			N
		SECURITIES AND EXCHANGE COMMISSIO Washington, D.C. 20549	N
		FORM 8-K	
		CURRENT REPORT	
		Pursuant to Section 13 or 15(d) of the	
	Date	Securities Exchange Act of 1934 of Report (Date of earliest event reported): Ma	v 9. 2023
		Duolingo, Inc.	, -,
	(	Exact name of registrant as specified in its cha	arter)
	Delaware	001-40653	45-3055872
	(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification Number)
		5900 Penn Avenue Pittsburgh, Pennsylvania 15206 (Address of principal executive offices) (Zip Co	ode)
	Registra	nt's telephone number, including area code: (4	12) 567-6602
eck the ap	propriate box below if the Form 8-K filing is intend	ed 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 und	der the Exchange Act (17 CFR 240.14a-12)	
	Pre-commencement communications pursuan	t to Rule 14d-2(b) under the Exchange Act (17 CF	R 240.14d-2(b))
	Pre-commencement communications pursuan	t to Rule 13e-4(c) under the Exchange Act (17 CF	R 240.13e-4(c))
curities reg	gistered pursuant to Section 12(b) of the Act:		
	Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A co	ommon stock, \$0.0001 par value per share	DUOL	The Nasdaq Stock Market
	heck mark whether the registrant is an emerging g change Act of 1934 (§240.12b-2 of this chapter).	rowth company as defined in Rule 405 of the Secu	urities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of th

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.

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

On May 9, 2023, Duolingo, Inc. (the "Company") issued a press release announcing the financial results of the Company for the three months ended March 31, 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.

Exhibit No.	Description
99.1	Press Release dated May 9, 2023
99.2	Shareholder Letter dated May 9, 2023

#### 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: May 9, 2023

By: /s/ Matthew Skaruppa

Matthew Skaruppa Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)



#### Duolingo Reports 62% DAU Growth, 42% Revenue Growth, and Increased Profitability in First Quarter 2023; Raises Full Year Guidance

Pittsburgh, PA – May 9, 2023 – Duolingo, Inc. (NASDAQ: DUOL), the world's leading mobile learning platform, announced results for the first quarter ended March 31, 2023 in a shareholder letter that is posted at investors.duolingo.com.

"2023 picked up where 2022 left off, with strong user growth, top-line growth, and increasing profitability and cash from operations," said Luis von Ahn, Co-Founder and CEO of Duolingo. "We continue to operate with discipline and, as a result, exceeded our expectations on profitability."

"We are also excited about our new AI-driven product, Duolingo Max, and are improving its features to teach better, drive engagement, and grow monetization."

#### First Quarter 2023 Highlights

- Total bookings were \$140.1 million, an increase of 37% from the prior year quarter;
- Subscription bookings were \$110.1 million, an increase of 40% from the prior year quarter;
- Paid Subscribers totaled 4.8 million at quarter end, an increase of 63% from the prior year quarter;
- Monthly active users (MAUs) grew 47% to 72.6 million from the prior year quarter and Daily active users (DAUs) grew 62% to 20.3 million from the prior year quarter;
- Total revenues were \$115.7 million, an increase of 42% from the prior year quarter;
- Net loss totaled \$2.6 million, compared to a net loss of \$12.2 million in the prior year quarter;
- Adjusted EBITDA was \$15.1 million, compared to \$3.9 million in the prior year quarter, or a 13% and 5% Adjusted EBITDA margin, respectively.

#### **Financial and Key Operating Metrics**

The following table summarizes our financial and operating highlights for the quarters ended March 31, 2023 and 2022.

