

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

FORM 8-K

CURRENT REPORT  
Pursuant to Section 13 or 15(d) of the  
Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): August 8, 2023

Duolingo, Inc.  
(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction  
of incorporation)

001-40653  
(Commission  
File Number)

45-3055872  
(IRS Employer  
Identification Number)

5900 Penn Avenue  
Pittsburgh, Pennsylvania 15206  
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (412) 567-6602

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A common stock, \$0.0001 par value per share	DUOL	The Nasdaq Stock Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

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 13(a) of the Exchange Act.

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**Item 2.02 Results of Operations and Financial Condition**

On August 8, 2023, Duolingo, Inc. (the "Company") issued a press release announcing the financial results of the Company for the three and six months ended June 30, 2023. A copy of the press release is being furnished as Exhibit 99.1 attached hereto and is incorporated by reference herein.

In accordance with General Instruction B.2 of Form 8-K, the information in this Item 2.02 of this Current Report on Form 8-K, including Exhibit 99.1 attached hereto, shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

**Item 9.01 Financial Statements and Exhibits**

(d) Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
99.1	<a href="#">Press Release dated August 8, 2023</a>
99.2	<a href="#">Shareholder Letter dated August 8, 2023</a>

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**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

**DUOLINGO, INC.**

Date: August 8, 2023

By: /s/ Matthew Skaruppa

Matthew Skaruppa

Chief Financial Officer

(Principal Financial Officer and Principal Accounting Officer)



## Duolingo Reports 62% DAU Growth, 44% Revenue Growth, and Stronger Profitability in Second Quarter 2023; Raises Full Year Guidance

Pittsburgh, PA – August 8, 2023 – Duolingo, Inc. (NASDAQ: DUOL), the world's leading mobile learning platform, announced results for the second quarter ended June 30, 2023 in a shareholder letter that is posted at [investors.duolingo.com](https://investors.duolingo.com).

"We delivered exceptional results this quarter, with our continued strong user growth helping to drive our excellent financial performance," said Luis von Ahn, Co-Founder and CEO of Duolingo. "We believe that our focus on product-led growth propelled us to record-high daily and monthly active users and subscribers, while our disciplined execution led to increased profitability."

### Second Quarter 2023 Highlights

- Total bookings were \$137.5 million, an increase of 41% from the prior year quarter;
- Subscription bookings were \$106.3 million, an increase of 43% from the prior year quarter;
- Paid Subscribers totaled 5.2 million at quarter end, an increase of 59% from the prior year quarter;
- Monthly active users (MAUs) grew 50% to 74.1 million from the prior year quarter and Daily active users (DAUs) grew 62% to 21.4 million from the prior year quarter;
- Total revenues were \$126.8 million, an increase of 44% from the prior year quarter;
- Net income totaled \$3.7 million, compared to a net loss of \$15.0 million in the prior year quarter;
- Adjusted EBITDA was \$20.9 million, compared to \$4.2 million in the prior year quarter, or a 16.5% and 4.7% Adjusted EBITDA margin, respectively.

### Financial and Key Operating Metrics

The following table summarizes our financial and operating highlights for the quarters ended June 30, 2023 and 2022.

<i>(In millions)</i>	Three Months Ended June 30,		% Change
	2023	2022	
<b>Operating Metrics</b>			
Monthly active users (MAUs)	74.1	49.5	50 %
Daily active users (DAUs)	21.4	13.2	62 %
Paid subscribers (at period end)	5.2	3.3	59 %

<i>(In thousands)</i>	Three Months Ended June 30,				
	2023		2022		% Change
<b>Operating Metrics</b>					
Subscription bookings	\$	106,254	\$	74,123	43%
Total bookings	\$	137,539	\$	97,467	41%
<b>Financial Measures</b>					
Total revenues (GAAP)	\$	126,839	\$	88,386	44%
Net income (loss) (GAAP)	\$	3,725	\$	(15,045)	nm
Adjusted EBITDA (Non-GAAP)	\$	20,871	\$	4,198	>100%

The following table provides revenues by product type:

<i>(In thousands)</i>	Three Months Ended June 30,				Change	% Change
	2023		2022			
Subscription	\$	95,158	\$	65,194	\$ 29,964	46%
Advertising		13,061		11,218	1,843	16
Duolingo English Test		9,809		8,036	1,773	22
Other *		8,811		3,938	4,873	>100
Total revenues	\$	126,839	\$	88,386	\$ 38,453	44%

\* Other primarily includes in-app sales of virtual goods

### Financial Outlook

Duolingo is providing the following guidance for the third quarter and the full year ending December 31, 2023:

<i>(In millions)</i>	Third Quarter 2023		Full Year 2023	
	Low	High	Low	High
Total Bookings	\$136.5	\$139.5	\$569.0	\$575.0
Revenues	\$129.5	\$132.5	\$510.0	\$516.0
Adjusted EBITDA	\$16.8	\$18.6	\$71.4	\$77.4
Adjusted EBITDA Margin	13.0 %	14.0 %	14.0 %	15.0 %

With regards to the Non-GAAP Adjusted EBITDA and Adjusted EBITDA margin outlook provided above, a reconciliation to GAAP net income (loss), the most directly comparable financial measure presented in accordance with GAAP, has not been provided as the quantification of certain items included in the calculation of GAAP net income (loss) cannot be calculated or predicted at this time without unreasonable efforts. For example, the non-GAAP adjustment for stock-based compensation expenses related to equity awards requires additional inputs such as number of shares granted and market price that are not currently ascertainable, and the non-GAAP adjustment for certain legal, tax and regulatory reserves and expenses depends on the timing and magnitude of these expenses and cannot be accurately forecasted. For the same reasons, we are unable to address the probable significance of the unavailable information,

which could have a potentially unpredictable, and potentially significant, impact on our future GAAP financial results.

### Dilutive Securities

Duolingo has various dilutive securities. The table below details these securities (shares in millions; rounding differences may occur):

<i>(Amounts in millions, except share price)</i>	Price as of June 30, 2023	Weighted-average exercise price	Shares
Share price	\$142.94		
Common stock outstanding as of June 30, 2023			41.5
Founder awards (1)			1.8
Dilutive effect of stock options outstanding (2)	\$	15.31	3.1
RSUs outstanding			2.4
Total estimated diluted shares outstanding			48.8

(1) Includes 1.6 million shares where performance criteria has not been satisfied.

(2) The Company has 3.5 million options outstanding as of June 30, 2023. The estimated dilutive effect is calculated as the number of shares expected to be issued upon vesting or exercise, adjusted for the strike price proceeds that are received by the Company and assumed to be used to repurchase shares of Duolingo common stock.

