

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

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended June 30, 2020
OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE TRANSITION PERIOD FROM _____ TO _____
Commission File Number 001-36164

Twitter, Inc.

(Exact name of registrant as specified in its charter)

Delaware

20-8913779

(State or other jurisdiction of
incorporation or organization)

(I.R.S. Employer
Identification No.)

1355 Market Street, Suite 900
San Francisco, California 94103
(Address of principal executive offices and Zip Code)
(415) 222-9670
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.000005 per share	TWTR	New York Stock Exchange

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES NO

The number of shares of the registrant's common stock outstanding as of July 23, 2020 was 790,948,953.

TABLE OF CONTENTS

	<u>Page</u>
	<u>PART I – FINANCIAL INFORMATION</u>
Item 1.	<u>Financial Statements (Unaudited)</u> 6
	<u>Consolidated Balance Sheets as of June 30, 2020 and December 31, 2019</u> 6
	<u>Consolidated Statements of Operations for the Three and Six Months Ended June 30, 2020 and June 30, 2019</u> 7
	<u>Consolidated Statements of Comprehensive Income (Loss) for the Three and Six Months Ended June 30, 2020 and June 30, 2019</u> 8
	<u>Consolidated Statements of Stockholders' Equity for the Three and Six Months Ended June 30, 2020 and June 30, 2019</u> 9
	<u>Consolidated Statements of Cash Flows for the Six Months Ended June 30, 2020 and June 30, 2019</u> 10
	<u>Notes to Consolidated Financial Statements</u> 11
Item 2.	<u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u> 30
Item 3.	<u>Quantitative and Qualitative Disclosures About Market Risk</u> 43
Item 4.	<u>Controls and Procedures</u> 44
	<u>PART II – OTHER INFORMATION</u>
Item 1.	<u>Legal Proceedings</u> 45
Item 1A.	<u>Risk Factors</u> 45
Item 2.	<u>Unregistered Sales of Equity Securities and Use of Proceeds</u> 66
Item 6.	<u>Exhibits</u> 67
	<u>Signatures</u> 68

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which statements involve substantial risks and uncertainties. Forward-looking statements generally relate to future events or our future financial or operating performance. In some cases, you can identify forward-looking statements because they contain words such as “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “could,” “intends,” “target,” “projects,” “contemplates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these words or other similar terms or expressions that concern our expectations, strategy, plans or intentions. Forward-looking statements contained in this Quarterly Report on Form 10-Q include, but are not limited to, statements about:

- our ability to attract and retain people on Twitter and increase their level of engagement, including ad engagement, and its impact on revenue;
- our plans regarding health and safety and our other top priorities, including our expectations regarding the impact on our reported metrics, policies, enforcement and preventing manipulation of our platform;
- the impact of the COVID-19 pandemic and related responses of businesses and governments to the pandemic on our operations and personnel, and on commercial activity and advertiser demand across our platform and on our operating results;
- our expectations regarding monetizable DAUs (mDAU), changes in cost per ad engagement and changes in ad engagements;
- our ability to develop or acquire new products, product features and services, improve our existing products and services, including with respect to Promoted Products, video and performance advertising, and increase the value of our products and services;
- our business strategies, plans and priorities, including our plans for growth and hiring, investment in our research and development efforts and our plans to scale capacity and enhance capability and reliability of our infrastructure, including capital expenditures relating to infrastructure;
- our work to increase the stability, performance, development velocity and scale of our ads platform and our Mobile Application Promotion (MAP) product;
- our ability to provide new content from third parties, including our ability to secure live streaming video content on terms that are acceptable to us;
- our ability to attract advertisers to our platforms, products and services and increase the amount that advertisers spend with us;
- our expectations regarding our mDAU growth and growth rates and related opportunities as well as the continued usage of our mobile applications, including the impact of seasonality;
- our ability to increase our revenue and our revenue growth rate, including advertising and data licensing and other revenue;
- our ability to improve monetization of our products and services;
- our future financial performance, including trends in cost per ad engagement, revenue (including data licensing revenue), cost of revenue, operating expenses, including stock-based compensation and income taxes;
- the impact of the recent security breach whereby attackers gained control of certain highly-visible accounts;
- our expectations regarding certain deferred tax assets and fluctuations in our tax expense and cash taxes;
- the impact of privacy and data protection laws and regulations;
- the impact of content- or copyright-related legislation or regulation;
- our expectations regarding outstanding litigation or the decisions of the courts;
- the effects of seasonal trends on our results of operations;
- the impact of our future transactions and corporate structuring on our income and other taxes;
- the sufficiency of our cash and cash equivalents, short-term investment balance and credit facility together with cash generated from operations to meet our working capital and capital expenditure requirements;
- our ability to timely and effectively develop, invest in, scale and adapt our existing technology and network infrastructure;

- our ability to successfully acquire and integrate companies and assets; and
- our expectations regarding international operations and foreign exchange gains and losses.

We caution you that the foregoing list may not contain all of the forward-looking statements made in this Quarterly Report on Form 10-Q.

You should not rely upon forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this Quarterly Report on Form 10-Q primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition, operating results, cash flows or prospects. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties and other factors described in the section titled "Risk Factors" and elsewhere in this Quarterly Report on Form 10-Q. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this Quarterly Report on Form 10-Q. We cannot assure you that the results, events and circumstances reflected in the forward-looking statements will be achieved or occur, and actual results, events or circumstances could differ materially from those described in the forward-looking statements.

The forward-looking statements made in this Quarterly Report on Form 10-Q relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this Quarterly Report on Form 10-Q to reflect events or circumstances after the date of this Quarterly Report on Form 10-Q or to reflect new information or the occurrence of unanticipated events, except as required by law. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

NOTE REGARDING KEY METRICS

We review a number of metrics, including monetizable daily active usage or users, or mDAU, changes in ad engagements and changes in cost per ad engagement, to evaluate our business, measure our performance, identify trends affecting our business, formulate business plans and make strategic decisions. See the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations— Key Metrics” for a discussion of how we calculate mDAU, changes in ad engagements and changes in cost per ad engagement.

We define mDAU as people, organizations, or other accounts who logged in or were otherwise authenticated and accessed Twitter on any given day through twitter.com or Twitter applications that are able to show ads. Average mDAU for a period represents the number of mDAU on each day of such period divided by the number of days for such period. Changes in mDAU are a measure of changes in the size of our daily logged in or otherwise authenticated active total accounts. To calculate the year-over-year change in mDAU, we subtract the average mDAU for the three months ended in the previous year from the average mDAU for the same three months ended in the current year and divide the result by the average mDAU for the three months ended in the previous year. Additionally, our calculation of mDAU is not based on any standardized industry methodology and is not necessarily calculated in the same manner or comparable to similarly titled measures presented by other companies. Similarly, our measures of mDAU growth and engagement may differ from estimates published by third parties or from similarly-titled metrics of our competitors due to differences in methodology.

The numbers of mDAU presented in this Quarterly Report on Form 10-Q are based on internal company data. While these numbers are based on what we believe to be reasonable estimates for the applicable period of measurement, there are inherent challenges in measuring usage and engagement across our large number of total accounts around the world. Furthermore, our metrics may be impacted by our information quality efforts, which are our overall efforts to reduce malicious activity on the service, inclusive of spam, malicious automation, and fake accounts. For example, there are a number of false or spam accounts in existence on our platform. We have performed an internal review of a sample of accounts and estimate that the average of false or spam accounts during the second quarter of 2020 represented fewer than 5% of our mDAU during the quarter. The false or spam accounts for a period represents the average of false or spam accounts in the samples during each monthly analysis period during the quarter. In making this determination, we applied significant judgment, so our estimation of false or spam accounts may not accurately represent the actual number of such accounts, and the actual number of false or spam accounts could be higher than we have estimated. We are continually seeking to improve our ability to estimate the total number of spam accounts and eliminate them from the calculation of our mDAU, and have made improvements in our spam detection capabilities that have resulted in the suspension of a large number of spam, malicious automation, and fake accounts. We intend to continue to make such improvements. After we determine an account is spam, malicious automation, or fake, we stop counting it in our mDAU, or other related metrics. We also treat multiple accounts held by a single person or organization as multiple mDAU because we permit people and organizations to have more than one account. Additionally, some accounts used by organizations are used by many people within the organization. As such, the calculations of our mDAU may not accurately reflect the actual number of people or organizations using our platform.

In addition, geographic location data collected for purposes of reporting the geographic location of our mDAU is based on the IP address or phone number associated with the account when an account is initially registered on Twitter. The IP address or phone number may not always accurately reflect a person’s actual location at the time they engaged with our platform. For example, someone accessing Twitter from the location of the proxy server that the person connects to rather than from the person’s actual location.

We regularly review and may adjust our processes for calculating our internal metrics to improve their accuracy.

PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

TWITTER, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except par value)
(Unaudited)

	June 30, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	\$ 3,112,454	\$ 1,799,082
Short-term investments	4,653,560	4,839,970
Accounts receivable, net of allowance for doubtful accounts of \$18,429 and \$2,401	600,777	850,184
Prepaid expenses and other current assets	128,496	130,839
Total current assets	8,495,287	7,620,075
Property and equipment, net	1,142,601	1,031,781
Operating lease right-of-use assets	640,202	697,095
Intangible assets, net	64,347	55,106
Goodwill	1,284,325	1,256,699
Deferred tax assets, net	786,290	1,908,086
Other assets	134,535	134,547
Total assets	<u>\$ 12,547,587</u>	<u>\$ 12,703,389</u>
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 162,160	\$ 161,148
Accrued and other current liabilities	533,981	500,893
Operating lease liabilities, short-term	137,718	146,959
Finance lease liabilities, short-term	7,248	23,476
Total current liabilities	841,107	832,476
Convertible notes, long-term	2,734,867	1,816,833
Senior notes, long-term	692,489	691,967
Operating lease liabilities, long-term	560,461	609,245
Deferred and other long-term tax liabilities, net	26,579	24,170
Other long-term liabilities	34,029	24,312
Total liabilities	4,889,532	3,999,003
Commitments and contingencies (Note 14)		
Stockholders' equity:		
Preferred stock, \$0.000005 par value-- 200,000 shares authorized; none issued and outstanding	—	—
Common stock, \$0.000005 par value-- 5,000,000 shares authorized; 790,426 and 779,619 shares issued and outstanding	4	4
Additional paid-in capital	9,127,495	8,763,330
Accumulated other comprehensive loss	(93,000)	(70,534)
Retained earnings (accumulated deficit)	(1,376,444)	11,586
Total stockholders' equity	7,658,055	8,704,386
Total liabilities and stockholders' equity	<u>\$ 12,547,587</u>	<u>\$ 12,703,389</u>

The accompanying notes are an integral part of these consolidated financial statements.

TWITTER, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share data)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Revenue	\$ 683,438	\$ 841,381	\$ 1,491,075	\$ 1,628,271
Costs and expenses				
Cost of revenue	288,039	277,965	572,076	541,976
Research and development	215,806	159,242	416,194	305,488
Sales and marketing	207,286	240,249	428,573	446,048
General and administrative	246,237	88,239	355,605	165,415
Total costs and expenses	957,368	765,695	1,772,448	1,458,927
Income (loss) from operations	(273,930)	75,686	(281,373)	169,344
Interest expense	(39,828)	(38,317)	(73,098)	(75,577)
Interest income	25,013	42,887	57,910	83,428
Other income (expense), net	(361)	7,523	(8,080)	7,087
Income (loss) before income taxes	(289,106)	87,779	(304,641)	184,282
Provision (benefit) for income taxes	1,088,899	(1,031,781)	1,081,760	(1,126,082)
Net income (loss)	\$ (1,378,005)	\$ 1,119,560	\$ (1,386,401)	\$ 1,310,364
Net income (loss) per share attributable to common stockholders:				
Basic	\$ (1.75)	\$ 1.46	\$ (1.77)	\$ 1.71
Diluted	\$ (1.75)	\$ 1.43	\$ (1.77)	\$ 1.68
Weighted-average shares used to compute net income (loss) per share attributable to common stockholders:				
Basic	785,909	768,755	783,303	766,658
Diluted	785,909	785,056	783,303	781,378

The accompanying notes are an integral part of these consolidated financial statements.