	Three Months Ended		
(In millions)	2023	2022	% Change
Operating Metrics			
Monthly active users (MAUs)	72.6	49.2	47 %
Daily active users (DAUs)	20.3	12.5	62 %
Paid subscribers (at period end)	4.8	2.9	63 %

	Three Months Ended March 31,				
(In thousands)		2023		2022	% Change
Operating Metrics					
Subscription bookings	\$	110,122	\$	78,539	40 %
Total bookings	\$	140,054	\$	102,054	37 %
Financial Measures					
Total revenues (GAAP)	\$	115,661	\$	81,220	42 %
Net loss (GAAP)	\$	(2,582)	\$	(12,154)	(79)%
Adjusted EBITDA (Non-GAAP)	\$	15,111	\$	3,946	>100%

The following table provides revenues by product type:

	Three Months Ended March 31,				
(in thousands)	 2023		2022	Change	% Change
Subscription	\$ 86,185	\$	58,010	\$ 28,175	49 %
Advertising	11,635		11,748	(113)	(1)%
Duolingo English Test	9,972		8,080	1,892	23 %
Other *	7,869		3,382	4,487	>100%
Total revenues	\$ 115,661	\$	81,220	\$ 34,441	42 %

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

#### **Financial Outlook**

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

	Second Quarter 2	2023	Full Year 2023		
(in millions)	Low	High	Low	High	
Total Bookings	\$128.0	\$131.0	\$552.0	\$561.0	
Revenues	\$122.0	\$125.0	\$500.0	\$509.0	
Adjusted EBITDA	\$13.4	\$15.0	\$55.0	\$61.0	
Adjusted EBITDA Margin	11.0 %	12.0 %	11.0 %	12.0 %	

With regards to the Non-GAAP Adjusted EBITDA and Adjusted EBITDA margin outlook provided above, a reconciliation to GAAP net 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 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):

(in millions)	Price as of March 31, 2023	Weighted- average exercise price	Shares
Share price	\$142.59		
Common stock outstanding as of March 31, 2023			41.0
Founder awards (1)			1.8
Stock options outstanding (2)		\$ 14.80	3.5
RSUs outstanding (3)			2.0
Total estimated diluted shares outstanding			48.3

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

(2) The Company has 3.9 million options outstanding as of March 31, 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, May 9, 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. 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 March 31, 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 March 31, 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," "shall," "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 achieve 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 guarterly period ended March 31, 2023 and in our other filings with the SEC, accessible on the SEC's website at www.sec.gov and the Investor Relations section of the Company's website at 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 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.

#### Website Information

We routinely post important information for investors on the Investor Relations section of our website, investors.duolingo.com and also from time to time may use social media channels, including our Twitter account (twitter.com/duolingo) and our LinkedIn account (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)

March 31, 2023 December 31, 2022 ASSETS Cash and cash equivalents \$ 641,091 \$ 608,180 Accounts receivable 52,509 46,728 Deferred cost of revenues 40,137 35,041 7,234 Prepaid expenses and other current assets 7,497 Noncurrent assets 49,145 50,164 Total assets \$ 790,379 \$ 747,347 LIABILITIES AND STOCKHOLDERS' EQUITY Accounts payable \$ 986 \$ 1,177 Deferred revenues 181,942 157,550 Other current liabilities 19,885 23,039 Long-term obligation under operating leases 22,378 23,503 **Total liabilities** 225,191 205,269 Total stockholders' equity 565,188 542,078 Total liabilities and stockholders' equity \$ 790,379 \$ 747,347

# 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,			ch 31,
		2023		2022
Revenues	\$	115,661	\$	81,220
Cost of revenues		31,492		21,490
Gross profit		84,169		59,730
Operating expenses:				
Research and development		45,844		29,781
Sales and marketing		16,601		14,940
General and administrative		30,243		26,856
Total operating expenses		92,688		71,577
Loss from operations		(8,519)		(11,847)
Other income (expense), net		182		(312)
Loss before interest income and (benefit) provision for income taxes		(8,337)		(12,159)
Interest income		5,639		33
Loss before provision for income taxes		(2,698)		(12,126)
(Benefit) provision for income taxes		(116)		28
Net loss and comprehensive loss	\$	(2,582)	\$	(12,154)
Net loss per share attributable to Class A and Class B common stockholders, basic	\$	(0.06)	\$	(0.31)
Net loss per share attributable to Class A and Class B common stockholders, diluted	\$	(0.06)	\$	(0.31)