### Video Webcast

Duolingo will host a video webcast to discuss its quarterly results today, August 8, 2023 at 5:30 p.m. ET. This live webcast and related materials will be publicly available and can be accessed at [investors.duolingo.com](https://investors.duolingo.com). A replay will be available on the Investor Relations section of our website two hours following completion of the call and will remain available for a period of one year.

### About Duolingo

Duolingo is the leading mobile learning platform globally. Its 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. With technology at the core of everything it does, Duolingo has consistently invested to provide learners a fun, engaging, and effective learning experience while remaining committed to its mission to develop the best education in the world and make it universally available.

### Definitions

**Subscription Bookings and Total Bookings.** Subscription bookings represent the amounts we receive from a purchase of any Duolingo subscription offering. Total bookings represent the amounts we receive from a purchase of any Duolingo subscription offering, a purchase of a Duolingo English Test, an in-app purchase of 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 revenues because we recognize subscription revenues ratably over the lifetime of a subscription, which is generally from one to twelve months.

**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 the MAUs for each calendar month in that measurement period. The measurement period for MAUs is the three months ended June 30, 2023 and the same period in the prior year where applicable, and the analysis of results is based on those periods. MAUs are a measure of the size of our global active user community on Duolingo.

**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. The measurement period for DAUs is the three months ended June 30, 2023 and the same period in the prior year where applicable, and the analysis of results is based on those periods. DAUs are a measure of the consistent engagement of our global user community on Duolingo.

**Paid Subscribers.** Paid subscribers are defined as users who pay for access to any Duolingo subscription offering 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 or who are non-paying members of a family plan.

#### **Forward-Looking Statements**

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. We intend such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements other than statements of historical facts contained in this press release, including without limitation, statements regarding our business model and strategic plans, including the anticipated release of new products, and our financial outlook are forward-looking statements. Without limiting the generality of the foregoing, 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. Such forward-looking statements are neither promises nor guarantees, but involve a number of known and unknown risks, uncertainties and assumptions that may cause our actual results, performance or achievements to differ materially from those expressed or implied in the forward-looking statements due to various factors, including, but not limited to: our ability to retain and grow our users and sustain their engagement with our products; competition in the online language learning industry; our limited operating history; our ability to maintain profitability; our ability to manage our growth and operate at such scale; the success of our investments; our reliance on third-party platforms to store and distribute our products and collect revenue; our reliance on third-party hosting and cloud computing providers; our ability to compete for advertisements; acceptance by educational organizations of technology-based education; our ability to access, collect, and use personal data about our users and payers, and to comply with applicable data privacy laws; regulatory and legislative developments on the use of artificial intelligence and machine learning; potential intellectual property-related litigation and proceedings; our ability adequately obtain, protect and maintain our intellectual property rights; and the other important factors more fully detailed under the caption "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, as any such factors may be updated from time to time, including without limitation our Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2023 and in our other filings with the SEC, accessible on the

SEC's website at [www.sec.gov](http://www.sec.gov) and the Investor Relations section of the Company's website at [investors.duolingo.com](http://investors.duolingo.com). All forward-looking statements speak only as of the date of this press release. While we may elect to update such forward-looking statements at some point in the future, we disclaim any obligation to do so, even if subsequent events cause our views to change.

#### **Limitation of Key Operating Metrics and Other Data**

We manage our business by tracking several operating metrics, including MAUs, DAUs, paid subscribers, and subscription and total bookings. While these metrics are based on what we believe to be reasonable estimates of our user base for the applicable period of measurement, there are inherent challenges in measuring how our platform is used. These metrics are determined by using internal data gathered on an analytics platform that we developed and operate and have not been validated by an independent third party. This platform tracks user account and session activity. If we fail to maintain an effective analytics platform, our metrics calculations may be inaccurate. Because we update the methodologies we employ to create metrics, our operating metrics may not be comparable to those in prior periods. Other companies, including companies in our industry, may calculate these metrics differently.

#### **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 Adjusted EBITDA margin. Please refer to the definitions and reconciliation at the end of this press release. 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 these non-GAAP financial measures provide meaningful supplemental information 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 financial 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 financial measures differently or not at all, which reduces their usefulness as comparative measures.

#### **Website Information**

We routinely post important information for investors on the Investor Relations section of our website, [investors.duolingo.com](http://investors.duolingo.com) and also from time to time may use social media channels, including our Twitter account ([twitter.com/duolingo](https://twitter.com/duolingo)) and our LinkedIn account ([linkedin.com/company/duolingo/](https://linkedin.com/company/duolingo/)), as an additional means of disclosing public information to investors, the media and others interested in us. It is possible that certain information we post on our website and on social media could be deemed to be material information, and we encourage investors, the media and others interested in us to review the business and financial information we post on our website and on the social media channels identified above, in addition to following our press releases, SEC filings, public conference calls, presentations and webcasts. The information contained on, or that may be accessed through, our website and our social media channels is not incorporated by reference into, and is not a part of, this document.



**DUOLINGO, INC. AND SUBSIDIARIES**  
**UNAUDITED CONDENSED CONSOLIDATED BALANCE SHEETS**  
*(Amounts in thousands)*

	June 30, 2023	December 31, 2022
<b>ASSETS</b>		
Cash and cash equivalents	\$ 678,665	\$ 608,180
Accounts receivable	53,406	46,728
Deferred cost of revenues	42,720	35,041
Prepaid expenses and other current assets	10,150	7,234
Noncurrent assets	49,862	50,164
<b>Total assets</b>	<b>\$ 834,803</b>	<b>\$ 747,347</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Accounts payable	\$ 2,305	\$ 1,177
Deferred revenues	192,753	157,550
Other current liabilities	22,048	23,039
Long-term obligation under operating leases	21,292	23,503
<b>Total liabilities</b>	<b>238,398</b>	<b>205,269</b>
<b>Total stockholders' equity</b>	<b>596,405</b>	<b>542,078</b>
<b>Total liabilities and stockholders' equity</b>	<b>\$ 834,803</b>	<b>\$ 747,347</b>

**DUOLINGO, INC. AND SUBSIDIARIES**  
**UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)**  
*(Amounts in thousands, except per share amounts)*

	Three Months Ended June 30,	
	2023	2022
Revenues	\$ 126,839	\$ 88,386
Cost of revenues	33,788	23,869
Gross profit	93,051	64,517
Operating expenses:		
Research and development	47,947	34,217
Sales and marketing	17,734	15,277
General and administrative	32,235	30,057
Total operating expenses	97,916	79,551
Loss from operations	(4,865)	(15,034)
Other expense, net of other income	(268)	(539)
Loss before interest income and income taxes	(5,133)	(15,573)
Interest income	7,543	669
Income (loss) before income taxes	2,410	(14,904)
(Benefit) provision for income taxes	(1,315)	141
Net income (loss) and comprehensive income (loss)	\$ 3,725	\$ (15,045)
Net income (loss) per share attributable to Class A and Class B common stockholders, basic	\$ 0.09	\$ (0.38)
Net income (loss) per share attributable to Class A and Class B common stockholders, diluted	\$ 0.08	\$ (0.38)

