, state and local income taxes and the Excise Tax, results in the receipt by Executive on an after-tax basis, of the largest payment, notwithstanding that all or some portion the Payment may be taxable under Section 4999 of the Code. The accounting firm engaged by the Company for general audit purposes as of the day prior to the effective date of the Change in Control shall perform the foregoing calculations. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder. The accounting firm shall provide its calculations to the Company and Executive within fifteen (15) calendar days after the date on which Executive's right to a Payment is triggered (if requested at that time by the Company or Executive) or such other time as requested by the Company or Executive. Any good faith determinations of the accounting firm made hereunder shall be final, binding and conclusive upon the Company and Executive. Any reduction in payments and/or benefits pursuant to this Section 8 will occur in the following order: (1) reduction of cash payments; (2) cancellation of accelerated vesting of equity awards other than stock options; (3) cancellation of accelerated vesting of stock options; and (4) reduction of other benefits payable to Executive.

9. Definition of Terms. The following terms referred to in this Agreement shall have the following meanings:

(a) Cause. "***Cause***" means (i) Executive's willful, material breach of a material provision of a written agreement with the Company that remains uncured more than thirty (30) days after the Company's delivery of written notice thereof to Executive, (ii) Executive's conviction of, or plea of *nolo contendere* to, a felony or crime involving moral turpitude, (iii) Executive's willful

participation in a fraud, act of material dishonesty or misappropriation or similar conduct that causes material harm to the Company or (iv) Executive's willful conduct that is materially injurious to the Company or its affiliates or subsidiaries, monetarily or otherwise. For the purposes hereof, conduct will not be considered "willful" unless it is done with intentionally, without the good faith belief that such conduct was in the best interests of the Company or its affiliates or subsidiaries.

(b) Change in Control. "***Change in Control***" shall have the meaning ascribed such term in the Company's 2021 Incentive Award Plan.

(c) Change in Control Period. "***Change in Control Period***" means the period of time commencing three (3) months prior to a Change in Control and ending twelve (12) months following the Change in Control.

(d) Constructive Termination. "***Constructive Termination***" means Executive's resignation from employment with the Company that is effective within one-hundred twenty (120) days after the occurrence, without Executive's written consent, of any of the following: (i) a material diminution in Executive's base compensation; (ii) a material diminution in Executive's job responsibilities or duties inconsistent in any material respect with Executive's position, authority or responsibilities in effect immediately prior to such change; (iii) other than as a result of a change in work from home orders, a relocation of Executive's principal place of employment that increases Executive's one-way commute by more than thirty-five (35) miles or (iv) the failure by any successor entity or corporation following a Change in Control to assume the obligations under this Agreement. Notwithstanding the foregoing, a resignation shall not constitute a "Constructive Termination" unless the condition giving rise to such resignation continues uncured by the Company more than thirty (30) days following Executive's written notice of such condition provided to the Company within ninety (90) days of the first occurrence of such condition and such resignation is effective within thirty (30) days following the end of such notice period.

(e) Covered Termination. "***Covered Termination***" means Executive's Constructive Termination [during a Change in Control Period] or the termination of Executive's employment by the Company other than for Cause at any time.

(f) Termination Date. "***Termination Date***" means the date Executive experiences a Covered Termination.

10. Successors.

(a) Company's Successors. Except as set forth above, any successor to the Company (whether direct or indirect and whether by purchase, merger, consolidation, liquidation or otherwise) to all or substantially all of the Company's business and/or assets shall assume the obligations under this Agreement and agree expressly to perform the obligations under this Agreement in the same manner and to the same extent as the Company would be required to perform such obligations in the absence of a succession. For all purposes under this Agreement, the term "***Company***" shall include

any successor to the Company's business and/or assets which executes and delivers the assumption agreement described in this Section 10(a) or which becomes bound by the terms of this Agreement by operation of law.

(b) Executive's Successors. The terms of this Agreement and all rights of Executive hereunder shall inure to the benefit of, and be enforceable by, Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

11. Notices. Notices and all other communications contemplated by this Agreement shall be in writing and shall be deemed to have been duly given when personally delivered or one day following mailing via Federal Express or similar overnight courier service. In the case of Executive, mailed notices shall be addressed to Executive at Executive's home address that the Company has on file for Executive. In the case of the Company, mailed notices shall be addressed to its corporate headquarters, and all notices shall be directed to the attention of its Chief Executive Officer.

12. Confidentiality; Non-Disparagement.

(a) Confidentiality. Executive hereby expressly confirms Executive's continuing obligations to the Company pursuant to Executive's Proprietary Information and Invention Assignment Agreement with the Company (the "***Confidential Information Agreement***").

(b) Non-Disparagement. Executive agrees that Executive shall not disparage, criticize or defame the Company, its affiliates and their respective affiliates, directors, officers, agents, partners, stockholders or employees, either publicly or privately. The Company agrees that it shall not, and it shall instruct its officers and members of its Board to not, disparage, criticize or defame Executive, either publicly or privately. Nothing in this Section 12(b) shall have application to any evidence or testimony required by any court, arbitrator or government agency.