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

	Three Months Ended March 31,		
	 2023		2022
Cash flows from operating activities:			
Net loss	\$ (2,582)	\$	(12,154)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Depreciation and amortization	1,762		774
Stock-based compensation	21,073		14,586
Gain on sale of capitalized software	(100)		—
Changes in assets and liabilities	9,451		17,421
Net cash provided by operating activities	29,604		20,627
Net cash used for investing activities	 (1,312)		(2,444)
Net cash provided by financing activities	4,619		5,226
Net increase in cash and cash equivalents	32,911		23,409
Cash and cash equivalents - Beginning of period	608,180		553,922
Cash and cash equivalents - End of period	\$ 641,091	\$	577,331

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

Adjusted EBITDA. Adjusted EBITDA is defined as net loss excluding interest income, income tax provision, depreciation and amortization, stock-based compensation expenses related to equity awards, IPO and public company costs, acquisition earn-out costs, and gain on sale of capitalized software. 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 loss, the most directly comparable financial measure presented in accordance with GAAP, to Adjusted EBITDA and Adjusted EBITDA margin:

		Three Months	Ended Ma	ırch 31,
(In thousands)	2023		2022	
Net loss	\$	(2,582)	\$	(12,154)
Interest income		(5,639)		(33)
(Benefit) provision for income taxes		(116)		28
Depreciation and amortization		1,762		774
Stock-based compensation expenses related to equity awards (1)		21,673		15,100
IPO and public company costs (2)		—		231
Acquisition earn-out costs (3)		113		—
Gain on sale of capitalized software (4)		(100)		_
Adjusted EBITDA	\$	15,111	\$	3,946
Revenues	\$	115,661	\$	81,220
Adjusted EBITDA Margin		13.1 %	<u> </u>	4.9 %

(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. These costs are included in General and administration expense within our Unaudited Condensed Consolidated Statements of Operations and Comprehensive Loss.

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 Loss. (3)

(4) Represents proceeds from a sale of capitalized software, which is included within Other income (expense), net within our Unaudited Condensed Consolidated Statements of Operations and Comprehensive Loss

#### Contacts

Investor Relations: Deborah Belevan, VP of Investor Relations IR@duolingo.com

Press: Sam Dalsimer, Global Head of Communications press@duolingo.com

# shareholder letter Q1 2023



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



# **Q1 Highlights**

	Q1 2022	Q1 2023
Daily Active Users	12.5M	<b>20.3M</b> +62% YoY
Monthly Active Users	49.2M	<b>72.6M</b> +47% YoY
Paid Subscribers at Period End	2.9M	<b>4.8M</b> +63% YoY
Paid Subscriber Penetration (% of MAU*)	6.8%	8.0%
Revenue	\$81.2M	<b>\$115.7M</b> +42% YoY
Total Bookings	\$102.1M	<b>\$140.1M</b> +37% YoY
Net Loss	\$(12.2)M	\$(2.6)M
Adjusted EBITDA	<b>\$3.9M</b> 4.9% margin	<b>\$15.1M</b> 13.1% margin

\*LTM MAU

# Dear shareholders,

In Q1 2023 we **outperformed our expectations for user growth, bookings, revenue, and profitability**. Here's a summary:

# **Q1 Highlights**

- Duolingo DAUs increased 62% to 20.3 million and MAUs increased 47% to 72.6 million, compared to the prior year quarter;
- DAU/MAU, a measure of user engagement, reached an all-time high of 28%;
- The number of paid Super Duolingo subscribers totaled 4.8 million at the end of Q1, an increase of 63% compared to the prior year quarter;
- Total bookings grew 37% and revenue grew 42%, compared to the prior year quarter (42% and 47%, respectively, on a constant currency basis);
- Our net loss was \$2.6 million, and we delivered our highest quarterly Adjusted EBITDA of \$15.1 million, or a 13% margin.

Based on this performance, we are raising our top-line guidance for 2023 to reflect 30% year over year growth, and tightening our target Adjusted EBITDA margin range to 11-12% for the year.

**Our results were strong mainly because we continue to improve the Duolingo language learning app along three dimensions: teaching efficacy, user engagement, and monetization.** On top of that, we believe that our marketing through organic social media, influencers, and paid user acquisition keeps getting more effective. I encourage you to read our previous shareholder letters to learn more about these initiatives. In this letter, I'll describe how we expect artificial intelligence (AI) to remain a competitive advantage for us, and briefly touch on our progress toward profitability.