TWITTER, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Net income (loss)	\$ (1,378,005)	\$ 1,119,560	\$ (1,386,401)	\$ 1,310,364
Other comprehensive income (loss), net of tax:				
Change in unrealized gain (loss) on investments in available-for-sale securities	48,551	9,106	22,191	17,954
Change in foreign currency translation adjustment	16,446	615	(44,657)	413
Net change in accumulated other comprehensive income (loss)	64,997	9,721	(22,466)	18,367
Comprehensive income (loss)	<u>\$ (1,313,008)</u>	<u>\$ 1,129,281</u>	<u>\$ (1,408,867)</u>	<u>\$ 1,328,731</u>

The accompanying notes are an integral part of these consolidated financial statements.

TWITTER, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)
(Unaudited)

	Three Months Ended June 30,				Six Months Ended June 30,			
	2020		2019		2020		2019	
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount
Common stock								
Balance, beginning of period	784,100	\$ 4	767,913	\$ 4	779,619	\$ 4	764,257	\$ 4
Issuance of common stock in connection with RSU vesting	3,946	—	3,243	—	8,171	—	7,132	—
Issuance of restricted stock in connection with acquisitions	—	—	—	—	33	—	—	—
Issuance of restricted stock in connection with acquisitions accounted for as stock-based compensation	1,002	—	306	—	1,381	—	306	—
Exercise of stock options	83	—	123	—	264	—	195	—
Issuance of common stock upon purchases under employee stock purchase plan	1,395	—	901	—	1,395	—	901	—
Shares withheld related to net share settlement of equity awards	(100)	—	(91)	—	(437)	—	(396)	—
Other activities	—	—	(2)	—	—	—	(2)	—
Balance, end of period	790,426	\$ 4	772,393	\$ 4	790,426	\$ 4	772,393	\$ 4
Additional paid-in capital								
Balance, beginning of period	—	\$ 8,952,059	—	\$ 8,408,749	—	\$ 8,763,330	—	\$ 8,324,974
Issuance of restricted stock in connection with acquisitions	—	—	—	—	—	1,312	—	—
Exercise of stock options	—	118	—	413	—	423	—	509
Issuance of common stock upon purchases under employee stock purchase plan	—	34,395	—	25,209	—	34,395	—	25,209
Shares withheld related to net share settlement of equity awards	—	(2,925)	—	(3,461)	—	(14,618)	—	(12,938)
Stock-based compensation	—	143,848	—	104,553	—	250,444	—	197,709
Equity component of the convertible note issuance, net	—	—	—	—	—	92,209	—	—
Balance, end of period	—	\$ 9,127,495	—	\$ 8,535,463	—	\$ 9,127,495	—	\$ 8,535,463
Accumulated other comprehensive loss								
Balance, beginning of period	—	\$ (157,997)	—	\$ (56,665)	—	\$ (70,534)	—	\$ (65,311)
Other comprehensive income (loss)	—	64,997	—	9,721	—	(22,466)	—	18,367
Balance, end of period	—	\$ (93,000)	—	\$ (46,944)	—	\$ (93,000)	—	\$ (46,944)
Retained earnings (Accumulated deficit)								
Balance, beginning of period	—	\$ 1,561	—	\$ (1,263,269)	—	\$ 11,586	—	\$ (1,454,073)
Cumulative-effect adjustment from adoption of current expected credit loss guidance	—	—	—	—	—	(1,629)	—	—
Net income (loss)	—	(1,378,005)	—	1,119,560	—	(1,386,401)	—	1,310,364
Balance, end of period	—	\$ (1,376,444)	—	\$ (143,709)	—	\$ (1,376,444)	—	\$ (143,709)
Total stockholders' equity	790,426	\$ 7,658,055	772,393	\$ 8,344,814	790,426	\$ 7,658,055	772,393	\$ 8,344,814

The accompanying notes are an integral part of these consolidated financial statements.

TWITTER, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Six Months Ended June 30,	
	2020	2019
Cash flows from operating activities		
Net income (loss)	\$ (1,386,401)	\$ 1,310,364
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation and amortization expense	244,486	229,090
Stock-based compensation expense	230,779	178,106
Amortization of discount on convertible notes	48,060	62,787
Bad debt expense	17,495	1,363
Deferred income taxes	(26,037)	62,689
Deferred tax assets establishment related to intra-entity transfers of intangible assets	—	(1,206,880)
Deferred tax assets valuation allowance establishment	1,101,374	—
Impairment of investments in privately-held companies	8,503	1,550
Other adjustments	(5,185)	(19,466)
Changes in assets and liabilities, net of assets acquired and liabilities assumed from acquisitions:		
Accounts receivable	234,281	67,237
Prepaid expenses and other assets	2,957	(2,547)
Operating lease right-of-use assets	78,117	69,174
Accounts payable	(26,234)	(4,740)
Accrued and other liabilities	4,575	1,281
Operating lease liabilities	(78,987)	(59,342)
Net cash provided by operating activities	<u>447,783</u>	<u>690,666</u>
Cash flows from investing activities		
Purchases of property and equipment	(287,083)	(218,821)
Proceeds from sales of property and equipment	3,905	3,057
Purchases of marketable securities	(3,122,764)	(2,991,921)
Proceeds from maturities of marketable securities	2,481,134	2,768,938
Proceeds from sales of marketable securities	858,669	63,299
Business combinations, net of cash acquired	(34,285)	(20,302)
Other investing activities	(12,389)	11,368
Net cash used in investing activities	<u>(112,813)</u>	<u>(384,382)</u>
Cash flows from financing activities		
Proceeds from issuance of convertible notes	1,000,000	—
Debt issuance costs	(14,662)	—
Taxes paid related to net share settlement of equity awards	(14,618)	(12,938)
Payments of finance lease obligations	(16,456)	(37,933)
Proceeds from exercise of stock options	423	509
Proceeds from issuances of common stock under employee stock purchase plan	34,395	25,209
Net cash provided by (used in) financing activities	<u>989,082</u>	<u>(25,153)</u>
Net increase in cash, cash equivalents and restricted cash	1,324,052	281,131
Foreign exchange effect on cash, cash equivalents and restricted cash	(15,778)	7,002
Cash, cash equivalents and restricted cash at beginning of period	1,827,666	1,921,875
Cash, cash equivalents and restricted cash at end of period	<u>\$ 3,135,940</u>	<u>\$ 2,210,008</u>
Supplemental disclosures of non-cash investing and financing activities		
Common stock issued in connection with acquisitions	\$ 1,312	\$ —
Changes in accrued property and equipment purchases	\$ 40,249	\$ 77,611
Reconciliation of cash, cash equivalents and restricted cash as shown in the consolidated statements of cash flows		
Cash and cash equivalents	\$ 3,112,454	\$ 2,183,111
Restricted cash included in prepaid expenses and other current assets	2,900	1,379
Restricted cash included in other assets	20,586	25,518
Total cash, cash equivalents and restricted cash	<u>\$ 3,135,940</u>	<u>\$ 2,210,008</u>

The accompanying notes are an integral part of these consolidated financial statements.

TWITTER, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1. Description of Business and Summary of Significant Accounting Policies

Twitter, Inc. ("Twitter" or the "Company") was incorporated in Delaware in April 2007 and is headquartered in San Francisco, California. Twitter offers products and services for people, organizations, advertisers, developers and platform and data partners.

Basis of Presentation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

The accompanying unaudited consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America (GAAP). The unaudited interim consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and reflect, in management's opinion, all adjustments of a normal, recurring nature that are necessary for the fair statement of the Company's financial position, results of operations and cash flows for the interim periods, but are not necessarily indicative of the results expected for the full fiscal year or any other period.

The accompanying interim consolidated financial statements and these related notes should be read in conjunction with the consolidated financial statements and related notes included in the Company's Annual Report on Form 10-K for the year ended December 31, 2019.

Prior Period Reclassifications

Certain prior period amounts have been reclassified to conform to the current period presentation.

Use of Estimates

The preparation of the Company's consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses, as well as related disclosure of contingent assets and liabilities. Actual results could differ materially from the Company's estimates. To the extent that there are material differences between these estimates and actual results, the Company's financial condition or operating results will be affected. The Company bases its estimates on past experience and other assumptions that the Company believes are reasonable under the circumstances, and the Company evaluates these estimates on an ongoing basis.

COVID-19 Impacts

The COVID-19 pandemic has caused, and continues to cause, widespread economic disruption and has impacted the Company in a number of ways, most notably a significant decrease in global advertising spend starting in March 2020. The Company expects the extent of the impact on its financial and operational results will continue to depend on the duration and severity of the economic disruption caused by the COVID-19 pandemic.

As of June 30, 2020, the Company had \$7.77 billion of cash, cash equivalents and short-term investments in marketable securities. If required, the Company may take certain liquidity mitigation actions in the future; however, it does not believe such actions are necessary based on its current forecasts. The Company believes that the existing cash, cash equivalents and short-term investments balances, together with cash generated by operations will be sufficient to meet its working capital and capital expenditure requirements in the foreseeable future based on its current expectations of the impact of the COVID-19 pandemic.

The Company considered the impacts of the COVID-19 pandemic on its significant estimates and judgments used in applying its accounting policies in the three and six months ended June 30, 2020. In light of the pandemic, there is a greater degree of uncertainty in applying these judgments and depending on the duration and severity of the pandemic, changes to its estimates and judgments could result in a meaningful impact to its financial statements in future periods. Some of the more reasonably possible and significant items subject to a greater degree of uncertainty during this time include estimates of the valuation allowance against deferred tax assets, the carrying value of investments in privately-held companies, revenue collectibility, and credit losses related to accounts receivable, unbilled revenue and investments in debt securities.

Recent Accounting Pronouncements

Recently adopted accounting pronouncements

In June 2016, the Financial Accounting Standards Board (FASB) issued a new accounting standard update on the measurement of credit losses on financial instruments. The new guidance requires financial assets measured at amortized cost to be presented at the net amount expected to be collected and available-for-sale debt securities to record credit losses through an allowance for credit losses. The Company adopted this new accounting standard on January 1, 2020 using a modified retrospective method. In connection with the adoption of this guidance, the Company recorded a cumulative-effect adjustment of \$1.6 million to opening retained earnings as of January 1, 2020, related to additional allowance for credit losses on doubtful accounts and unbilled revenue.

In August 2018, the FASB issued a new accounting standard update which eliminates, adds and modifies certain disclosure requirements for fair value measurements. The update eliminates the requirement to disclose the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, and introduces a requirement to disclose the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. The Company adopted this new accounting standard on January 1, 2020, using the prospective method, and the adoption did not have a material impact on the Company's financial statements and related disclosures.

In August 2018, the FASB issued a new accounting standard update requiring a customer in a cloud computing arrangement (i.e., hosting arrangement) that is a service contract to capitalize certain implementation costs as if the arrangement was an internal-use software project. Capitalized implementation costs related to a hosting arrangement that is a service contract will be amortized over the term of the hosting arrangement, beginning when the module or component of the hosting arrangement is ready for its intended use. The Company adopted the new accounting standard update on January 1, 2020, using the prospective method, and the adoption did not have a material impact on the Company's financial statements and related disclosures.

In December 2019, the FASB issued a new accounting standard update to simplify the accounting for income taxes. The new guidance removes certain exceptions for recognizing deferred taxes for investments, performing intraperiod allocation and calculating income taxes in interim periods. It also adds guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax goodwill and allocating taxes to members of a consolidated group. The Company adopted this guidance on January 1, 2020, using the modified retrospective method, and the adoption did not have a material impact on the Company's financial statements and related disclosures.

With the exception of the standards discussed above, there have been no other recent accounting pronouncements or changes in accounting pronouncements during the six months ended June 30, 2020, as compared to the recent accounting pronouncements described in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, that are of significance or potential significance to the Company.

Significant Accounting Policies

There have been no material changes to the Company's significant accounting policies from its Annual Report on Form 10-K for the fiscal year ended December 31, 2019, except for the policies noted below, which changed as a result of the adoption of the new standard on the measurement of credit losses on financial instruments.

Accounts Receivable, Net

The Company records accounts receivable at the invoiced amount. The Company maintains an allowance for doubtful accounts to reserve for potentially uncollectible receivable amounts. In evaluating the Company's ability to collect outstanding receivable balances, the Company considers various factors including the age of the balance, the creditworthiness of the customer, which is assessed based on ongoing credit evaluations and payment history, the customer's current financial condition, and now considers macro-economic factors such as gross domestic product (GDP) growth rates to estimate expected future credit losses. In the three and six months ended June 30, 2020, the Company recorded \$2.2 million and \$16.3 million of incremental allowance for doubtful accounts, respectively, including estimated future losses in consideration of the impact of the COVID-19 pandemic on the economy and the Company. The Company considered the current and expected future economic and market conditions surrounding the COVID-19 pandemic to determine future expected losses on its accounts receivable. Actual future bad debt could differ materially from this estimate and additional bad debt could be incurred as the duration and severity of the impact of the COVID-19 pandemic remains uncertain.