**DUOLINGO, INC. AND SUBSIDIARIES**  
**UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**  
*(Amounts in thousands)*

	Six Months Ended June 30,	
	2023	2022
Cash flows from operating activities:		
Net income (loss)	\$ 1,143	\$ (27,199)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation and amortization	3,396	1,944
Stock-based compensation expense	44,787	32,700
Gain on sale of capitalized software	(100)	—
Changes in assets and liabilities	17,545	25,844
Net cash provided by operating activities	66,771	33,289
Net cash used for investing activities	(4,683)	(5,713)
Net cash provided by financing activities	8,397	9,662
Net increase in cash and cash equivalents	70,485	37,238
Cash and cash equivalents - Beginning of period	608,180	553,922
Cash and cash equivalents - End of period	\$ 678,665	\$ 591,160

**DUOLINGO, INC. AND SUBSIDIARIES**  
**ADJUSTED EBITDA RECONCILIATION**  
*(Amounts in thousands)*

**Adjusted EBITDA.** Adjusted EBITDA is defined as net income (loss) excluding interest income, income taxes, depreciation and amortization, stock-based compensation expenses related to equity awards, IPO and public company costs, and acquisition earn-out costs. Adjusted EBITDA margin is defined as Adjusted EBITDA as a percentage of revenues. These non-GAAP financial measures are used by management to evaluate the financial performance of our business and we present these non-GAAP financial measures because we believe that they are helpful in highlighting trends in our operating results and that they are frequently used by analysts, investors and other interested parties to evaluate companies in our industry. The following table presents a reconciliation of our net income (loss), the most directly comparable financial measure presented in accordance with GAAP, to Adjusted EBITDA and Adjusted EBITDA margin:

<i>(In thousands)</i>	Three Months Ended June 30,	
	2023	2022
Net income (loss)	\$ 3,725	\$ (15,045)
Interest income	(7,543)	(669)
(Benefit) provision for income taxes	(1,315)	141
Depreciation and amortization	1,634	1,170
Stock-based compensation expenses related to equity awards (1)	24,258	18,494
IPO and public company costs (2)	—	107
Acquisition earn-out costs (3)	112	—
Adjusted EBITDA	\$ 20,871	\$ 4,198
Revenues	\$ 126,839	\$ 88,386
Adjusted EBITDA Margin	16.5 %	4.7 %

(1) In addition to stock-based compensation expense, this includes costs incurred related to taxes paid on equity transactions.

(2) IPO and public company costs include costs associated with the establishment of our public company structure and processes, including consultant costs, a one-time fee associated with the set-up of our initial proxy statement, and fees paid to consultants and Deloitte for work in connection with remediation of the material weakness disclosed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021. These costs are included in General and administration expense within our Unaudited Condensed Consolidated Statements of Operations and Comprehensive Income (Loss).

(3) Represent costs incurred related to the earn-out payment on an acquisition, which is included within General and administrative within our Unaudited Condensed Consolidated Statements of Operations and Comprehensive Income (Loss).

**Contacts**

**Investor Relations:**

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# shareholder letter Q2 2023



**our mission is  
to develop the  
best education  
in the world  
and make it  
universally  
available.**



## Q2 Highlights

User Metrics	Q2 2022	Q2 2023
Daily Active Users	13.2M	21.4M +62% YoY
Monthly Active Users	49.5M	74.1M +50% YoY
Paid Subscribers at period end	3.3M	5.2M +59% YoY
Paid Subscriber Penetration as % of MAU*	7.2%	7.9%

Financial Metrics	Q2 2022	Q2 2023
Revenue	\$88.4M	\$126.8M +44% YoY
Total Bookings	\$97.5M	\$137.5M +41% YoY
Net (Loss) Income	\$(15.0)M	\$3.7M
Adjusted EBITDA	\$4.2M 4.7% margin	\$20.9M 16.5% margin

\*LTM MAU

# Dear shareholders,

We delivered another strong quarter, **beating our expectations on both the top and bottom line, and on user growth**. Our performance is a testament to the quality of our product and to the strength of our brand. Here's a summary of our second quarter 2023 results:

## Second Quarter Highlights

- DAUs increased 62% to 21.4 million and MAUs increased 50% to 74.1 million, compared to the prior year quarter;
- DAU/MAU, a measure of user engagement, reached an all-time high of 29%;
- The number of paid Super Duolingo subscribers totaled 5.2 million at the end of Q2, an increase of 59% compared to the prior year quarter;
- Total bookings grew 41% and revenue grew 44%, compared to the prior year quarter (42% and 46%, respectively, on a constant currency basis);
- Subscription bookings increased 43% to \$106.3 million compared to the prior year quarter;
- Our net income was \$3.7 million, and we delivered our highest quarterly Adjusted EBITDA of \$20.9 million, or a 16.5% margin;
- Cash flow from operating activities increased to \$37.2 million and we delivered record free cash flow of \$34.3 million, or 27.1% margin.

Based on this performance, we are raising our full-year 2023 total bookings guidance to reflect 33-34% year over year growth. We are also raising our target Adjusted EBITDA margin range to 14-15% for the year.

In this letter, I want to focus on our unique approach to marketing, why it works, and how it helps with our user growth. Our marketing efforts have become an increasingly efficient complement to our organic user growth, and we've also been winning awards! In 2022, Ad Age named Duolingo one of its "Hottest Brands." And this June, we took home our first Gold Lion award at Cannes for our "High Valyrian Lessons" campaign.

## The Most Popular Way to Learn

Duolingo has organically become the most popular way to learn a language. Word of mouth has been our most powerful growth lever since the beginning and we expect that to continue—we've created a beautiful product that is free, fun, and effective, and because of that learners avidly refer their friends and family.