# Al and Education Make a Great Duo

Since Duolingo's inception, we have bet on AI to accelerate our efforts to make high-quality education available to everyone. We've been building our AI team for more than ten years and have created proprietary systems that now drive many aspects of our products and business, putting us in a position to benefit from the latest advancements in generative AI.

We deploy AI in user-facing and internal capacities. For learners, **Birdbrain** is our proprietary machine learning model that makes Duolingo more personalized and effective. Using data from more than one billion exercises completed each day on the Duolingo app, Birdbrain chooses exercises that are at just the right level of difficulty for every individual learner. The Duolingo English Test (DET) uses Al in every step of its process, from creating content at scale, to administering, scoring, and securing the test. In fact, the DET has been working with OpenAl since 2021, long before GPT became a household name. We're also creating the testing industry's first set of standards for how Al should be used responsibly.

In addition, we're using AI to accelerate the pace of adding intermediate and advanced **course content** in our language learning app. In the past, it would take our experts a lot of time to create the thousands of sentences and exercises we add to each course over time. Now, GPT-4 can generate these in seconds, freeing our experts to focus on even more impactful ways of improving our courses.

Finally, as I mentioned in last quarter's shareholder letter, we have introduced two AI features as part of our new subscription tier, Duolingo Max, that are built with GPT-4: Explain My Answer and Roleplay. Both of these features are aimed at teaching better by emulating a human tutor experience. Duolingo Max is still in its infancy, and our teams are excited to roll it out more broadly, improve subscriber engagement, and test new features to make it an even more compelling offering.

# How AI Fits Into Our Competitive Advantage

While being a launch partner for GPT-4 gave us a head start on using this latest model, it's important to remember that our competitive advantage comes from our vast user data, in-house machine learning and AI expertise, gamified approach, and brand:

- Thanks to the over one billion exercises our learners complete every day, we believe we have more insights on language learning than any other entity in history, creating a large data moat around our business;
- We're not using GPT-4 "off the shelf." We're combining GPT-4 with our proprietary machine learning systems and signature gamified approach to make our products more engaging. We believe this will lead to more people telling their friends and family about us;
- 3. Our engaging and delightful cast of characters and design elements have put us on the path to becoming an iconic brand. Our beloved characters, especially our mascot Duo, alongside our powerful brand have made us synonymous with language learning in large parts of the world and bolstered our organic growth.

# Profitability

This quarter we achieved a 13.1% Adjusted EBITDA margin. That means that about 32% of our year-over-year incremental revenue flowed through to the bottom line. We did this while also hiring more than 30 people into the business as we continue to invest in our products. We will keep running the company with discipline, and expect to deliver meaningful leverage in operating expenses, putting us well on the path to our long-term target of 30-35% Adjusted EBITDA margin.

# In Closing

I have never been more excited about applying advanced technology to our mission than I am now. The pace of change is incredible and seems poised to accelerate. With that in mind, I believe the company that learns the fastest and that integrates technological advances most rapidly will pull away. At Duolingo, we have always learned rapidly—constant testing and iteration are core to our business—and I'm confident that we are well-positioned to take advantage of this exciting new era in technology.

Until next time, see you on the leaderboards!