Unbilled Revenue (Contract Assets)

The Company evaluates whether its unbilled revenue is exposed to potential credit losses by considering factors such as the creditworthiness of its customers, the term over which unbilled revenue will be recognized, historical impairment of unbilled revenue, and contemplation of projected macroeconomic factors such as GDP growth rates. As of June 30, 2020, the Company recorded an immaterial amount of allowance for credit losses on unbilled revenue in consideration of the impact of the COVID-19 pandemic on the economy and the Company. The Company considered the current and expected future economic and market conditions surrounding the COVID-19 pandemic to determine future expected credit losses on its unbilled revenue. Actual results could differ materially from the Company's estimates given the uncertainty arising from the COVID-19 pandemic.

Cash, Cash Equivalents and Short-term Investments

The Company determines the appropriate classification of its investments in marketable securities at the time of purchase and reevaluates such designation at each balance sheet date. The Company has classified and accounted for its marketable securities as available-for-sale. After considering the Company's capital preservation objectives, as well as its liquidity requirements, the Company may sell securities prior to their stated maturities. The Company carries its available-for-sale securities at fair value. The Company reports the unrealized gains and losses, net of taxes, as a component of stockholders' equity, except for unrealized losses determined to be credit-related which are recorded as other income (expense), net in the consolidated statements of operations and reports an allowance for credit losses in short-term investments on the balance sheet, if any.

The Company's investment policy only allows purchases of investment-grade notes and provides guidelines on concentrations to ensure minimum risk of loss. The Company evaluates whether the unrealized loss on available-for-sale debt securities is the result of the credit worthiness of the corporate notes it held, or other non-credit-related factors such as liquidity by reviewing a number of factors such as the implied yield of the corporate note based on the market price, the nature of the invested entity's business or industry, market capitalization relative to debt, changes in credit ratings, and the market prices of the corporate notes subsequent to period end. As of June 30, 2020, the gross unrealized loss on available-for-sale debt securities was immaterial and there were no expected credit losses related to the Company's available-for-sale debt securities. The Company does not intend to sell these investments and it is not more likely than not that the Company will be required to sell these investments before recovery of their amortized cost bases. As of June 30, 2020, no allowance for credit losses in short-term investments was recorded. However, given the uncertainty surrounding the severity and duration of the COVID-19 pandemic, the Company could incur future unrealized losses on available-for-sale debt securities that are credit-related, which will be recorded in other income (expense), net in the consolidated statements of operations.

Note 2. Revenue

Revenue Recognition

Revenue is recognized when the control of promised goods or services is transferred to customers at an amount that reflects the consideration to which the Company expects to be entitled to in exchange for those goods or services. The Company identifies its contracts with customers and all performance obligations within those contracts. The Company then determines the transaction price and allocates the transaction price to the performance obligations within the Company's contracts with customers, recognizing revenue when, or as the Company satisfies its performance obligations. While the majority of the Company's revenue transactions are based on standard business terms and conditions, the Company also enters into sales agreements with advertisers and data partners that sometimes involve multiple performance obligations and occasionally include non-standard terms or conditions.

Revenue by geography is based on the billing address of the customers. The following tables set forth revenue by services and revenue by geographic area (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Revenue by services:				
Advertising services	\$ 561,994	\$ 727,123	\$ 1,244,186	\$ 1,406,589
Data licensing and other	121,444	114,258	246,889	221,682
Total revenue	<u>\$ 683,438</u>	<u>\$ 841,381</u>	<u>\$ 1,491,075</u>	<u>\$ 1,628,271</u>

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Revenue by geographic area:				
United States	\$ 364,881	\$ 455,201	\$ 833,311	\$ 887,557
Japan	108,239	133,171	239,371	268,742
Rest of World	210,318	253,009	418,393	471,972
Total revenue	<u>\$ 683,438</u>	<u>\$ 841,381</u>	<u>\$ 1,491,075</u>	<u>\$ 1,628,271</u>

Contract Balances

The Company enters into contracts with its customers, which may give rise to contract liabilities (deferred revenue) and contract assets (unbilled revenue). The payment terms and conditions within the Company's contracts vary by the type and location of its customer and products or services purchased, the substantial majority of which are due in less than one year. When the timing of revenue recognition differs from the timing of payments made by customers, the Company recognizes either unbilled revenue (its performance precedes the billing date) or deferred revenue (customer payment is received in advance of performance).

Unbilled Revenue (Contract Assets)

The Company presents unbilled revenue in the consolidated balance sheets within prepaid expenses and other current assets and within other assets. The Company's contracts do not contain material financing components. The Company's unbilled revenue primarily consists of amounts that have yet to be billed under contracts with escalating fee structures. Specifically, because the Company generally recognizes revenue on a straight-line basis for data licensing arrangements with escalating fee structures, revenue recognized represents amounts to which the Company is contractually entitled; however, the revenue recognized exceeds the amounts the Company has a right to bill as of the period end, thus resulting in unbilled revenue.

Deferred Revenue (Contract Liabilities)

The Company presents deferred revenue primarily within accrued and other current liabilities in the consolidated balance sheets and there is not expected to be any material non-current contract liabilities given the Company's contracting provisions. The Company's deferred revenue balance primarily consists of cash payments due in advance of satisfying its performance obligations relating to data licensing contracts and performance obligations given to customers based on their spend relating to advertising contracts, for which the Company defers, as they represent material rights. The Company recognizes deferred revenue relating to its data licensing contracts on a straight-line basis over the period in which the Company provides data. The Company recognizes deferred revenue relating to its advertising contracts based on the amount of customer spend and the relative standalone selling price of the material rights.

The following table presents contract balances (in thousands):

	June 30, 2020	December 31, 2019
Unbilled revenue	\$ 32,009	\$ 27,691
Deferred revenue	\$ 72,330	\$ 69,000

The amount of revenue recognized in the three months ended June 30, 2020 that was included in the deferred revenue balance as of March 31, 2020 was \$34.1 million. The amount of revenue recognized in the six months ended June 30, 2020 that was included in the deferred revenue balance as of December 31, 2019 was \$69.0 million. This revenue consists primarily of revenue recognized as a result of the utilization of bonus ads inventory earned by and material rights provided to customers in prior periods and the satisfaction of the Company's performance obligations relating to data licensing contracts with advance cash payments or material rights.

The amount of revenue recognized from obligations satisfied (or partially satisfied) in prior periods was not material.

The increase in the unbilled revenue balance from December 31, 2019 to June 30, 2020 was primarily attributable to differences between revenue recognized and amounts billed in the Company's data licensing arrangements with escalating fee structures due to recognizing such fees as revenue on a straight-line basis.

The increase in the deferred revenue balance from December 31, 2019 to June 30, 2020 was primarily due to cash payments received or due in advance of satisfying the Company's performance obligations for data licensing contracts and bonus and make good ads inventory earned by and offered to customers during the period.

Remaining Performance Obligations

As of June 30, 2020, the aggregate amount of the transaction price allocated to remaining performance obligations in contracts with an original expected duration exceeding one year is \$900.0 million. This total amount primarily consists of long-term data licensing contracts and excludes deferred revenue related to the Company's short-term advertising service arrangements. The Company expects to recognize this amount as revenue over the following time periods (in thousands):

	Remaining Performance Obligations			
	Total	Remainder of 2020	2021	2022 and Thereafter
Revenue expected to be recognized on remaining performance obligations	\$ 900,032	\$ 157,703	\$ 291,998	\$ 450,331

Note 3. Cash, Cash Equivalents and Short-term Investments

Cash, cash equivalents and short-term investments consist of the following (in thousands):

	June 30, 2020	December 31, 2019
Cash and cash equivalents:		
Cash	\$ 211,907	\$ 254,405
Money market funds	2,282,166	465,158
Corporate notes, commercial paper and certificates of deposit	618,381	1,079,519
Total cash and cash equivalents	\$ 3,112,454	\$ 1,799,082
Short-term investments:		
U.S. government and agency securities including treasury bills	\$ 706,637	\$ 660,860
Corporate notes, commercial paper and certificates of deposit	3,946,198	4,179,110
Marketable equity securities	725	—
Total short-term investments	\$ 4,653,560	\$ 4,839,970

The contractual maturities of debt securities classified as available-for-sale as of June 30, 2020 were as follows (in thousands):

	June 30, 2020
Due within one year	\$ 2,381,978
Due after one year through five years	2,270,857
Total	\$ 4,652,835

The following tables summarize unrealized gains and losses related to available-for-sale debt securities classified as short-term investments on the Company's consolidated balance sheets (in thousands):

	June 30, 2020			
	Gross Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Aggregated Estimated Fair Value
U.S. government and agency securities including treasury bills	\$ 704,924	\$ 1,733	\$ (20)	\$ 706,637
Corporate notes, commercial paper and certificates of deposit	3,912,495	34,845	(1,142)	3,946,198
Total available-for-sale debt securities classified as short-term investments	\$ 4,617,419	\$ 36,578	\$ (1,162)	\$ 4,652,835

	December 31, 2019			
	Gross Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Aggregated Estimated Fair Value
U.S. government and agency securities including treasury bills	\$ 660,361	\$ 1,049	\$ (550)	\$ 660,860
Corporate notes, commercial paper and certificates of deposit	4,166,203	13,133	(226)	4,179,110
Total available-for-sale debt securities classified as short-term investments	\$ 4,826,564	\$ 14,182	\$ (776)	\$ 4,839,970

The gross unrealized loss on available-for-sale debt securities in a continuous loss position for 12 months or longer was not material as of June 30, 2020 and December 31, 2019.

Note 4. Fair Value Measurements

The Company measures its cash equivalents, short-term investments and derivative financial instruments at fair value. The Company classifies its cash equivalents, short-term investments and derivative financial instruments within Level 1 or Level 2 because the Company values these investments using quoted market prices or alternative pricing sources and models utilizing market observable inputs. The fair value of the Company's Level 1 financial assets is based on quoted market prices of the identical underlying security. The fair value of the Company's Level 2 financial assets is based on inputs that are directly or indirectly observable in the market, including the readily-available pricing sources for the identical underlying security that may not be actively traded.

The following tables set forth the fair value of the Company's financial assets and liabilities measured at fair value on a recurring basis as of June 30, 2020 and December 31, 2019 based on the three-tier fair value hierarchy (in thousands):

	June 30, 2020		
	Level 1	Level 2	Total
Assets			
Cash equivalents:			
Money market funds	\$ 2,282,166	\$ —	\$ 2,282,166
Commercial paper	—	618,381	618,381
Short-term investments:			
U.S. government and agency securities	—	706,637	706,637
Corporate notes	—	2,668,762	2,668,762
Commercial paper	—	1,022,289	1,022,289
Certificates of deposit	—	255,147	255,147
Marketable equity securities	725	—	725
Other current assets:			
Foreign currency contracts	—	2,556	2,556
Total	<u>\$ 2,282,891</u>	<u>\$ 5,273,772</u>	<u>\$ 7,556,663</u>
Liabilities			
Other current liabilities:			
Foreign currency contracts	—	1,598	1,598
Total	<u>\$ —</u>	<u>\$ 1,598</u>	<u>\$ 1,598</u>

	December 31, 2019		
	Level 1	Level 2	Total
Assets			
Cash equivalents:			
Money market funds	\$ 465,158	\$ —	\$ 465,158
Corporate notes	—	8,246	8,246
Commercial paper	—	1,031,825	1,031,825
Certificates of deposit	—	39,448	39,448
Short-term investments:			
U.S. government and agency securities	—	660,860	660,860
Corporate notes	—	2,468,429	2,468,429
Commercial paper	—	1,236,487	1,236,487
Certificates of deposit	—	474,194	474,194
Other current assets:			
Foreign currency contracts	—	3,756	3,756
Total	<u>\$ 465,158</u>	<u>\$ 5,923,245</u>	<u>\$ 6,388,403</u>
Liabilities			
Other current liabilities:			
Foreign currency contracts	—	1,573	1,573
Total	<u>\$ —</u>	<u>\$ 1,573</u>	<u>\$ 1,573</u>

The Company has \$954.0 million in aggregate principal amount of 1.00% convertible senior notes due in 2021, or the 2021 Notes, \$1.15 billion in aggregate principal amount of 0.25% convertible senior notes due in 2024, or the 2024 Notes, \$1.0 billion in aggregate principal amount of 0.375% convertible senior notes due in 2025, or the 2025 Notes, and, taken together with the 2021 Notes and the 2024 Notes, the Convertible Notes. The Company also has \$700.0 million in aggregate principal amount of 3.875% senior notes due in 2027, or the 2027 Notes, and, together with the Convertible Notes, the Notes, outstanding as of June 30, 2020. Refer to Note 10 – Senior Notes and Convertible Notes for further details on the Notes.