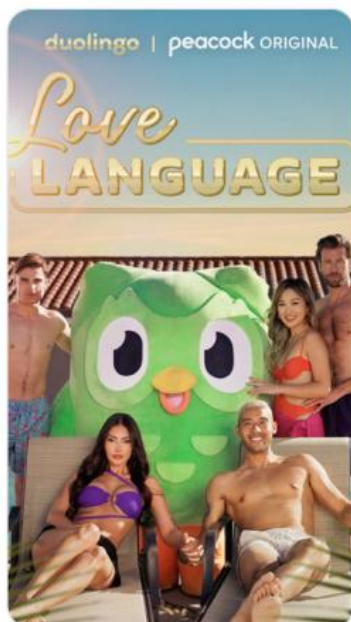
We spend relatively little on paid user acquisition, and the vast majority of our users have been acquired organically, but that doesn't mean that our marketing isn't effective. We have tested our way to a marketing strategy that inserts our brand into pop culture events and social media moments in order to expose it to new audiences and drive word-of-mouth growth. We call this social-first marketing.



## Our Social-First Marketing Strategy

“Social-first marketing” means that every campaign we create starts with the goal of driving virality for our brand. To do that, we create content that delights and engages our audiences, prompting them to share it on social media. We tap into trending topics or connect with major pop culture moments like the [Barbie movie](#), which, spoiler alert, includes a scene featuring Duolingo. We also don’t sell directly in our campaigns—you’ve never seen a “try Duolingo” button on any of our social posts. This strategy is relatively low cost, and has generated outsized returns in terms of social media impressions, press coverage, and, ultimately, new users to Duolingo.

A fun example of this is our annual April Fools prank, which [went viral in 2019](#) and is now a yearly brand moment. It has grown in scale each year, reaching more people and enabling us to partner with bigger brands. This year, we partnered with NBC’s Peacock to create “[Love Language](#),” a fictitious dating reality TV show in which contestants don’t speak each other’s language.



Love Language Trailer - 04/01



Duo attending Taylor Swift's Eras Tour - Pittsburgh 06/17



Duo, guest at the Barbie Premiere - L.A. 07/11

## Our Learners Are Brand Ambassadors

Our social-first marketing approach has a wonderful brand benefit—fans and users become brand ambassadors that spread our message. They share their experiences with our products, engage with our social content, and [create their own viral Duolingo memes and lore](#) often inspired by our own social posts. In fact, we’ve seen user-created content on TikTok and YouTube outpace impressions of our own posts.

This organic, user-created content also gives us data and insight into how our brand is perceived around the world. For example, while our mascot Duo is beloved globally, we've discovered that Lily, our purple-haired, emo teenager is adored by learners in China. Organic fan content devoted to Lily has spread across Chinese social media. We've taken that insight to heart, producing [social content using a Lily mascot suit](#) and offering Lily plushies and stickers in our new [merchandise store](#).

As a result of this social-first marketing strategy, we've become one of the most followed brands on TikTok globally, and have seen 150% YoY growth in our social media impressions. This, in turn, has driven our brand awareness and word-of-mouth user growth.

## Accelerating Our Mission with AI

In our [last letter](#), I said that we have used machine learning and AI for about a decade to make Duolingo more personalized and engaging. Over the next decade, we believe these technologies will enable us to accelerate our ability to provide our learners with an even more fun, personalized, and effective learning experience. That's why we've been so excited about launching new AI-enabled features into our product like those in Duolingo Max, the higher subscription tier that we are testing. We're also applying new generative AI tools throughout the company. For example, we're using them to speed up our script-writing for Duolingo Stories and to more efficiently scale our course content.

We expect to continue integrating AI more and more deeply into everything we do. Using new technologies to make excellent products takes time to get right, but we think we are uniquely well-positioned to do that—we have experience with AI and an enormous user base that will help us test new features and products. We are excited to see what we can build.

## In Closing

I'd like to remind everyone to tune in on October 11th to Duocon, our annual event where we discuss all things Duolingo. It's a hoot! And I'd like to thank our team for their excellent work this quarter, as always.

Until next time, don't forget to do your Duolingo!



A handwritten signature in black ink, appearing to read 'Luis von Ahn'.

**Luis von Ahn**  
CEO and Co-Founder

# financial performance and outlook

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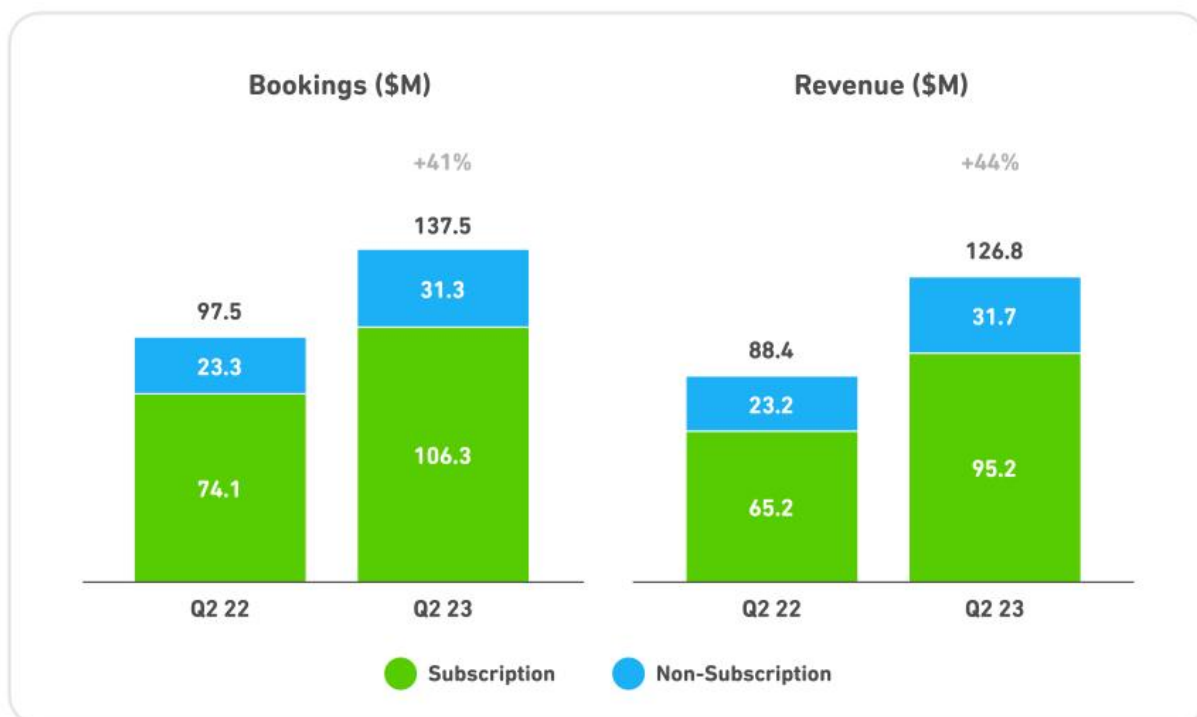
## Summary of Financial and Key Operating Metrics