13. Dispute Resolution. To ensure the timely and economical resolution of disputes that arise in connection with this Agreement, Executive and the Company agree that any and all disputes, claims, or causes of action arising from or relating to the enforcement, breach, performance or interpretation of this Agreement, Executive's employment, or the termination of Executive's employment, shall be resolved to the fullest extent permitted by law by final, binding and confidential arbitration in Allegheny County, Pennsylvania through Judicial Arbitration & Mediation Services/Endispute ("***JAMS***") in conformity with the then-existing JAMS employment arbitration rules and Pennsylvania law. A link to the current JAMS employment arbitration rules follows: https://www.jamsadr.com/rules-employment-arbitration/english. **By agreeing to this arbitration procedure, both Executive and the Company waive the right to resolve any such dispute through a trial by jury or judge or administrative proceeding**. The arbitrator shall: (a) have the authority to compel adequate discovery for the resolution of the dispute and to award such relief as would otherwise be permitted by law; and (b) issue a written arbitration decision, to include the arbitrator's essential findings and conclusions and a statement of the award. The Company shall pay all JAMS's arbitration fees in excess of the amount of court fees that would be required if the dispute

were decided in a court of law. Nothing in this Agreement is intended to prevent either Executive or the Company from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Notwithstanding the foregoing, Executive and the Company each have the right to resolve any issue or dispute over intellectual property rights by Court action instead of arbitration.

14. Miscellaneous Provisions.

(a) Section 409A.

(i) Separation from Service. Notwithstanding any provision to the contrary in this Agreement, no amount deemed deferred compensation subject to Section 409A of the Code shall be payable pursuant to Sections 3 or 4 above unless Executive's termination of employment constitutes a "separation from service" with the Company within the meaning of Section 409A of the Code and the Department of Treasury regulations and other guidance promulgated thereunder ("***Separation from Service***") and, except as provided under Section 14(a)(ii) of this Agreement, any such amount shall not be paid, or in the case of installments, commence payment, until the sixtieth (60^{th}) day following Executive's Separation from Service. Any installment payments that would have been made to Executive during the sixty (60) day period immediately following Executive's Separation from Service but for the preceding sentence shall be paid to Executive on the sixtieth (60^{th}) day following Executive's Separation from Service and the remaining payments shall be made as provided in this Agreement.

(ii) Specified Employee. Notwithstanding any provision to the contrary in this Agreement, if Executive is deemed at the time of Executive's separation from service to be a "specified employee" for purposes of Section 409A(a)(2)(B)(i) of the Code, to the extent delayed commencement of any portion of the benefits to which Executive is entitled under this Agreement is required in order to avoid a prohibited distribution under Section 409A(a)(2)(B)(i) of the Code, such portion of Executive's benefits shall not be provided to Executive prior to the earlier of (A) the expiration of the six (6)-month period measured from the date of Executive's Separation from Service or (B) the date of Executive's death. Upon the first business day following the expiration of the applicable Code Section 409A(a)(2)(B)(i) period, all payments deferred pursuant to this Section 14(a)(ii) shall be paid in a lump sum to Executive, and any remaining payments due under this Agreement shall be paid as otherwise provided herein.

(iii) Expense Reimbursements. To the extent that any reimbursements payable pursuant to this Agreement are subject to the provisions of Section 409A of the Code, any such reimbursements payable to Executive pursuant to this Agreement shall be paid to Executive no later than December 31^{st} of the year following the year in which the expense was incurred, the amount of expenses reimbursed in one year shall not affect the amount eligible for reimbursement in any subsequent year, and Executive's right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

(iv) Installments. For purposes of Section 409A of the Code (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), Executive's right to receive any installment payments under this Agreement shall be treated as a right to receive a series of separate payments and, accordingly, each such installment payment shall at all times be considered a separate and distinct payment.

(b) Waiver. No provision of this Agreement shall be modified, waived or discharged unless the modification, waiver or discharge is agreed to in writing and signed by Executive and by an authorized officer of the Company (other than Executive). No waiver by either party of any breach of, or of compliance with, any condition or provision of this Agreement by the other party shall be considered a waiver of any other condition or provision or of the same condition or provision at another time.

(c) Whole Agreement. This Agreement and the Confidential Information Agreement represent the entire understanding of the parties hereto with respect to the subject matter hereof and supersede all prior promises, arrangements and understandings regarding same, whether written or written, including, without limitation, any severance or change in control benefits in Executive's offer letter agreement or employment agreement or previously approved by the Board.

(d) Choice of Law. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the Commonwealth of Pennsylvania.

(e) Severability. The invalidity or unenforceability of any provision or provisions of this Agreement shall not affect the validity or enforceability of any other provision hereof, which shall remain in full force and effect.

(f) Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together will constitute one and the same instrument.

(*Signature page follows*)

IN WITNESS WHEREOF, each of the parties has executed this Agreement, in the case of the Company by its duly authorized officer, as of the day and year set forth below.

DUOLINGO, INC.

By _____
Title: _____
Date: _____

EXECUTIVE

_____
[____]
Date: _____

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the use in this Amendment 1 to Registration Statement No. 333-257483 on Form S-1 of our report dated April 30, 2021, relating to the financial statements of Duolingo, Inc. and subsidiaries. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ Deloitte & Touche LLP
New York, New York
July 19, 2021