The estimated fair value of the 2021 Notes, the 2024 Notes, and the 2027 Notes, based on a market approach as of June 30, 2020 was approximately \$934.3 million, \$1.07 billion, and \$700.1 million, respectively, which represents a Level 2 valuation. The estimated fair value was determined based on the estimated or actual bids and offers of the Notes in an over-the-counter market on the last business day of the period.

The estimated fair value of the 2025 Notes, based on a binomial model, as of June 30, 2020 was approximately \$1.07 billion, which represents a Level 3 valuation. The Level 3 inputs used include risk free rate, volatility and discount yield.

Derivative Financial Instruments

The Company enters into foreign currency forward contracts with financial institutions to reduce the risk that its earnings may be adversely affected by the impact of exchange rate fluctuations on monetary assets or liabilities denominated in currencies other than the functional currency of a subsidiary. These contracts do not subject the Company to material balance sheet risk due to exchange rate movements because gains and losses on these derivatives are intended to offset gains and losses on the hedged foreign currency denominated assets and liabilities. These foreign currency forward contracts are not designated as hedging instruments.

The Company recognizes these derivative instruments as either assets or liabilities in the consolidated balance sheets at fair value based on a Level 2 valuation. The Company records changes in the fair value (i.e., gains or losses) of the derivatives in other income (expense), net in the consolidated statements of operations. The notional principal of foreign currency contracts outstanding was equivalent to \$606.5 million and \$456.1 million at June 30, 2020 and December 31, 2019, respectively.

The fair values of outstanding derivative instruments for the periods presented on a gross basis are as follows (in thousands):

	Balance Sheet Location	June 30, 2020	December 31, 2019
Assets			
Foreign currency contracts not designated as hedging instruments	Other current assets	\$ 2,556	\$ 3,756
Liabilities			
Foreign currency contracts not designated as hedging instruments	Other current liabilities	\$ 1,598	\$ 1,573

The Company recognized a \$0.5 million net gain on its foreign currency contracts in the three months ended June 30, 2020 and an \$11.2 million net loss on its foreign currency contracts in the six months ended June 30, 2020. The Company recognized \$4.3 million and \$4.9 million of net losses on its foreign currency contracts in the three and six months ended June 30, 2019, respectively.

Note 5. Property and Equipment, Net

The following tables set forth property and equipment, net by type and by geographic area for the periods presented (in thousands):

	June 30, 2020	December 31, 2019
Property and equipment, net		
Equipment	\$ 1,593,025	\$ 1,445,003
Furniture and leasehold improvements	353,892	347,983
Capitalized software	746,433	688,894
Construction in progress	162,984	100,551
Total	2,856,334	2,582,431
Less: Accumulated depreciation and amortization	(1,713,733)	(1,550,650)
Property and equipment, net	<u>\$ 1,142,601</u>	<u>\$ 1,031,781</u>
	June 30, 2020	December 31, 2019
Property and equipment, net:		
United States	\$ 1,110,824	\$ 999,552
International	31,777	32,229
Total property and equipment, net	<u>\$ 1,142,601</u>	<u>\$ 1,031,781</u>

Note 6. Operating and Finance Leases

The Company has operating leases primarily for office space and data center facilities. The Company's server and networking equipment leases typically are accounted for as finance leases. Operating lease right-of-use assets obtained in exchange for operating lease obligations were \$25.2 million and \$26.8 million in the six months ended June 30, 2020 and 2019, respectively. In the three months ended June 30, 2020, the Company entered into an operating lease agreement related to an expansion of its data center facilities that has not yet commenced. This additional operating lease represents a gross commitment of approximately \$130.8 million as of June 30, 2020 and has a lease term of ten years. There were no other material changes in the Company's operating and finance leases in the three and six months ended June 30, 2020, as compared to the disclosure in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

Note 7. Goodwill and Intangible Assets

The following table presents the goodwill activities for the periods presented (in thousands):

Goodwill		
Balance as of December 31, 2019		\$ 1,256,699
Acquisitions		32,706
Other		(5,080)
Balance as of June 30, 2020		<u>\$ 1,284,325</u>

For each of the periods presented, gross goodwill balance equaled the net balance since no impairment charges have been recorded. The following table presents the detail of intangible assets for the periods presented (in thousands):

	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
June 30, 2020:			
Patents and developed technologies	\$ 115,203	\$ (52,606)	\$ 62,597
Other	3,233	(1,483)	1,750
Total	<u>\$ 118,436</u>	<u>\$ (54,089)</u>	<u>\$ 64,347</u>
December 31, 2019:			
Patents and developed technologies	\$ 96,636	\$ (41,530)	\$ 55,106
Total	<u>\$ 96,636</u>	<u>\$ (41,530)</u>	<u>\$ 55,106</u>

Amortization expense associated with intangible assets was \$7.6 million and \$3.9 million for the three months ended June 30, 2020 and 2019, respectively, and \$12.6 million and \$8.7 million for the six months ended June 30, 2020 and 2019, respectively.

Estimated future amortization expense as of June 30, 2020 is as follows (in thousands):

Remainder of 2020	\$	10,849
2021		18,249
2022		13,022
2023		7,843
2024		6,026
Thereafter		8,358
Total	\$	<u>64,347</u>

Note 8. Accrued and Other Current Liabilities

The following table presents the detail of accrued and other current liabilities for the periods presented (in thousands):

	June 30, 2020	December 31, 2019
Federal Trade Commission accrual (see Note 14)	\$ 150,000	\$ —
Accrued compensation	106,302	190,465
Deferred revenue	70,515	68,987
Accrued professional services	33,385	38,596
Accrued publisher, content and ad network costs	26,509	45,265
Accrued tax liabilities	17,881	45,967
Accrued other	129,389	111,613
Total	<u>\$ 533,981</u>	<u>\$ 500,893</u>

Note 9. Acquisitions and Other Investments

2020 Acquisitions

During the six months ended June 30, 2020, the Company made a number of acquisitions, which were accounted for as business combinations. The total purchase price for these acquisitions was \$45.7 million, which was allocated as follows: \$8.8 million to developed technologies and other acquired intangible assets, \$4.2 million to net assets assumed based on their estimated fair value on the acquisition date, and the excess \$32.7 million of the purchase price over the fair value of net assets acquired to goodwill. The goodwill from the acquisitions is mainly attributable to assembled workforce, expected synergies and other benefits. The goodwill is not tax deductible. Developed technologies and other acquired intangible assets will be amortized on a straight-line basis over their estimated useful lives of up to three years.

The results of operations for these acquisitions have been included in the Company's consolidated statements of operations since the date of each respective acquisition. Actual and pro forma revenue and results of operations for these acquisitions have not been presented because they do not have a material impact on the consolidated revenue and results of operations.

Investments in Privately-Held Companies

From time to time, the Company makes strategic investments in privately-held companies. The Company evaluates each investee to determine if the investee is a variable interest entity and, if so, whether the Company is the primary beneficiary of the variable interest entity. The Company has determined, as of June 30, 2020, there were no variable interest entities required to be consolidated in the Company's consolidated financial statements. The Company's investments in privately-held companies are primarily non-marketable equity securities without readily determinable fair values. The Company accounts for its investments in privately-held companies either under equity method accounting or by adjusting the carrying value of its non-marketable equity securities to fair value upon observable transactions for identical or similar investments of the same issuer or upon impairment (referred to as the measurement alternative). All gains and losses on non-marketable equity securities, realized and unrealized, are recognized in other income (expense), net. The Company's non-marketable equity securities had a combined carrying value of \$76.1 million and \$77.7 million as of June 30, 2020 and December 31, 2019, respectively. The maximum loss the Company can incur for its investments is their carrying value. These investments in privately-held companies are included within other assets on the consolidated balance sheets.

The Company periodically evaluates the carrying value of the investments in privately-held companies when events and circumstances indicate that the carrying amount of the investment may not be recovered. The Company estimates the fair value of the investments to assess whether impairment losses shall be recorded using Level 3 inputs. These investments include the Company's holdings in privately-held companies that are not exchange traded and therefore not supported with observable market prices; hence, the Company may determine the fair value by reviewing equity valuation reports, current financial results, long-term plans of the privately-held companies, the amount of cash that the privately-held companies have on-hand, the ability to obtain additional financing and overall market conditions in which the privately-held companies operate or based on the price observed from the most recent completed financing. The Company recorded impairment charges of \$0.5 million and \$8.5 million in the three and six months ended June 30, 2020, respectively, and \$1.6 million in the three and six months ended June 30, 2019 within other income (expense), net in the consolidated statements of operations. The Company also recorded a gain of \$10.2 million from the sale of an investment in a privately-held company in the three and six months ended June 30, 2019 within other income (expense), net in the consolidated statements of operations. No gain was recorded in the three and six months ended June 30, 2020.

Note 10. Senior Notes and Convertible Notes

Senior Notes

2027 Notes

In 2019, the Company issued \$700.0 million aggregate principal amount of the 3.875% senior notes due 2027, or the 2027 Notes, in a private placement to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended, and outside the United States pursuant to Regulation S under the Securities Act of 1933. The total net proceeds from this offering were approximately \$691.9 million, after deducting \$8.1 million of debt issuance costs in connection with the issuance of the 2027 Notes. The 2027 Notes represent senior unsecured obligations of the Company. The interest rate is fixed at 3.875% per annum and interest is payable semi-annually in arrears on June 15 and December 15 of each year, which commenced on June 15, 2020. The 2027 Notes mature on December 15, 2027.

Convertible Notes

2025 Notes

In March 2020, the Company entered into an investment agreement (the "Investment Agreement") with Silver Lake Partners V DE (AIV), L.P. (Silver Lake) relating to the issuance and sale to Silver Lake of \$1.0 billion in aggregate principal amount of the Company's 0.375% convertible senior notes due 2025, or the 2025 Notes. The total net proceeds from this offering were approximately \$985.3 million, after deducting \$14.7 million of debt issuance costs in connection with the 2025 Notes.

The 2025 Notes represent senior unsecured obligations of the Company. The interest rate is fixed at 0.375% per annum and interest is payable semi-annually in arrears on March 15 and September 15 of each year, commencing on September 15, 2020. The 2025 Notes mature on March 15, 2025, subject to earlier conversion, redemption or repurchase.

The 2025 Notes are convertible at the option of the holder at any time until the scheduled trading day prior to the maturity date, including in connection with a redemption by the Company. The 2025 Notes will be convertible into shares of the Company's common stock based on an initial conversion rate of 24.0964 shares of common stock per \$1,000 principal amount of the 2025 Notes, which is equal to an initial conversion price of \$41.50 per share, subject to customary anti-dilution and other adjustments, including in connection with any make-whole adjustment as a result of certain extraordinary transactions.

Upon conversion of the 2025 Notes, the Company will pay or deliver, as the case may be, cash, shares of its common stock or a combination of cash and shares of its common stock, at the Company's election. If the Company satisfies its conversion obligation solely in cash or through payment and delivery, as the case may be, of a combination of cash and shares of its common stock, the amount of cash and shares of common stock, if any, due upon conversion will be based on a daily conversion value (as set forth in the indenture governing the 2025 Notes) calculated on a proportionate basis for each trading day in a 30 trading day observation period.

On or after March 20, 2022, the 2025 Notes will be redeemable by the Company in the event that the closing sale price of the Company's common stock has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) ending on, and including, the trading day immediately preceding the date on which the Company provides the redemption notice at a redemption price of 100% of the principal amount of such 2025 Notes, plus accrued and unpaid interest to, but excluding, the redemption date.

With certain exceptions, upon a change of control of the Company or a fundamental change (as defined in the indenture governing the 2025 Notes), the holders of the 2025 Notes may require that the Company repurchase all or part of the principal amount of the 2025 Notes at a repurchase price equal to 100% of the principal amount of the 2025 Notes, plus any accrued and unpaid interest to, but excluding, the repurchase date.

Pursuant to the Investment Agreement, and subject to certain exceptions, Silver Lake will be restricted from transferring or entering into an agreement that transfers the economic consequences of ownership of the 2025 Notes or converting the 2025 Notes prior to the earlier of (i) the two year anniversary of the original issue date of the 2025 Notes or (ii) immediately prior to the consummation of a change of control of the Company. Exceptions to such restrictions on transfer include, among others: (a) transfers to affiliates of Silver Lake, (b) transfers to the Company or any of its subsidiaries, (c) transfers to a third party where the net proceeds of such sale are solely used to satisfy a margin call or repay a permitted loan or (d) transfers in connection with certain merger and acquisition events.