(in millions)	Q2 2022	Q2 2023	YoY
<b>User Metrics</b>			
Monthly active users (MAUs)	49.5	74.1	50%
Daily active users (DAUs)	13.2	21.4	62%
Paid subscribers (period end)	3.3	5.2	59%
<b>Operating Metrics</b>			
Total bookings	\$97.5	\$137.5	41%
Subscription bookings	\$74.1	\$106.3	43%
<b>GAAP Financial Metrics</b>			
Revenues	\$88.4	\$126.8	44%
Gross profit	\$64.5	\$93.1	44%
Gross margin (%)	73.0%	73.4%	~40 bps
Net (loss) income	(\$15.0)	\$3.7	nm
Net cash from operating activities	\$12.7	\$37.2	>100%
<b>Non-GAAP Financial Metrics (1)</b>			
Adjusted EBITDA	\$4.2	\$20.9	>100%
Free cash flow	\$9.9	\$34.3	>100%

(1) Please refer to the Appendix at the end of this letter for a reconciliation of these non-GAAP financial measures to the most directly comparable GAAP financial measure.

Amounts reported in millions are computed based on the amounts in thousands. As a result, the sum of the components reported in millions may not equal the total amount reported in millions due to rounding. In addition, percentages presented are calculated from the underlying numbers in thousands and may not add to their respective totals due to rounding.





In the second quarter, total bookings grew 41% year over year on a reported basis (and 42% on a constant currency basis) to \$137.5 million. This was primarily driven by a 43% increase in subscription bookings. Revenues grew 44% year over year on a reported basis to \$126.8 million in the second quarter (and 46% on a constant currency basis), driven primarily by growth in subscription revenue, which grew 46% year over year, and comprised 75% of revenues.

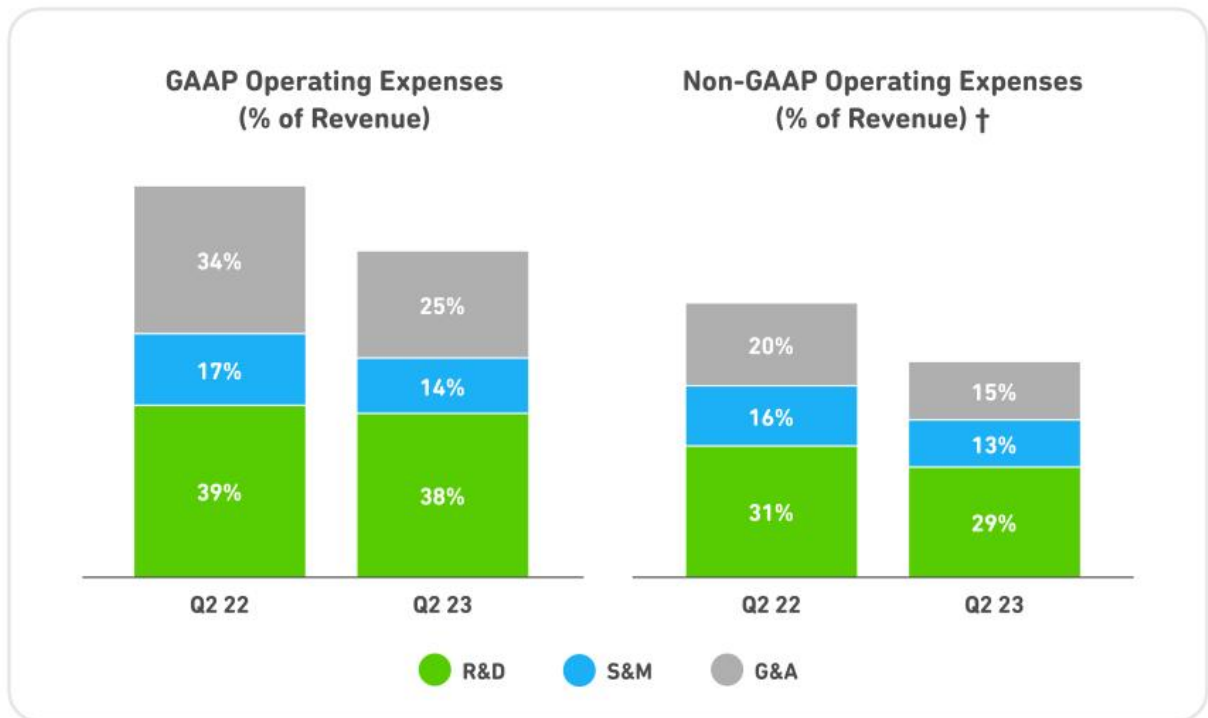
The increase in both subscription bookings and subscription revenue was primarily driven by a higher average number of Super Duolingo subscribers. Subscription revenue per subscriber declined 7% year over year, primarily due to regional pricing and foreign currency changes.

The table below provides revenues by product type:

(in millions)	Q2 2022	Q2 2023	Change	%Change
Subscription	\$65.2	\$95.2	\$30.0	46%
Advertising	11.2	13.1	1.8	16%
Duolingo English Test	8.0	9.8	1.8	22%
Other*	3.9	8.8	4.9	>100%
<b>Total revenues</b>	<b>\$88.4</b>	<b>\$126.8</b>	<b>\$38.5</b>	<b>44%</b>

Gross margin increased by approximately 40 basis points year over year to 73.4% in the second quarter. This was primarily driven by higher subscription margins as a result of a reduction in third-party payment processing fees per subscriber, as well as improved margins on the Duolingo English Test from higher pricing. These improvements were partially offset by lower advertising margins during the period due to lower advertising revenue per DAU.

\*Other primarily includes in-app sales of virtual goods.



We report three categories of operating expenses: Research and development (R&D), Sales and marketing (S&M), and General and administrative (G&A). Non-GAAP operating expenses† represent GAAP expenses adjusted for depreciation, amortization, stock-based compensation expenses related to equity awards, and IPO and public company costs, as well as other expenses. The majority of the adjustment in Q2 2023 was for stock-based compensation (SBC) expense of \$23.7 million. Nearly a third of our SBC expense was related to our pre-IPO founder equity awards, which are intended to serve as the sole equity award opportunity for our founders through 2031. As a reminder, these founder awards are meant to align our founders’ economic interests with those of shareholders because they vest, in part, based upon the achievement of stock price hurdles that, if achieved, would result in significant value creation for our equity holders. However, these founder awards are expensed even if none of the stock price hurdles are achieved. The next hurdle would be achieved if our stock price averaged \$178.50 per share for 60 days.