do

Luis von Ahn CEO and Co-Founder

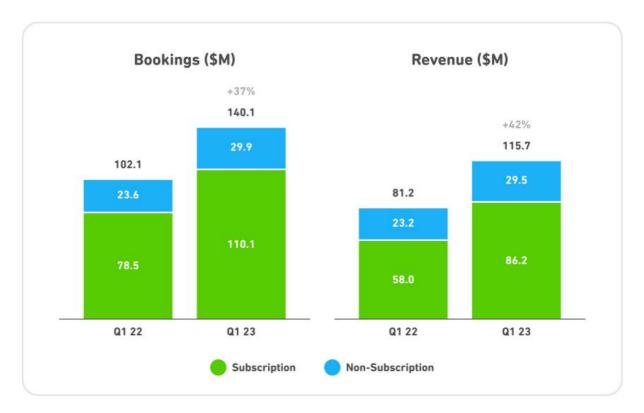
# financial performance and outlook

# Summary of Financial and Key Operating Metrics

(in millions)	Q1 2022	Q1 2023	YoY
User Metrics			
Monthly active users (MAUs)	49.2	72.6	47%
Daily active users (DAUs)	12.5	20.3	62%
Paid subscribers (period end)	2.9	4.8	63%
Operating Metrics			
Total bookings	\$102.1	\$140.1	37%
Subscription bookings	\$78.5	\$110.1	40%
GAAP Financial Metrics			
Revenues	\$81.2	\$115.7	42%
Gross profit	\$59.7	\$84.2	41%
Gross margin (%)	73.5%	72.8%	~(80) bps
Net loss	(\$12.2)	(\$2.6)	(79)%
Net cash from operating activities	\$20.6	\$29.6	44%
Non-GAAP Financial Metrics (1)			
Adjusted EBITDA	\$3.9	\$15.1	>100%
Free cash flow	\$18.9	\$28.8	52%

(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.



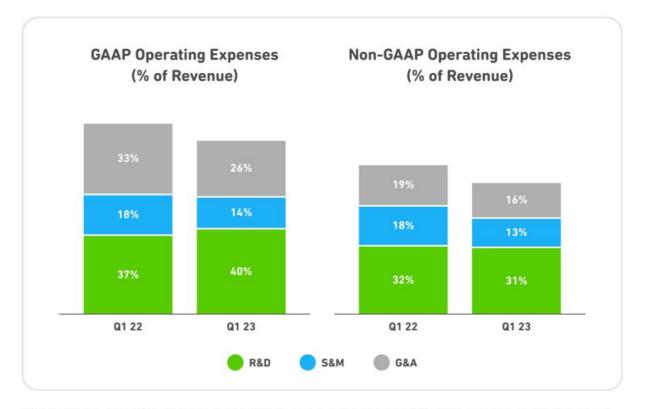
In the first quarter, total bookings grew 37% year over year on a reported basis (and 42% on a constant currency basis) to a record high of \$140.1 million. This was primarily driven by a 40% increase in subscription bookings due to an increase in the average number of paid subscribers. We also continue to see a shift to higher lifetime value plans. Subscribers on our annual and family plans made up about 92% of subscribers compared to about 87% in the prior year quarter.

In the first quarter, revenues grew 42% year over year on a reported basis to \$115.7 million (and 47% on a constant currency basis), driven primarily by growth in subscription revenue, which comprised 75% of revenue and grew 49% year over year. The increase in subscription revenue was primarily driven by a higher average number of paid subscribers. The table below provides revenues by product type:

(in millions)	Q1 2022	Q1 2023	Change	% Change
Subscription	\$58.0	\$86.2	\$28.2	49%
Advertising	11.7	11.6	(0.1)	-1%
Duolingo English Test	8.1	10.0	1.9	23%
Other *	3.4	7.9	4.5	133%
Total revenues	\$81.2	\$115.7	\$34.4	42%

Gross margin decreased by approximately 80 basis points year over year to 72.8% in Q1. This was primarily driven by lower advertising margins during the period due to lower advertising revenue per DAU, in addition to increased amortization of capitalized software. This was partially offset by higher subscription margins due to a greater proportion of our subscriber base renewing their subscriptions after one year, driving a reduction in third-party payment processing fees per subscriber.

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



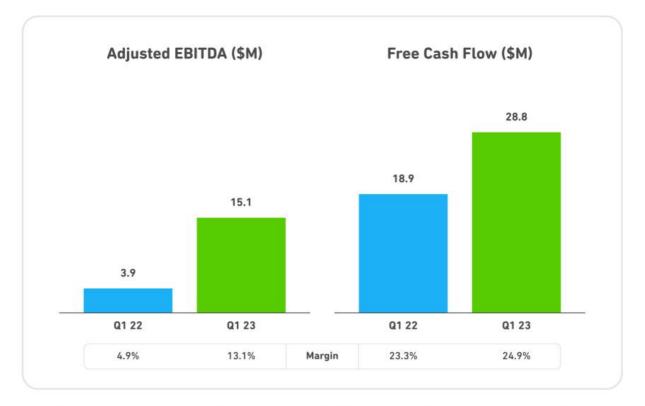
We report three categories of operating expenses: Research and development (R&D), Sales and marketing (S&M), and General and administrative (G&A). Non-GAAP operating expenses† represent GAAP expenses adjusted for depreciation, amortization, stock-based compensation, and IPO and public company costs, as well as other expenses. The majority of the adjustment in Q1 2023 was for stock-based compensation (SBC) expense of \$21.1 million. Roughly 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, they 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 Q1, GAAP R&D expense increased from 37% to 40% of revenue year over year, primarily due to growth in headcount as we continue to invest in engineering and product talent in order to improve our products, drive new user growth, and increase engagement. On a non-GAAP basis, R&D expense slightly decreased year over year from 32% to 31%.