In accordance with accounting guidance on embedded conversion features, the Company valued and bifurcated the conversion option associated with the 2025 Notes from the respective host debt instrument, which is referred to as debt discount, and initially recorded the conversion option of \$121.4 million for the 2025 Notes in stockholders' equity. The resulting debt discount on the 2025 Notes is amortized to interest expense at an effective interest rate of 2.99% over the contractual term of the 2025 Notes. The Company allocated \$1.8 million of debt issuance costs to the equity component and the remaining debt issuance costs of \$12.9 million are amortized to interest expense under the effective interest rate method over the contractual terms of the notes.

As of June 30, 2020, the net carrying value, net of debt issuance costs, of the 2025 Notes was \$873.4 million.

2021 Notes and 2024 Notes

In 2014, the Company issued \$954.0 million in aggregate principal amount of the 1.00% convertible senior notes due 2021, or the 2021 Notes, in a private placement to qualified institutional buyers pursuant to Rule 144A of the Securities Act of 1933, as amended. The total net proceeds from this offering were approximately \$939.5 million, after deducting \$14.3 million of debt discount and \$0.2 million of debt issuance costs in connection with the issuance of the 2021 Notes.

In 2018, the Company issued \$1.15 billion aggregate principal amount of the 0.25% convertible senior notes due 2024, or the 2024 Notes, in a private placement to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933. The total net proceeds from this offering were approximately \$1.14 billion, after deducting \$12.3 million of debt issuance costs in connection with the 2024 Notes.

The 2021 Notes and the 2024 Notes are senior unsecured obligations of the Company. The interest rate of the 2021 Notes is fixed at 1.00% per annum and interest is payable semi-annually in arrears on March 15 and September 15 of each year. The interest rate of the 2024 Notes is fixed at 0.25% per annum and interest is payable semi-annually in arrears on June 15 and December 15 of each year. The 2021 Notes mature on September 15, 2021 and the 2024 Notes mature on June 15, 2024.

Senior Notes and Convertible Notes

The Notes consisted of the following (in thousands):

	June 30, 2020				December 31, 2019		
	2021 Notes	2024 Notes	2025 Notes	2027 Notes	2021 Notes	2024 Notes	2027 Notes
Principal amounts:							
Principal	\$ 954,000	\$ 1,150,000	\$ 1,000,000	\$ 700,000	\$ 954,000	\$ 1,150,000	\$ 700,000
Unamortized debt discount and issuance costs ⁽¹⁾	(60,756)	(181,747)	(126,630)	(7,511)	(84,652)	(202,515)	(8,033)
Net carrying amount	\$ 893,244	\$ 968,253	\$ 873,370	\$ 692,489	\$ 869,348	\$ 947,485	\$ 691,967
Carrying amount of the equity component ⁽²⁾	\$ 283,283	\$ 254,981	\$ 121,413	\$ —	\$ 283,283	\$ 254,981	\$ —

(1) Included in the consolidated balance sheets within convertible notes and senior notes, and amortized over the remaining lives of the Notes.

(2) Included in the consolidated balance sheets within additional paid-in capital.

During the three months ended June 30, 2020 and 2019, the Company recognized \$29.1 million and \$34.8 million, respectively, of interest expense related to the amortization of debt discount and issuance costs prior to capitalization of interest, and \$10.8 million and \$3.8 million, respectively, of coupon interest expense. During the six months ended June 30, 2020 and 2019, the Company recognized \$52.8 million and \$68.5 million, respectively, of interest expense related to the amortization of debt discount and issuance costs prior to capitalization of interest, and \$20.8 million and \$7.4 million, respectively, of coupon interest expense.

As of June 30, 2020, the remaining life of the 2021 Notes, the 2024 Notes, the 2025 Notes, and the 2027 Notes is approximately 14 months, 47 months, 56 months, and 89 months, respectively.

Note 11. Net Income (Loss) per Share

Basic net income (loss) per share is computed by dividing net income (loss) attributable to common stockholders by the weighted-average common shares outstanding during the period. The weighted-average common shares outstanding is adjusted for shares subject to repurchase such as unvested restricted stock granted to employees in connection with acquisitions, contingently returnable shares and escrowed shares supporting indemnification obligations that are issued in connection with acquisitions and unvested stock options exercised.

Diluted net income (loss) per share is computed by dividing the net income (loss) attributable to common stockholders by the weighted-average number of common shares outstanding during the period, including potential dilutive common stock instruments. In the three and six months ended June 30, 2020, the Company's potential common stock instruments such as stock options, RSUs, shares to be purchased under the 2013 Employee Stock Purchase Plan, shares subject to repurchases, the conversion feature of the Convertible Notes and the warrants were not included in the computation of diluted loss per share as the effect of including these shares in the calculation would have been anti-dilutive.

The following table presents the calculation of basic and diluted net income (loss) per share for periods presented (in thousands, except per share data):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Basic net income (loss) per share:				
Numerator				
Net income (loss)	\$ (1,378,005)	\$ 1,119,560	\$ (1,386,401)	\$ 1,310,364
Denominator				
Weighted-average common shares outstanding	787,954	770,792	785,186	768,810
Weighted-average restricted stock subject to repurchase	(2,045)	(2,037)	(1,883)	(2,152)
Weighted-average shares used to compute basic net income (loss) per share	785,909	768,755	783,303	766,658
Basic net income (loss) per share attributable to common stockholders	\$ (1.75)	\$ 1.46	\$ (1.77)	\$ 1.71
Diluted net income (loss) per share:				
Numerator				
Net income (loss)	\$ (1,378,005)	\$ 1,119,560	\$ (1,386,401)	\$ 1,310,364
Denominator				
Number of shares used in basic computation	785,909	768,755	783,303	766,658
Weighted-average effect of dilutive securities:				
RSUs	—	11,767	—	10,548
Stock options	—	2,577	—	2,530
Other	—	1,957	—	1,642
Weighted-average shares used to compute diluted net income (loss) per share	785,909	785,056	783,303	781,378
Diluted net income (loss) per share attributable to common stockholders	\$ (1.75)	\$ 1.43	\$ (1.77)	\$ 1.68

The following numbers of potential common shares at the end of each period were excluded from the calculation of diluted net income (loss) per share attributable to common stockholders because their effect would have been anti-dilutive for the periods presented (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
RSUs	41,437	2,676	41,437	12,379
Warrants	32,412	44,454	32,412	44,454
Stock options	2,992	3	2,992	6
Shares subject to repurchase and others	8,135	3,549	8,135	3,582

Since the Company expects to settle the principal amount of the outstanding Convertible Notes in cash, the Company uses the treasury stock method for calculating any potential dilutive effect of the conversion spread on diluted net income per share, if applicable. For the 2021 Notes, the conversion spread of 12.3 million shares will have a dilutive impact on diluted net income per share of common stock when the average market price of the Company's common stock for a given period exceeds the conversion price of \$77.64 per share. For the 2024 Notes, the conversion spread of 20.1 million shares will have a dilutive impact on diluted net income per share of common stock when the average market price of the Company's common stock for a given period exceeds the conversion price of \$57.14 per share. For the 2025 Notes, the conversion spread of 24.1 million shares will have a dilutive impact on diluted net income per share of common stock when the average market price of the Company's common stock for a given period exceeds the conversion price of \$41.50 per share.

If the average market price of the common stock exceeds the exercise price of the warrants, \$105.28 for the 2021 Notes, and \$80.20 for the 2024 Notes, the warrants will have a dilutive effect on the earnings per share assuming that the Company is profitable. Since the average market price of the common stock is below \$80.20 for all periods presented, the warrants are anti-dilutive.

Note 12. Stockholders' Equity

Equity Incentive Plans

The Company's 2013 Equity Incentive Plan serves as the successor to the 2007 Equity Incentive Plan. The number of shares of the Company's common stock available for issuance under the 2013 Equity Incentive Plan were and will be increased on the first day of each fiscal year beginning with the 2014 fiscal year, in an amount equal to the least of (i) 60,000,000 shares, (ii) 5% of the outstanding shares on the last day of the immediately preceding fiscal year or (iii) such number of shares determined by the Company's Board of Directors.

Share Repurchases

In March 2020, the Company's Board of Directors authorized a program to repurchase up to \$2.0 billion of the Company's common stock over time. Repurchases may be made from time to time through open market purchases or through privately negotiated transactions subject to market conditions, applicable legal requirements and other relevant factors. The repurchase program does not obligate the Company to acquire any particular amount of its common stock, and may be suspended at any time at the Company's discretion. No shares were repurchased under the program in the six months ended June 30, 2020.

Employee Stock Purchase Plan

The number of shares available for sale under the Employee Stock Purchase Plan (ESPP) has been and will be increased on the first day of each fiscal year beginning with the 2014 fiscal year, in an amount equal to the least of (i) 11.3 million shares; (ii) 1% of the outstanding shares of the Company's common stock as of the last day of the immediately preceding fiscal year; or (iii) such other amount as determined by the Company's Board of Directors.

During the six months ended June 30, 2020, employees purchased an aggregate of 1.4 million shares under the ESPP at a weighted-average price of \$24.65 per share. During the six months ended June 30, 2019, employees purchased an aggregate of 0.9 million shares under the ESPP at a weighted-average price of \$27.96 per share.

Restricted Common Stock

The Company has granted restricted common stock to certain continuing employees in connection with certain of its acquisitions. Vesting of this stock is dependent on the respective employee's continued employment at the Company during the requisite service period, which is generally up to four years from the issuance date, and the Company has the right to repurchase the unvested shares upon termination of employment. The fair value of the restricted common stock issued to employees is recorded as compensation expense on a straight-line basis over the requisite service period.

During the six months ended June 30, 2020, the Company granted 1.4 million shares of restricted common stock with a weighted-average grant date fair value of \$34.30 per share in connection with certain acquisitions. The Company had 2.2 million and 1.4 million shares of unvested restricted common stock as of June 30, 2020 and December 31, 2019, respectively. The Company's restricted common stock activity was not material during the six months ended June 30, 2020.

Stock Option Activity

The Company had 3.0 million and 3.2 million shares of stock options outstanding as of June 30, 2020 and December 31, 2019, respectively. The Company's stock option activity was not material during the six months ended June 30, 2020.

Performance Restricted Stock Units Activity

The Company grants restricted stock units to certain of its executive officers periodically that vest based on the Company's attainment of the annual financial performance goals and the executives' continued employment through the vesting date (PRSUs). These PRSUs are granted when the annual performance targets are set and the awards are approved by the Compensation Committee of the Board of Directors, generally in the first quarter of each financial year. Prior to 2020, the Company granted PRSUs with a vesting period of approximately one year. In the six months ended June 30, 2020, the Company granted PRSUs with a vesting period of approximately three years.

The following table summarizes the activity related to the Company's PRSUs for the six months ended June 30, 2020 (in thousands, except per share data):

	PRSUs Outstanding	
	Shares	Weighted-Average Grant-Date Fair Value Per Share
Unvested and outstanding at December 31, 2019	646	\$ 31.52
Granted (100% target level)	729	\$ 27.77
Vested (100% target level)	(646)	\$ 31.52
Unvested and outstanding at June 30, 2020	729	\$ 27.77

The total fair value of PRSUs vested during the six months ended June 30, 2020 and 2019 was \$22.7 million and \$23.2 million, respectively.

The Company also grants restricted stock units to certain of its executive officers that vest based on Twitter stock price performance relative to a broad-market index over a performance period of two or three calendar years and the executives' continued employment through the vesting date (TSR RSUs). Prior to 2020, the Company granted TSR RSUs with a performance period of two calendar years and a vesting period of approximately two years. In the six months ended June 30, 2020, the Company granted TSR RSU grants with a performance period of three calendar years and a vesting period of approximately three years.

The following table summarizes the activity related to the Company's TSR RSUs for the six months ended June 30, 2020 (in thousands, except per share data):

	TSR RSUs Outstanding	
	Shares	Weighted-Average Grant-Date Fair Value Per Share
Unvested and outstanding at December 31, 2019	759	\$ 41.15
Granted (100% target level)	487	\$ 31.16
Additional earned performance shares related to 2019 grants	52	\$ 54.97
Vested (116% target level)	(381)	\$ 54.97
Unvested and outstanding at June 30, 2020	917	\$ 30.90

The total fair value of TSR RSUs vested during the six months ended June 30, 2020 and 2019 was \$13.4 million and \$3.7 million, respectively.