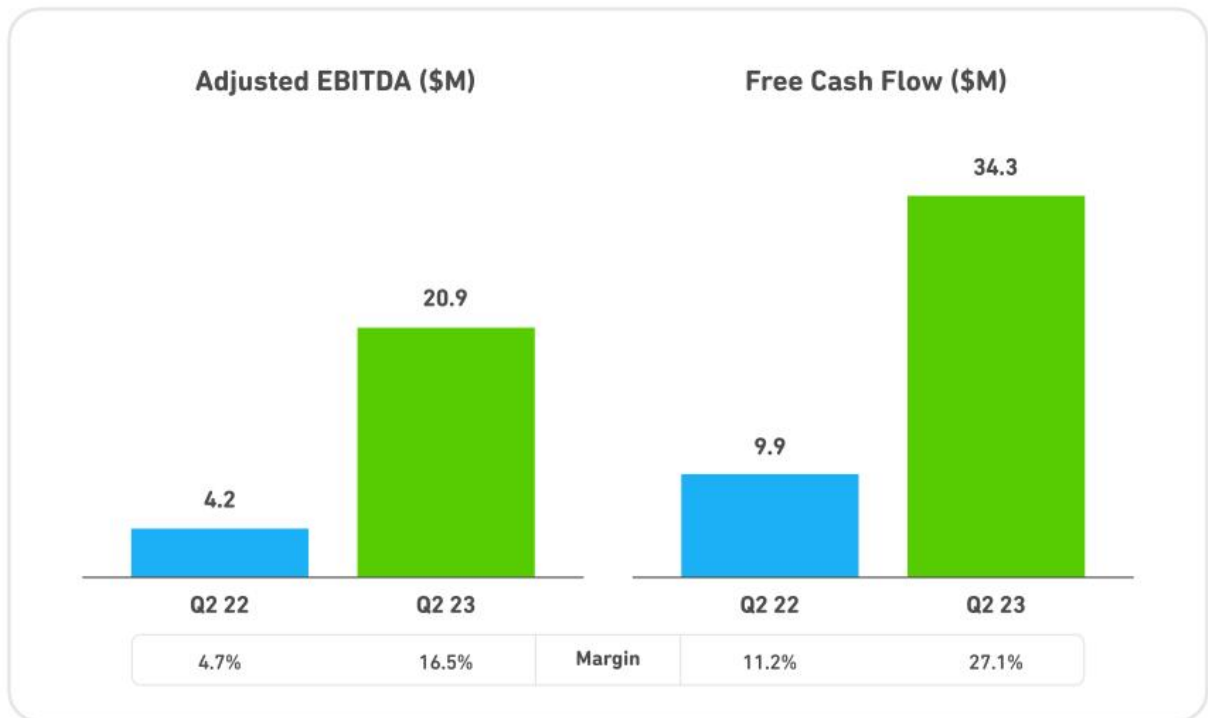
In Q2, we achieved significant leverage across total operating expenses, both on a GAAP and non-GAAP basis.

GAAP R&D expense decreased from 39% to 38% of revenue year over year. On a non-GAAP basis, R&D expense decreased year over year from 31% to 29%. While we continue to prioritize investment in R&D—primarily through hiring talented engineers, product managers, and designers—our top line performance has outpaced our growth in R&D expense.

GAAP S&M expense decreased from 17% to 14% of revenue year over year. On a non-GAAP basis, S&M expense decreased year over year from 16% to 13%. We continue to see success in applying learnings to more efficiently and strategically spend our marketing dollars.

GAAP G&A expense decreased from 34% to 25% of revenue year over year. On a non-GAAP basis, G&A expense decreased year over year from 20% to 15%. G&A has provided the most operating leverage year over year, particularly in office, legal and accounting expenses, and company-wide events.

†Please refer to the Appendix at the end of this letter for a reconciliation of these non-GAAP financial measures to the most directly comparable GAAP financial measure.



We continue to manage the business with cost discipline, and we are making progress towards our 2023 revised target range of 14-15% Adjusted EBITDA margin†. In Q2, we achieved our highest quarterly Adjusted EBITDA†, which increased by \$16.7 million year over year to \$20.9 million, a 16.5% margin. The increase was driven by growth in revenue and improved leverage across all categories of operating expenses.

During Q2, we generated our highest quarterly free cash flow (FCF)† of \$34.3 million, a 27.1% FCF margin†, driven primarily by an increase in cash from operations.

†Please refer to the Appendix at the end of this letter for a reconciliation of these non-GAAP financial measures to the most directly comparable GAAP financial measure.

## Q3 and FY 2023 Guidance

Duolingo is providing the following guidance for the third quarter and the full year 2023.

(in millions)	Q3 2023	FY 2023
<b>Bookings</b>	<b>\$136.5 - 139.5</b>	<b>\$569 - 575</b>
YoY Bookings Growth	33% - 36%	33% - 34%
<b>Revenues</b>	<b>\$129.5 - 132.5</b>	<b>\$510 - 516</b>
YoY Revenue Growth	35% - 38%	38% - 40%
<b>Adjusted EBITDA</b>	<b>\$16.8 - 18.6</b>	<b>\$71.4 - 77.4</b>
<b>Adjusted EBITDA margin</b>	<b>13% - 14%</b>	<b>14% - 15%</b>

With regards to the non-GAAP Adjusted EBITDA and Adjusted EBITDA margin outlook provided above, a reconciliation to GAAP net (loss) income, the most directly comparable financial measure presented in accordance with GAAP, has not been provided as the quantification of certain items included in the calculation of GAAP net (loss) income cannot be calculated or predicted at this time without unreasonable efforts. For example, the non-GAAP adjustment for stock-based compensation expenses related to equity awards requires additional inputs such as number of shares granted and market price that are not currently ascertainable, and the non-GAAP adjustment for certain legal, tax and regulatory reserves and expenses depends on the timing and magnitude of these expenses and cannot be accurately forecasted. For the same reasons, we are unable to address the probable significance of the unavailable information, which could have a potentially unpredictable, and potentially significant, impact on our future GAAP financial results.

## Video Webcast

Duolingo will host a video webcast to discuss its second quarter results today, August 8, 2023, at 5:30 p.m. ET. This live webcast and related materials will be publicly available and can be accessed at [investors.duolingo.com](https://investors.duolingo.com). A replay will be available on the Investor Relations website two hours following completion of the webcast and will remain available for a period of one year.

## About Duolingo

Duolingo is the leading mobile learning platform globally. Its 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. With technology at the core of everything it does, Duolingo has consistently invested to provide learners a fun, engaging, and effective learning experience while remaining committed to its mission to develop the best education in the world and make it universally available.



## Definitions

**Subscription Bookings and Total Bookings.** Subscription bookings represent the amounts we receive from a purchase of any Duolingo subscription offering. Total bookings represent the amounts we receive from a purchase of any Duolingo subscription offering, a purchase of a Duolingo English Test, an in-app purchase of 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 revenues because we recognize subscription revenues ratably over the lifetime of a subscription, which is generally from one to twelve months.