We continue to achieve leverage in S&M expense on both a GAAP and non-GAAP basis by applying our past learnings in order to spend marketing dollars strategically and acquire users more efficiently. In Q1, GAAP S&M expense decreased year over year from 18% to 14% of revenue, and non-GAAP S&M expense decreased year over year from 18% to 13% of revenue.

We have also achieved significant operating leverage in G&A since our IPO. In Q1, GAAP G&A expense decreased year over year from 33% to 26% of revenue. On a non-GAAP basis in Q1, G&A expense decreased year over year from 19% to 16%.

+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 and capital discipline and are making progress towards our 2023 revised target range of 11-12% Adjusted EBITDA margin†. In Q1, Adjusted EBITDA† increased by \$11.2 million year over year to \$15.1 million, a 13.1% margin. The increase was driven by growth in revenue, and improved leverage in operating expenses.

During Q1, we generated \$28.8 million in free cash flow (FCF)†, a 24.9% 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.

# Q2 and FY 2023 Guidance

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

(in millions)	Q2 2023	FY 2023
Bookings	\$128 - 131	\$552 - 561
YoY Bookings Growth	31%-34%	29% - 31%
Revenues	\$122 - 125	\$500 - 509
YoY Revenue Growth	38% - 41%	35% - 38%
Adjusted EBITDA	\$13.4 - 15.0	\$55 - 61
Adjusted EBITDA margin	11% - 12%	11% - 12%

With regards to the non-GAAP Adjusted EBITDA and Adjusted EBITDA margin outlook provided above, a reconciliation to GAAP net 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 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.

## **Video Webcast**

Duolingo will host a video webcast to discuss its first quarter results today, May 9, 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**. 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 March 31, 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 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 for financial and operational decision-making and as a means to evaluate period-to-period comparisons. 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 and our financial outlook are forwardlooking 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 achieve 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 March 31, 2023 and in our other filings with the SEC, accessible on the SEC's website at www.sec.gov and the Investor Relations section of the Company's website at investors.duolingo.com. All forwardlooking 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, and also from time to time may use social media channels, including our Twitter account twitter.com/duolingo and our LinkedIn account 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	March 31, 2023
Cash and cash equivalents	\$608,180	\$641,091
Accounts receivable	46,728	52,509
Deferred cost of revenues	35,041	40,137
Prepaid expenses and other current assets	7,234	7,497
Non-current assets	50,164	49,145
Total Assets	\$747,347	\$790,379
Accounts payable	\$1,177	\$986
Deferred revenues	157,550	181,942
Other current liabilities	23,039	19,885
Long-term liabilities	23,503	22,378
Total liabilities	205,269	225,191
Total stockholders' equity	542,078	565,188
Total liabilities, convertible preferred stock and stockholders' equity	\$747,347	\$790,379

#### DUOLINGO, INC. AND SUBSIDIARIES

## UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

		nths Ended ch 31,	
(in thousands)	2022	2023	
Revenues	\$81,220	\$115,661	
Cost of revenues	21,490	31,492	
Gross profit	59,730	84,169	
Operating expenses:			
Research and development	29,781	45,844	
Sales and marketing	14,940	16,601	
General and administrative	26,856	30,243	
Total operating expenses	71,577	92,688	
Loss from operations	(11,847)	(8,519)	
Other income (expense), net	(312)	182	
Loss before interest income and (benefit) provision for income taxes	(12,159)	(8,337)	
Interest income	33	5,639	
Loss before (benefit) provision for income taxes	(12,126)	(2,698)	
(Benefit) provision for income taxes	28	(116)	
Net loss and comprehensive loss	\$(12,154)	\$(2,582)	