RSU Activity

The following table summarizes the activity related to the Company's RSUs, excluding PRSUs and TSR RSUs, for the six months ended June 30, 2020. For purposes of this table, vested RSUs represent the shares for which the service condition had been fulfilled as of each respective date (in thousands, except per share data):

	RSUs Outstanding	
	Shares	Weighted-Average Grant-Date Fair Value Per Share
Unvested and outstanding at December 31, 2019	31,731	\$ 29.74
Granted	18,574	\$ 28.58
Vested	(7,144)	\$ 26.39
Canceled	(1,724)	\$ 30.49
Unvested and outstanding at June 30, 2020	41,437	\$ 29.77

The total fair value of RSUs vested during the three months ended June 30, 2020 and 2019 was \$112.0 million and \$122.9 million, respectively. The total fair value of RSUs vested during the six months ended June 30, 2020 and 2019 was \$215.9 million and \$219.4 million, respectively.

Stock-Based Compensation Expense

Stock-based compensation expense is allocated based on the cost center to which the award holder belongs. Total stock-based compensation expense by function is as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Cost of revenue	\$ 8,996	\$ 5,973	\$ 14,752	\$ 11,021
Research and development	77,988	50,229	138,575	96,490
Sales and marketing	29,183	22,202	48,022	40,267
General and administrative	16,709	16,211	29,430	30,328
Total stock-based compensation expense	\$ 132,876	\$ 94,615	\$ 230,779	\$ 178,106

The Company capitalized \$10.8 million and \$9.9 million of stock-based compensation expense associated with the cost for developing software for internal use in the three months ended June 30, 2020 and 2019, respectively, and \$18.9 million and \$19.6 million in the six months ended June 30, 2020 and 2019, respectively.

As of June 30, 2020, there was \$1.18 billion of gross unamortized stock-based compensation expense related to unvested awards which is expected to be recognized over a weighted-average period of 2.9 years. The Company accounts for forfeitures as they occur.

Note 13. Income Taxes

The Company's tax provision or benefit from income taxes for interim periods is determined using an estimate of its annual effective tax rate, adjusted for discrete items, if any. Each quarter the Company updates its estimate of the annual effective tax rate and makes a year-to-date adjustment to the provision.

The Company recorded a net provision for income taxes of \$1.09 billion and \$1.08 billion for the three and six months ended June 30, 2020, respectively, and a net benefit from income taxes of \$1.03 billion and \$1.13 billion for the three and six months ended June 30, 2019, respectively. For the three and six months ended June 30, 2020, the net provision for income taxes consisted of a provision for income taxes related to the establishment of a valuation allowance against deferred tax assets of \$1.10 billion of a foreign subsidiary, which was offset by income tax benefits of \$12.5 million and \$19.6 million, respectively. For the three and six months ended June 30, 2019, the net benefit from income taxes consisted of income tax benefits from the intra-entity transfers of certain intangible assets of \$1.08 billion and \$1.21 billion, respectively, which were offset by income tax provisions of \$50.7 million and \$80.8 million, respectively. The primary difference between the effective tax rate and the federal statutory tax rate relates to the valuation allowance establishment in the three months ended June 30, 2020, the deferred tax asset establishment in 2019, the accrual in the three months ended June 30, 2020 related to the ongoing Federal Trade Commission matter described in Note 14 that is not expected to be tax-deductible if and when paid, changes in income (loss) before tax by jurisdiction, foreign tax rate differences, tax deductions for stock-based compensation, and research and development credits. The Company's effective tax rate is based on forecasted annual results which may fluctuate significantly through the rest of the year, in particular due to the uncertainty in its annual forecasts resulting from the unpredictable impact of the COVID-19 pandemic on its operating results.

The Company reassessed the ability to realize deferred tax assets by considering the available positive and negative evidence. As of June 30, 2020, the Company has concluded that the deferred tax assets in a foreign subsidiary are not more-likely-than-not to be realized and recorded a full valuation allowance against such deferred tax assets in the approximate amount of \$1.10 billion. In evaluating the need for a valuation allowance, the Company considered its recent operating results which resulted in a cumulative taxable loss in a foreign subsidiary for the twelve quarters ended June 30, 2020. The twelve quarters cumulative taxable losses from operations is considered a significant piece of negative evidence and outweighs other positive evidence, such as projections of future income. The twelve quarters cumulative taxable losses and projected near-term losses in the foreign subsidiary are largely driven by the negative impact from the COVID-19 pandemic as it has caused, and may continue to cause, decreased advertiser demand. If there are favorable changes to actual operating results or to projections of future income, the Company may determine that it is more-likely-than-not such deferred tax assets may be realizable.

As of June 30, 2020, the Company had \$786.3 million of deferred tax assets for which it has not established a valuation allowance, related to the US federal, states other than Massachusetts and California, and international subsidiaries other than Ireland. The \$786.3 million deferred tax balance reflects the reduction in net deferred tax assets of \$1.10 billion in the three months ended June 30, 2020. The Company completed its reassessment of the ability to realize these assets and concluded that a valuation allowance was not required. Depending on the extent and severity of COVID-19's impact, the Company's forecasted earnings and expectations may change and could result in a material non-cash income tax charge to record additional valuation allowances to further reduce its deferred tax assets to the net amount it believes is more-likely-than-not to be realized.

As of June 30, 2020, the Company has \$430.8 million of unrecognized tax benefits, of which \$355.7 million could result in a reduction of the Company's effective tax rate, if recognized. The remainder of the unrecognized tax benefits would not affect the effective tax rate due to the full valuation allowance recorded for California and Massachusetts deferred tax assets.

On June 7, 2019, the Ninth Circuit Court of Appeals issued a new opinion in the case of *Altera Corp. v. Commissioner*, which upheld Department of Treasury regulations which require related parties in an intercompany cost-sharing arrangement to share expenses related to stock-based compensation. The Company has prepared the consolidated financial statements consistent with this opinion. In February 2020, Altera Corp. filed a petition to appeal the decision with the Supreme Court of the United States. On June 22, 2020, the Supreme Court denied the petition. The Company has considered the impact of the Supreme Court's denial and there were no material impacts to the consolidated financial statements.

The Company is subject to taxation in the United States and various state and foreign jurisdictions. Earnings from non-U.S. activities are subject to local country income tax. The material jurisdictions in which the Company is subject to potential examination by taxing authorities include the United States, California and Ireland. The Company believes that adequate amounts have been reserved in these jurisdictions.

Note 14. Commitments and Contingencies

Credit Facility

The Company has a revolving credit agreement with certain lenders, which provides for a \$500.0 million unsecured revolving credit facility maturing on August 7, 2023. The Company is obligated to pay interest on loans under the credit facility and other customary fees for a credit facility of this size and type, including an upfront fee and an unused commitment fee. The interest rate for the credit facility is determined based on calculations using certain market rates as set forth in the credit agreement. In addition, the credit facility contains restrictions on payments including cash payments of dividends. As of June 30, 2020, no amounts had been drawn under the credit facility.

Contractual Obligations

The Company's principal commitments consist of obligations under the Notes (including principal and coupon interest), operating and finance leases for equipment, office space and co-located data center facilities, as well as non-cancellable contractual commitments.

During the six months ended June 30, 2020, the Company entered into the Investment Agreement relating to the issuance and sale of \$1.0 billion in aggregate principal amount of the 2025 Notes. As of June 30, 2020, the Company's contractual obligation to settle commitments related to the 2025 Notes is \$1.9 million for the remainder of the year ended December 31, 2020, \$7.5 million for the years ended December 31, 2021 through 2022, \$7.5 million for the years ended December 31, 2023 through 2024, and \$1.0 billion for the year ended December 31, 2025.

Other than as described above, there were no material changes outside the Company's normal course of business in its commitments under contractual obligations from those disclosed in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

Legal Proceedings

Beginning in September 2016, multiple putative class actions and derivative actions were filed in state and federal courts in the United States against the Company and the Company's directors and/or certain former officers alleging that false and misleading statements, made in 2015, are in violation of securities laws and breached fiduciary duty. The putative class actions were consolidated in the U.S. District Court for the Northern District of California. On October 16, 2017, the court granted in part and denied in part the Company's motion to dismiss. On July 17, 2018, the court granted plaintiffs' motion for class certification in the consolidated securities action. The Company filed a motion for summary judgment on September 13, 2019, which was denied on April 17, 2020. The scheduled jury trial has been postponed due to the COVID-19 pandemic and there is currently no trial date scheduled. The outcome of this litigation is, and any potential losses therewith are, inherently uncertain, and the Company is, therefore, not able to estimate a reasonable range of possible loss, if any. The Company disputes the claims and intends to continue to defend the lawsuits vigorously.

Beginning in October 2019, putative class actions were filed in the U.S. District Court for the Northern District of California against the Company and certain of the Company's officers alleging violations of securities laws in connection with the Company's announcements that it had discovered and taken steps to remediate issues related to certain user settings designed to target advertising that were not working as expected and seeking unspecified damages. The Company disputes the claims and intends to defend the lawsuit vigorously.

From time to time the Company notifies the Irish Data Protection Commission, its designated European privacy regulator under the European Union General Data Protection Regulation, or GDPR, and other regulators, of certain personal data breaches and privacy issues, and is subject to inquiries and investigations regarding various aspects of our regulatory compliance. The Company is currently the subject of inquiries by the Irish Data Protection Commission with respect to its compliance with the GDPR.

On July 28, 2020, the Company received a draft complaint from the Federal Trade Commission (FTC) alleging violations of the Company's 2011 consent order with the FTC and the FTC Act. The allegations relate to the Company's use of phone number and/or email address data provided for safety and security purposes for targeted advertising during periods between 2013 and 2019. The Company estimates that the range of probable loss in this matter is \$150.0 million to \$250.0 million and has recorded an accrual of \$150.0 million. The accrual is included in accrued and other current liabilities in the consolidated balance sheet and in general and administrative expenses in the consolidated statements of operations. The matter remains unresolved, and there can be no assurance as to the timing or the terms of any final outcome.

The Company is also currently involved in, and may in the future be involved in, legal proceedings, claims, investigations, and government inquiries and investigations arising in the ordinary course of business. These proceedings, which include both individual and class action litigation and administrative proceedings, have included, but are not limited to matters involving content on the platform, intellectual property, privacy, data protection, securities, employment and contractual rights. Legal fees and other costs associated with such actions are expensed as incurred. The Company assesses, in conjunction with its legal counsel, the need to record a liability for litigation and contingencies. Litigation accruals are recorded when and if it is determined that a loss related matter is both probable and reasonably estimable. Material loss contingencies that are reasonably possible of occurrence, if any, are subject to disclosure. As of June 30, 2020, except for the above referenced class actions, derivative actions and FTC matter, there was no litigation or contingency with at least a reasonable possibility of a material loss. Except for the aforementioned accrual of \$150.0 million recorded in relation to the FTC matter, no other material losses were recorded during the three and six months ended June 30, 2020 and 2019 with respect to litigation or loss contingencies.

Non-Income Taxes

The Company is under various non-income tax audits by domestic and foreign tax authorities. These audits primarily revolve around routine inquiries, refund requests, and employee benefits. The Company accrues non-income taxes that may result from these audits when they are probable and can be reasonably estimated. Due to the complexity and uncertainty of some of these matters, however, as well as the judicial process in certain jurisdictions, the final outcome of these audits may be materially different from the Company's expectations.

Indemnification

In the ordinary course of business, the Company often includes standard indemnification provisions in its arrangements with its customers, partners, suppliers and vendors. Pursuant to these provisions, the Company may be obligated to indemnify such parties for losses or claims suffered or incurred in connection with its service, breach of representations or covenants, intellectual property infringement or other claims made against such parties. These provisions may limit the time within which an indemnification claim can be made. It is not possible to determine the maximum potential amount under these indemnification obligations due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each particular agreement. The Company has never incurred significant expense defending its licensees against third-party claims, nor has it ever incurred significant expense under its standard service warranties or arrangements with its customers, partners, suppliers and vendors. Accordingly, the Company had no liabilities recorded for these provisions as of June 30, 2020 and December 31, 2019.

Note 15. Subsequent Events

On July 28, 2020, the Company received a draft complaint from the Federal Trade Commission. See Note 14 for further information.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the consolidated financial statements and related notes thereto included in Item 1 "Financial Statements" in this Quarterly Report on Form 10-Q. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section titled "Risk Factors" included elsewhere in this Quarterly Report on Form 10-Q.