**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 the MAUs for each calendar month in that measurement period. MAUs are a measure of the size of our global active user community on Duolingo.

**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.

Throughout this document, the measurement period for MAUs and DAUs is the three months ended June 30, 2023 and the same period in the prior year where applicable, and the analysis of results is based on those periods.

**Paid Subscribers.** Paid subscribers are defined as users who pay for access to any Duolingo subscription offering 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 or who are non-paying members of a family plan.

## Limitation of Key Operating Metrics and Other Data

We manage our business by tracking several operating metrics, including MAUs, DAUs, paid subscribers, and subscription and total bookings. While these metrics are based on what we believe to be reasonable estimates of our user base for the applicable period of measurement, there are inherent challenges in measuring how our platform is used. These metrics are determined by using internal data gathered on an analytics platform that we developed and operate and have not been validated by an independent third party. This platform tracks user account and session activity. If we fail to maintain an effective analytics platform, our metrics calculations may be inaccurate. Because we update the methodologies we employ to create metrics, our operating metrics may not be comparable to those in prior periods. Other companies, including companies in our industry, may calculate these metrics differently.

## 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; Adjusted EBITDA margin; non-GAAP R&D expense, non-GAAP S&M expense and non-GAAP G&A expense (collectively, the "non-GAAP operating expenses"); Free cash flow, and Free cash flow margin. Please refer to the definitions and reconciliation at the end of this letter. 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 these non-GAAP financial measures provide meaningful supplemental information 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 financial 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 financial measures differently or not at all, which reduces their usefulness as comparative measures.

The effect of currency exchange rates on our business is an important factor in understanding period to period comparisons. We use non-GAAP percentage change in constant currency revenues, which exclude the impact of fluctuations in foreign currency exchange rates, for financial and operational decision-making and as a means to evaluate period-to-period comparisons. We believe this information is useful to investors to facilitate comparisons and better identify trends in our business. The impact of changes in foreign currency may vary significantly from period to period, and such changes generally are outside of the control of our management. We calculate constant currency revenues by using current period foreign currency revenues and translating them to constant currency using prior year comparable period exchange rates. Constant currency revenue percentage change is calculated by determining the change in current period revenues over prior year comparable period revenues where current period foreign currency revenues are translated using prior year comparable period exchange rates.

## Forward-Looking Statements

This Shareholder Letter contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. We intend such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements other than statements of historical facts contained in this letter, including without limitation, statements regarding our business model and strategic plans, including the anticipated release of new products, the effectiveness of our marketing efforts, and our financial outlook are forward-looking statements. Without limiting the generality of the foregoing, 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. Such forward-looking statements are neither promises nor guarantees, but involve a number of known and unknown risks, uncertainties and assumptions that may cause our actual results, performance or achievements to differ materially from those expressed or implied in the forward-looking statements due to various factors, including, but not limited to: our ability to retain and grow our users and sustain their engagement with our products; competition in the online language learning industry; our limited operating history; our ability to maintain profitability; our ability to manage our growth and operate at such scale; the success of our investments; our reliance on third-party platforms to store and distribute our products and collect revenue; our reliance on third-party hosting and cloud computing providers; our ability to compete for advertisements; acceptance by educational organizations of technology-based education; our ability to access, collect, and use personal data about our users and payers, and to comply with applicable data privacy laws; regulatory and legislative developments on the use of artificial intelligence and machine learning; potential intellectual property-related litigation and proceedings; our ability adequately obtain, protect and maintain our intellectual property rights; and the other important factors more fully detailed under the caption "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, as any such factors may be updated from time to time, including without limitation our Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2023 and in our other filings with the SEC, accessible on the SEC's website at [www.sec.gov](http://www.sec.gov) and the Investor Relations section of the Company's website at [investors.duolingo.com](http://investors.duolingo.com). All forward-looking statements speak only as of the date of this letter. While we may elect to update such forward-looking statements at some point in the future, we disclaim any obligation to do so, even if subsequent events cause our views to change.

## Website Information

We routinely post important information for investors on the Investor Relations section of our website, [investors.duolingo.com](http://investors.duolingo.com), and also from time to time may use social media channels, including our Twitter account [twitter.com/duolingo](https://twitter.com/duolingo) and our LinkedIn account [linkedin.com/company/duolingo](https://linkedin.com/company/duolingo), as an additional means of disclosing public information to investors, the media, and others interested in us. It is possible that certain information we post on our website and on social media could be deemed to be material information, and we encourage investors, the media, and others interested in us to review the business and financial information we post on our website and on the social media channels identified above, in addition to following our press releases, SEC filings, public conference calls, presentations, and webcasts. The information contained on, or that may be accessed through, our website and our social media channels is not incorporated by reference into, and is not a part of, this document.

**DUOLINGO, INC. AND SUBSIDIARIES**  
**UNAUDITED CONDENSED CONSOLIDATED BALANCE SHEETS**

(in thousands)	December 31, 2022	June 30, 2023
<b>ASSETS</b>		
Cash and cash equivalents	\$608,180	\$678,665
Accounts receivable	46,728	53,406
Deferred cost of revenues	35,041	42,720
Prepaid expenses and other current assets	7,234	10,150
Non-current assets	50,164	49,862
<b>Total Assets</b>	<b>\$747,347</b>	<b>\$834,803</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Accounts payable	\$1,177	\$2,305
Deferred revenues	157,550	192,753
Other current liabilities	23,039	22,048
Long-term obligation under operating leases	23,503	21,292
<b>Total liabilities</b>	<b>205,269</b>	<b>238,398</b>
Total stockholders' equity	542,078	596,405
<b>Total liabilities and stockholders' equity</b>	<b>\$747,347</b>	<b>\$834,803</b>

**DUOLINGO, INC. AND SUBSIDIARIES**  
**UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND**  
**COMPREHENSIVE (LOSS) INCOME**

(in thousands)	Three Months Ended June 30,	
	2022	2023
Revenues	\$88,386	\$126,839
Cost of revenues	23,869	33,788
Gross profit	64,517	93,051
Operating expenses:		
Research and development	34,217	47,947
Sales and marketing	15,277	17,734
General and administrative	30,057	32,235
Total operating expenses	79,551	97,916
Loss from operations	(15,034)	(4,865)
Other expense, net of other income	(539)	(268)
Loss before interest income and income taxes	(15,573)	(5,133)
Interest income	669	7,543
(Loss) income before income taxes	(14,904)	2,410
Provision (benefit) for income taxes	141	(1,315)
<b>Net (loss) income and comprehensive (loss) income</b>	<b>\$(15,045)</b>	<b>\$3,725</b>