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

		Three Months Ended March 31,	
(in thousands)	2022	2023	
Net loss	\$(12,154)	\$(2,582)	
Adjustments to reconcile net loss to net cash provided by operating activities:			
Depreciation and amortization	774	1,762	
Stock-based compensation	14,586	21,073	
Gain on sale of capitalized software	-	(100)	
Changes in assets and liabilities	17,421	9,451	
Net cash provided by operating activities	20,627	29,604	
Net cash used for investing activities	(2,444)	(1,312)	
Net cash provided by financing activities	5,226	4,619	
Net increase in cash and cash equivalents	23,409	32,911	
Cash and cash equivalents - Beginning of period	553,922	608,180	
Cash and cash equivalents - End of period	\$577,331	\$641,091	

# appendix

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

Adjusted EBITDA is defined as net loss excluding interest income, income tax provision, depreciation and amortization, stock-based compensation expenses related to equity awards, IPO and public company costs, acquisition earn-out costs, and gain on sale of capitalized software. 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 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 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)	Q1 2022	Q1 2023
Net Income (Loss)	\$(12,154)	\$(2,582)
Less: Interest income	(33)	(5,639)
Plus: (Benefit) provision for income taxes	28	(116)
Plus: Depreciation & amortization	774	1,762
Plus: Stock-based compensation expenses related to equity awards (1)	15,100	21,673
Plus: IPO and public company costs (2)	231	-
Plus: Acquisition earn-out costs (3)	-	113
Less: Gain on sale of capitalized software (4)	-	(100)
Adjusted EBITDA	\$3,946	\$15,111
Revenues	\$81,220	\$115,661
Adjusted EBITDA margin	4.9%	13.1%

# Reconciliation: GAAP to Non-GAAP Operating Expense

(in thousands)	Q1 2022	Q1 2023
Total GAAP Operating Expense	\$71,577	\$92,688
Less: Depreciation & Amortization	(774)	(1,359)
Less: Stock-based compensation expenses related to equity awards (1)	(15,094)	(21,662)
Less: Other Adjustments (2) (3)	(231)	(113)
Non-GAAP Operating Expense	\$55,478	\$69,554

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

(in thousands)	Q1 2022	Q1 2023
Total GAAP R&D Expense	\$29,781	\$45,844
Less: Depreciation & Amortization	(134)	(407)
Less: Stock-based compensation expenses related to equity awards (1)	(3,858)	(9,586)
Non-GAAP R&D Expense	\$25,789	\$35,851

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

(in thousands)	Q1 2022	Q1 2023
Total GAAP S&M Expense	\$14,940	\$16,601
Less: Depreciation & Amortization	(228)	(398)
Less: Stock-based compensation expenses related to equity awards (1)	(363)	(793)
Non-GAAP S&M Expense	\$14,349	\$15,410

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

(in thousands)	Q1 2022	Q1 2023
Total GAAP G&A Expense	\$26,856	\$30,243
Less: Depreciation & Amortization	(412)	(554)
Less: Stock-based compensation expenses related to equity awards (1)	(10,873)	(11,283)
Less: Other Adjustments (2) (3)	(231)	(113)
Non-GAAP G&A Expense	\$15,340	\$18,293

#### **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)	Q1 2022	Q1 2023
Net cash provided by operating activities	\$20,627	\$29,604
Less: Capitalized software development costs	(1,117)	(731)
Less: Purchases of property and equipment	(1,327)	(681)
Plus: Taxes paid related to stock-based compensation equity awards	514	600
Plus: IPO and public company costs (2)	231	
Free cash flow	\$18,928	\$28,792
Revenues	\$81,220	\$115,661
Free cash flow margin	23.3%	24.9%

In addition to stock-based compensation expense, this includes costs incurred related to taxes paid on equity transactions.
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.
Represent costs incurred related to the earn-out payment on an acquisition.

(4) Represents proceeds from a sale of capitalized software.

# Contacts

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