Overview and Highlights of Quarterly Results

Subsequent to our announcement of our financial results for the second quarter of 2020, which was furnished on Form 8-K on July 23, 2020, we received a draft complaint from the FTC alleging violations of our 2011 consent order with the FTC and the FTC Act. The allegations relate to our use of phone number and/or email address data provided for safety and security purposes for targeted advertising during periods between 2013 and 2019. As a result, prior to the filing of this Form 10-Q, we estimated a probable loss and recorded an accrual of \$150.0 million which is included in accrued and other current liabilities in the consolidated balance sheet and in general and administrative expenses in the consolidated statements of operations. The additional expense of \$150.0 million resulted in a \$0.19 increase in basic and diluted net loss per share for the three and six months ended June 30, 2020.

Revenue in the second quarter of 2020 totaled \$683.4 million, a decrease of 19%, compared to the second quarter of 2019.

- Advertising revenue totaled \$562.0 million, a decrease of 23% year over year.
- Data licensing and other revenue totaled \$121.4 million, an increase of 6% year over year.
- U.S. revenue totaled \$364.9 million, a decrease of 20% year over year.
- International revenue totaled \$318.5 million, a decrease of 18% year over year.

Net loss was \$1.38 billion for the three months ended June 30, 2020, which was inclusive of a \$1.10 billion provision for income taxes related to the establishment of a valuation allowance against deferred tax assets. Net income for the three months ended June 30, 2019 was \$1.12 billion, which was inclusive of a \$1.08 billion benefit from income taxes related to the establishment of deferred tax assets from the intra-entity transfer of intangible assets.

Loss from operations was \$273.9 million, or 40% of total revenue, for the three months ended June 30, 2020, compared to income from operations of \$75.7 million, or 9% of total revenue, for the three months ended June 30, 2019.

Cash, cash equivalents and short-term investments in marketable securities totaled \$7.77 billion as of June 30, 2020.

Average monetizable daily active users (mDAU) for the three months ended June 30, 2020 was 186 million, an increase of 34% year over year.

COVID-19 Update

The COVID-19 pandemic has resulted in public health responses including travel bans, restrictions, social distancing requirements, and shelter-in-place orders, which have negatively impacted our business, operations, and financial performance. In the second quarter of 2020, we saw our highest reported quarterly year-over-year mDAU growth rate primarily driven by external factors, such as continued shelter-in-place requirements for many people, increased global conversation around the COVID-19 pandemic and other current events. Our work to serve the conversation around COVID-19, to help people find trusted sources of information, to better organize and surface the many topics and interests that bring people to Twitter, and innovations such as virtual watch parties for movie launches and virtual concerts helped us serve our larger audience. We also continue to benefit from ongoing product improvements, including continued increases in relevance of notifications, Search, Explore, and the Home timeline. We believe that mDAU growth in the second quarter of 2020 would still have been strong in the absence of external factors due to the ongoing benefit of these product improvements.

While we experienced significant growth in mDAU, we also continued to see a significant decrease in advertising spend since the pandemic became global in March. This decrease in advertising spend led to twelve quarters cumulative taxable losses from operations in a foreign subsidiary, which is a significant piece of negative evidence in assessing the ability to realize deferred tax assets. As of June 30, 2020, we have concluded that the deferred tax assets in a foreign subsidiary are not more-likely-than-not to be realized and recorded a valuation allowance of \$1.10 billion. This valuation allowance would be reversed in the event, and to the extent, that it is more-likely-than-not that there will be sufficient taxable income in the foreign subsidiary to realize the tax benefit. Depending on the extent and severity of COVID-19's impact, we could have additional deferred tax asset valuation allowances in future periods.

In light of the current operating and economic environment, we have shifted resources and priorities to increase focus on our revenue products. We have decreased our expense growth due to decisions we have made to reduce spending, continued cost savings from restricted business operations, and some of the challenges of growing headcount and investing in our objectives in the current environment. As we continue to adapt our operations and improve and increase hiring, we intend to continue investing in our most important work. We expect total costs and expenses to increase 10% or more year-over-year in the third quarter of 2020. We have responded quickly and decisively to the challenges presented by the current environment, updating our policies, increasing our use of machine learning and automation to take actions on potentially abusive and manipulative content, ensuring the continuity of our service, and partnering with advertisers to adapt their campaigns to the current situation.

Given the continued and unprecedented uncertainty and rapidly shifting market conditions of the business environment, we cannot reasonably estimate the full impacts of the COVID-19 pandemic on our future financial and operational results. Our past results may not be indicative of our future performance, and historical trends in revenue, income (loss) from operations, net income (loss), and net income (loss) per share may differ materially. For example, to the extent the pandemic continues to disrupt economic activity globally, it could continue to adversely affect our business, operations and financial results through prolonged decreases in advertising spend, credit deterioration of our customers, depressed economic activity, or declines in capital markets. The timing of our capital expenditures related to the buildout of our new data center and to address our near-term capacity needs are contingent on improvements in the IT supply chain. We continue to monitor the rapidly evolving situation and guidance from international and domestic authorities, including federal, state and local public health authorities, and there may be developments outside our control requiring us to adjust our operating plan. As such, given the unprecedented uncertainty around the duration and severity of the impact on market conditions and the business environment, we cannot reasonably estimate the full impacts of the COVID-19 pandemic on our operating results in the future.

The risks related to the COVID-19 pandemic on our business are further described in "Part II—Other Information, Item 1A. Risk Factors."

Key Metrics

We review a number of metrics, including the following key metrics, to evaluate our business, measure our performance, identify trends affecting our business, formulate business plans and make strategic decisions.

Monetizable Daily Active Usage or Users (mDAU). We define mDAU as people, organizations, or other accounts who logged in or were otherwise authenticated and accessed Twitter on any given day through twitter.com or Twitter applications that are able to show ads. We believe that mDAU, and its related growth, is the best way to measure our success against our objectives and to show the size of our audience and engagement. Average mDAU for a period represents the number of mDAU on each day of such period divided by the number of days for such period. Changes in mDAU are a measure of changes in the size of our daily logged in or otherwise authenticated active total accounts. To calculate the year-over-year change in mDAU, we subtract the average mDAU for the three months ended in the previous year from the average mDAU for the same three months ended in the current year and divide the result by the average mDAU for the three months ended in the previous year. Additionally, our calculation of mDAU is not based on any standardized industry methodology and is not necessarily calculated in the same manner or comparable to similarly titled measures presented by other companies.

In the three months ended June 30, 2020, we had 186 million average mDAU, which represents an increase of 34% from the three months ended June 30, 2019. The increase was driven by global conversation around current events and ongoing product improvements. In the three months ended June 30, 2020, we had 36 million average mDAU in the United States and 150 million average mDAU in the rest of the world, which represent increases of 24% and 37%, respectively, from the three months ended June 30, 2019.

For additional information on how we calculate changes in mDAU and factors that can affect this metric, see the section titled “Note Regarding Key Metrics.”

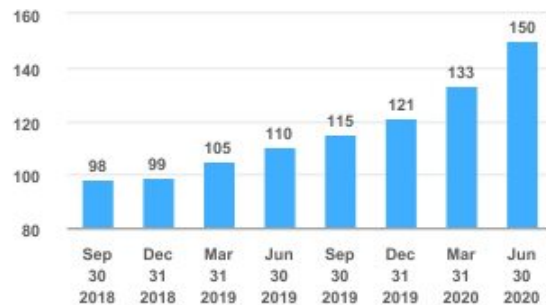
Monetizable Daily Active Usage: Worldwide
(quarterly average in millions)



Monetizable Daily Active Usage: United States
(quarterly average in millions)

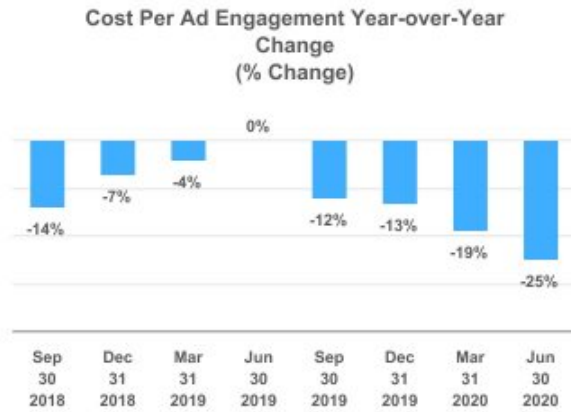
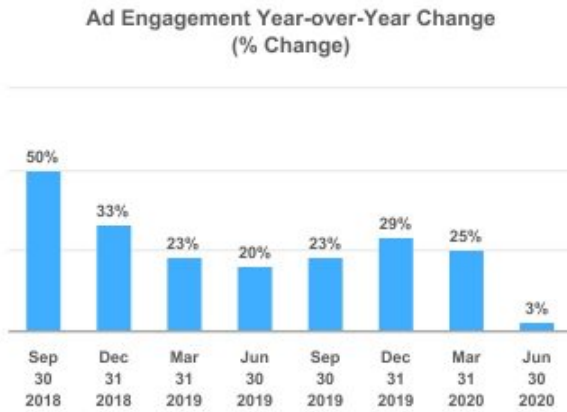


Monetizable Daily Active Usage: International
(quarterly average in millions)



Changes in Ad Engagements and Changes in Cost per Ad Engagement. We define an ad engagement as an interaction with one of our pay-for-performance advertising products. Ad engagements with our advertising products are based on the completion of an objective set out by an advertiser such as expanding, Retweeting, liking or replying to a Promoted Tweet, viewing an embedded video, downloading or engaging with a promoted mobile application, clicking on a website link, signing up for marketing emails from advertisers, following the account that Tweets a Promoted Tweet, or completing a transaction on an external website. We believe changes in ad engagements is one way to measure engagement with our advertising products. We believe changes in cost per ad engagement is one way to measure demand.

In the three months ended June 30, 2020, ad engagements increased 3% from the three months ended June 30, 2019, resulting primarily from audience growth offset by a mix shift to ad formats with lower clickthrough rates. In the three months ended June 30, 2020, cost per ad engagement decreased by 25% compared to the three months ended June 30, 2019, driven by like-for-like price decreases across most ad formats and lower demand.



Results of Operations

The following tables set forth our consolidated statements of operations data for each of the periods presented (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Revenue				
Advertising services	\$ 561,994	\$ 727,123	\$ 1,244,186	\$ 1,406,589
Data licensing and other	121,444	114,258	246,889	221,682
Total revenue	683,438	841,381	1,491,075	1,628,271
Costs and expenses ⁽¹⁾				
Cost of revenue	288,039	277,965	572,076	541,976
Research and development	215,806	159,242	416,194	305,488
Sales and marketing	207,286	240,249	428,573	446,048
General and administrative	246,237	88,239	355,605	165,415
Total costs and expenses	957,368	765,695	1,772,448	1,458,927
Income (loss) from operations	(273,930)	75,686	(281,373)	169,344
Interest expense	(39,828)	(38,317)	(73,098)	(75,577)
Interest income	25,013	42,887	57,910	83,428
Other income (expense), net	(361)	7,523	(8,080)	7,087
Income (loss) before income taxes	(289,106)	87,779	(304,641)	184,282
Provision (benefit) for income taxes	1,088,899	(1,031,781)	1,081,760	(1,126,082)
Net income (loss)	\$ (1,378,005)	\$ 1,119,560	\$ (1,386,401)	\$ 1,310,364

(1) Costs and expenses include stock-based compensation expense as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Cost of revenue	\$ 8,996	\$ 5,973	\$ 14,752	\$ 11,021
Research and development	77,988	50,229	138,575	96,490
Sales and marketing	29,183	22,202	48,022	40,267
General and administrative	16,709	16,211	29,430	30,328
Total stock-based compensation expense	\$ 132,876	\$ 94,615	\$ 230,779	\$ 178,106

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Revenue				
Advertising services	82 %	86 %	83 %	86 %
Data licensing and other	18	14	17	14
Total revenue	100	100	100	100
Costs and expenses				
Cost of revenue	42	33	38	33
Research and development	32	19	28	19
Sales and marketing	30	29	29	27
General and administrative	36	10	24	10
Total costs and expenses	140	91	119	90
Income (loss) from operations	(40)	9	(19)	10
Interest expense	(6)	(5)	(5)	(5)
Interest income	4	5	4	5
Other income (expense), net	—	1	(1)	0
Income (loss) before income taxes	(42)	10	(20)	11
Provision (benefit) for income taxes	159	(123)	73	(69)
Net income (loss)	(202)%	133 %	(93)%	80 %

Revenue

We generate the substantial majority of our revenue from the sale of advertising services. We also generate revenue by licensing our data to third parties and providing mobile advertising exchange services.