**DUOLINGO, INC. AND SUBSIDIARIES**  
**UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**

(in thousands)	Six Months Ended June 30,	
	2022	2023
Cash flows from operating activities:		
Net (loss) income	\$(27,199)	\$1,143
Adjustments to reconcile net (loss) income to net cash provided by operating activities:		
Depreciation and amortization	1,944	3,396
Stock-based compensation expense	32,700	44,787
Gain on sale of capitalized software	-	(100)
Changes in assets and liabilities	25,844	17,545
Net cash provided by operating activities	33,289	66,771
Net cash used for investing activities	(5,713)	(4,683)
Net cash provided by financing activities	9,662	8,397
Net increase in cash and cash equivalents	37,238	70,485
Cash and cash equivalents - Beginning of period	553,922	608,180
<b>Cash and cash equivalents - End of period</b>	<b>\$591,160</b>	<b>\$678,665</b>

# appendix

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## Reconciliation: Adjusted EBITDA and Adjusted EBITDA Margin and GAAP Operating Expenses and Non-GAAP Operating Expenses

Adjusted EBITDA is defined as net (loss) income excluding interest income, income taxes, depreciation and amortization, stock-based compensation expenses related to equity awards, IPO and public company costs, and acquisition earn-out costs. Adjusted EBITDA margin is defined as Adjusted EBITDA as a percentage of revenues. GAAP operating expenses consist of research and development, sales and marketing, and general and administrative expenses. These non-GAAP operating expenses are defined as the respective GAAP operating expenses excluding depreciation and amortization, stock-based compensation expenses related to equity awards, and, as applicable, IPO and public company costs and acquisition earn-out costs. These non-GAAP financial measures are used by management to evaluate the financial performance of our business and we present these non-GAAP financial measures because we believe that they are helpful in highlighting trends in our operating results and that they are frequently used by analysts, investors and other interested parties to evaluate companies in our industry. The following tables present a reconciliation of our net (loss) income and GAAP operating expenses, the most directly comparable financial measure presented in accordance with GAAP, to Adjusted EBITDA and Adjusted EBITDA margin and non-GAAP operating expenses, respectively.

(in thousands)	Q2 2022	Q2 2023
<b>Net (loss) income</b>	<b>\$(15,045)</b>	<b>\$3,725</b>
Less: Interest income	(669)	(7,543)
Plus: Provision (benefit) for income taxes	141	(1,315)
Plus: Depreciation and amortization	1,170	1,634
Plus: Stock-based compensation expenses related to equity awards (1)	18,494	24,258
Plus: IPO and public company costs (2)	107	-
Plus: Acquisition earn-out costs (3)	-	112
<b>Adjusted EBITDA</b>	<b>\$4,198</b>	<b>\$20,871</b>
Revenues	\$88,386	\$126,839
<b>Adjusted EBITDA margin</b>	<b>4.7%</b>	<b>16.5%</b>

### Reconciliation: GAAP to Non-GAAP Operating Expense

(in thousands)	Q2 2022	Q2 2023
<b>Total GAAP Operating Expense</b>	<b>\$79,551</b>	<b>\$97,916</b>
Less: Depreciation and amortization	(897)	(1,232)
Less: Stock-based compensation expenses related to equity awards (1)	(18,484)	(24,244)
Less: Other Adjustments (2) (3)	(107)	(112)
<b>Non-GAAP Operating Expense</b>	<b>\$60,063</b>	<b>\$72,328</b>

### Reconciliation: GAAP to Non-GAAP R&D Expense

(in thousands)	Q2 2022	Q2 2023
<b>Total GAAP R&amp;D Expense</b>	<b>\$34,217</b>	<b>\$47,947</b>
Less: Depreciation and amortization	(463)	(409)
Less: Stock-based compensation expenses related to equity awards (1)	(5,920)	(11,319)
<b>Non-GAAP R&amp;D Expense</b>	<b>\$27,834</b>	<b>\$36,219</b>

### Reconciliation: GAAP to Non-GAAP S&M Expense

(in thousands)	Q2 2022	Q2 2023
<b>Total GAAP S&amp;M Expense</b>	<b>\$15,277</b>	<b>\$17,734</b>
Less: Depreciation and amortization	(268)	(266)
Less: Stock-based compensation expenses related to equity awards (1)	(604)	(995)
<b>Non-GAAP S&amp;M Expense</b>	<b>\$14,405</b>	<b>\$16,473</b>

### Reconciliation: GAAP to Non-GAAP G&A Expense

(in thousands)	Q2 2022	Q2 2023
<b>Total GAAP G&amp;A Expense</b>	<b>\$30,057</b>	<b>\$32,235</b>
Less: Depreciation and amortization	(166)	(557)
Less: Stock-based compensation expenses related to equity awards (1)	(11,960)	(11,930)
Less: Other Adjustments (2) (3)	(107)	(112)
<b>Non-GAAP G&amp;A Expense</b>	<b>\$17,824</b>	<b>\$19,636</b>



## Reconciliation: Free Cash Flow and Free Cash Flow Margin

Free cash flow represents net cash provided by operating activities, reduced by capitalized software development costs and purchases of property and equipment and increased by IPO and public company costs and taxes paid related to stock-based compensation equity awards, as we believe they are not indicative of future liquidity. Free cash flow margin is defined as Free cash flow as a percentage of revenues. 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. Free cash flow has certain limitations in that it does not represent our residual cash flow for discretionary expenditures and our non-discretionary commitments. 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.

(in thousands)	Q2 2022	Q2 2023
<b>Net cash provided by operating activities</b>	<b>\$12,662</b>	<b>\$37,167</b>
Less: Capitalized software development costs and purchases of intangible assets	(1,405)	(2,544)
Less: Purchases of property and equipment	(1,864)	(827)
Plus: IPO and public company costs (2)	107	-
Plus: Taxes paid related to stock-based compensation equity awards	380	544
<b>Free cash flow</b>	<b>\$9,880</b>	<b>\$34,340</b>
Revenues	\$88,386	\$126,839
<b>Free cash flow margin</b>	<b>11.2%</b>	<b>27.1%</b>

(1) In addition to stock-based compensation expense, this includes costs incurred related to taxes paid on equity transactions.

(2) IPO and public company costs include costs associated with the establishment of our public company structure and processes, including consultant costs, a one-time fee associated with the set-up of our initial proxy statement, and fees paid to consultants and Deloitte for work in connection with remediation of the material weakness disclosed in our Annual Report on Form 10-K.

(3) Represent costs incurred related to the earn-out payment on an acquisition.

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