Advertising Services

We generate most of our advertising revenue by selling our Promoted Products. Currently, our Promoted Products consist of the following:

- **Promoted Tweets.** Promoted Tweets, which are labeled as “promoted,” appear within a timeline, search results or profile pages just like an ordinary Tweet regardless of device, whether it be desktop or mobile. Using our proprietary algorithms and understanding of the interests of each account, we can deliver Promoted Tweets that are intended to be relevant to a particular account. We enable our advertisers to target an audience based on an individual account’s interest graph. Our Promoted Tweets are pay-for-performance or pay-for-impression delivered advertising that are priced through an auction. Our Promoted Tweets include objective-based features that allow advertisers to pay only for the types of engagement selected by the advertisers, such as Tweet engagements (e.g., Retweets, replies and likes), website clicks, mobile application installs or engagements, obtaining new followers, or video views.
- **Promoted Accounts.** Promoted Accounts, which are labeled as “promoted,” provide a way for our advertisers to grow a community of people who are interested in their business, products or services. Our Promoted Accounts are pay-for-performance advertising priced through an auction.
- **Promoted Trends.** Promoted Trends, which are labeled as “promoted,” appear at the top of the list of trending topics or timeline for an entire day in a particular country or on a global basis. We sell our Promoted Trends on a fixed-fee-per-day basis.

While the majority of the Promoted Products we sell to our advertisers are placed on Twitter, we also generate advertising revenue by placing advertising products that we sell to advertisers on third-party publishers’ websites, applications or other offerings.

Data Licensing and Other

We generate data licensing and other revenue by (i) offering data products and data licenses that allow our data partners to access, search and analyze historical and real-time data on our platform (which consists of public Tweets and their content), and (ii) providing mobile advertising exchange services through our MoPub exchange. Our data partners generally purchase licenses to access all or a portion of our data for a fixed period. We recognize data licensing revenue as our data partners consume and benefit from their use of the licensed data. In addition, we operate a mobile ad exchange and receive service fees from transactions completed on the exchange. Our mobile ad exchange enables buyers and sellers to purchase and sell advertising inventory and matches buyers and sellers. We have determined we are not the principal as it relates to the purchase and sale of advertising inventory in transactions between third-party buyers and sellers on the exchange. Therefore, we report revenue related to our ad exchange services on a net basis.

	Three Months Ended June 30,			Six Months Ended June 30,		
	2020	2019	% Change	2020	2019	% Change
	(in thousands)			(in thousands)		
Advertising services	\$ 561,994	\$ 727,123	(23) %	\$ 1,244,186	\$ 1,406,589	(12) %
Data licensing and other	121,444	114,258	6 %	246,889	221,682	11 %
Total revenue	\$ 683,438	\$ 841,381	(19) %	\$ 1,491,075	\$ 1,628,271	(8) %

Revenue in the three and six months ended June 30, 2020 decreased by \$157.9 million or 19% and \$137.2 million and 8%, respectively, compared to the three and six months ended June 30, 2019.

In the three and six months ended June 30, 2020, advertising revenue decreased by \$165.1 million or 23% and \$162.4 million or 12%, respectively, compared to the three and six months ended June 30, 2019.

The decrease in advertising revenue in the three and six months ended June 30, 2020 reflects continued widespread economic disruption related to the COVID-19 pandemic and a significant decrease in global advertising spend. In the first quarter of 2020, these factors led to a 27% decline in advertising revenue in the last three weeks of March compared to the same period in the prior year. There was a gradual, moderate recovery relative to March levels throughout most of the second quarter of 2020, with the exception of late May to mid-June, when many brands slowed or paused spend in reaction to US civil unrest. During the last three weeks of June, advertising revenue declined 15% year over year for this period. Demand gradually improved once brands returned after the protests subsided.

The decrease in advertising revenue in the three and six months ended June 30, 2020 was attributable to decreases in cost per ad engagement of 25% and 22%, respectively, offset by increases in the number of ad engagements of 3% and 13%, respectively, compared to the same periods in 2019. The decreases in cost per ad engagement were driven by like-for-like price decreases across most ad formats and lower demand beginning in March and continuing through the second quarter of 2020. The increases in the number of ad engagements resulted primarily from audience growth offset by a mix shift to ad formats with lower clickthrough rates.

In the three and six months ended June 30, 2020, data licensing and other revenue increased by 6% and 11% compared to the three and six months ended June 30, 2019, respectively. The increase was attributable to expanded and new partnerships in Developer and Enterprise Solutions, and the timing of revenue recognition. Looking ahead, we continue to expect year-over-year data licensing and other revenue growth to moderate over the course of 2020.

Cost of Revenue

Cost of revenue includes infrastructure costs, other direct costs including revenue share expenses, amortization of acquired intangible assets and amortization of capitalized labor costs for internally developed software, allocated facilities costs, as well as traffic acquisition costs, or TAC. Infrastructure costs consist primarily of data center costs related to our co-located facilities, which include lease and hosting costs, related support and maintenance costs and energy and bandwidth costs, public cloud hosting costs, as well as depreciation of servers and networking equipment; and personnel-related costs, including salaries, benefits and stock-based compensation, for our operations teams. TAC consists of costs we incur with third parties in connection with the sale to advertisers of our advertising products that we place on third-party publishers' websites, and applications or other offerings collectively resulting from acquisitions. Certain elements of our cost of revenue are fixed and cannot be reduced in the near term.

	Three Months Ended June 30,			% Change	Six Months Ended June 30,		
	2020	2019			2020	2019	% Change
	(in thousands)				(in thousands)		
Cost of revenue	\$ 288,039	\$ 277,965		4 %	\$ 572,076	\$ 541,976	6 %
Cost of revenue as a percentage of revenue	42 %	33 %			38 %	33 %	

In the three months ended June 30, 2020, cost of revenue increased by \$10.1 million compared to the three months ended June 30, 2019. The increase was attributable to a \$7.9 million increase in depreciation expense primarily related to additional internally developed software, server and networking equipment and a \$2.2 million increase in direct costs, primarily driven by an increase in infrastructure costs and traffic acquisition costs, offset by a decrease in revenue share expenses.

In the six months ended June 30, 2020, cost of revenue increased by \$30.1 million compared to the six months ended June 30, 2019. The increase was attributable to a \$16.3 million increase in direct costs, primarily driven by an increase in infrastructure cost and traffic acquisition costs, offset by a decrease in revenue share expenses, and a \$13.8 million increase in depreciation expense primarily related to additional internally developed software, server and networking equipment.

We plan to continue to scale the capacity and enhance the capability and reliability of our infrastructure to support mDAU growth and increased activity on our platform.

Research and Development

Research and development expenses consist primarily of personnel-related costs, including salaries, benefits and stock-based compensation, for our engineers and other employees engaged in the research and development of our products and services. In addition, research and development expenses include amortization of acquired intangible assets, allocated facilities costs, and other supporting overhead costs.

	Three Months Ended June 30,			% Change	Six Months Ended June 30,		
	2020	2019			2020	2019	% Change
	(in thousands)				(in thousands)		
Research and development	\$ 215,806	\$ 159,242		36 %	\$ 416,194	\$ 305,488	36 %
Research and development as a percentage of revenue	32 %	19 %			28 %	19 %	

In the three months ended June 30, 2020, research and development expenses increased by \$56.6 million compared to the three months ended June 30, 2019. The increase was attributable to a \$39.2 million increase in personnel-related costs mainly driven by an increase in employee headcount, a \$13.9 million net increase in allocated facilities costs and other supporting overhead expenses, and a \$3.5 million decrease in the capitalization of costs associated with developing software for internal use.

In the six months ended June 30, 2020, research and development expenses increased by \$110.7 million compared to the three months ended June 30, 2019. The increase was attributable to a \$69.7 million increase in personnel-related costs mainly driven by an increase in employee headcount, a \$30.8 million net increase in allocated facilities costs and other supporting overhead expenses, and a \$10.2 million decrease in the capitalization of costs associated with developing software for internal use.

We plan to continue to invest in key areas of our business to ensure that we have an appropriate level of engineering, product management and design personnel and related resources to support our research and development efforts on key priorities.

Sales and Marketing

Sales and marketing expenses consist primarily of personnel-related costs, including salaries, commissions, benefits and stock-based compensation for our employees engaged in sales, sales support, business development and media, marketing, corporate communications and customer service functions. In addition, marketing and sales-related expenses also include advertising costs, market research, trade shows, branding, marketing, public relations costs, amortization of acquired intangible assets, allocated facilities costs, and other supporting overhead costs.

	Three Months Ended June 30,			Six Months Ended June 30,		
	2020	2019	% Change	2020	2019	% Change
	(in thousands)			(in thousands)		
Sales and marketing	\$ 207,286	\$ 240,249	(14) %	\$ 428,573	\$ 446,048	(4) %
Sales and marketing as a percentage of revenue	30 %	29 %		29 %	27 %	

In the three months ended June 30, 2020, sales and marketing expenses decreased by \$33.0 million compared to the three months ended June 30, 2019. The decrease was attributable to a \$26.8 million decrease in marketing and sales-related expenses, primarily due to reduced marketing campaigns, customer events, and travel, and a \$6.2 million net decrease in allocated facilities costs and other supporting overhead expenses.

In the six months ended June 30, 2020, sales and marketing expenses decreased by \$17.5 million compared to the three months ended June 30, 2019. The decrease was attributable to a \$32.2 million decrease in marketing and sales-related expenses, primarily due to reduced marketing campaigns, customer events, and travel, offset by a \$14.7 million net increase in allocated facilities costs and other supporting overhead expenses.

We continue to evaluate key areas in our business to ensure we have an appropriate level of sales and marketing expenses to execute on our key priorities and objectives.

General and Administrative

General and administrative expenses consist primarily of personnel-related costs, including salaries, benefits and stock-based compensation, for our executive, finance, legal, information technology, human resources and other administrative employees. In addition, general and administrative expenses include fees and costs for professional services, including consulting, third-party legal and accounting services and facilities costs and other supporting overhead costs that are not allocated to other departments.

	Three Months Ended June 30,			Six Months Ended June 30,		
	2020	2019	% Change	2020	2019	% Change
	(in thousands)			(in thousands)		
General and administrative	\$ 246,237	\$ 88,239	179 %	\$ 355,605	\$ 165,415	115 %
General and administrative as a percentage of revenue	36 %	10 %		24 %	10 %	

In the three months ended June 30, 2020, general and administrative expenses increased by \$158.0 million compared to the three months ended June 30, 2019. The increase was attributable to a \$150.0 million legal accrual related to an ongoing FTC matter recorded in the second quarter of 2020, a \$15.3 million increase in personnel-related costs mainly driven by an increase in employee headcount, and a \$5.5 million increase in professional service fees, offset by a \$12.8 million increase in facilities and other supporting overhead expenses allocated to other functions.

In the six months ended June 30, 2020, general and administrative expenses increased by \$190.2 million compared to the three months ended June 30, 2019. The increase was attributable to a \$150.0 million legal accrual related to an ongoing FTC matter recorded in the second quarter of 2020, a \$51.8 million increase in personnel-related costs mainly driven by an increase in employee headcount and an \$11.4 million increase in professional service fees, offset by a \$23.0 million increase in facilities and other supporting overhead expenses allocated to other functions.

We plan to continue to invest in general and administrative functions to ensure we have an appropriate level of support for our key objectives.

Interest Expense

Interest expense consists primarily of interest expense incurred in connection with the \$935.0 million principal amount of 0.25% convertible senior notes due in 2019, or the 2019 Notes, which we repaid at maturity in September 2019, the \$954.0 million principal amount of 1.00% convertible senior notes due in 2021, or the 2021 Notes, the \$1.15 billion principal amount of 0.25% convertible senior notes due in 2024, or the 2024 Notes, the \$700.0 million principal amount of 3.875% senior notes due in 2027, or the 2027 Notes, and the \$1.0 billion principal amount of 0.375% convertible senior notes due in 2025, or the 2025 Notes, and interest expense related to finance leases and other financing facilities.

	Three Months Ended June 30,			Six Months Ended June 30,		
	2020	2019	% Change	2020	2019	% Change
	(in thousands)			(in thousands)		
Interest expense	39,828	38,317	4 %	73,098	75,577	(3) %

In the three months ended June 30, 2020, interest expense increased by \$1.5 million compared to the three months ended June 30, 2019. The increase was primarily attributable to the issuance of the 2027 Notes in December 2019 and the 2025 Notes in March 2020, offset by our repayment of the 2019 Notes at their maturity in September 2019. In the six months ended June 30, 2020, interest expense decreased by \$2.5 million compared to the six months ended June 30, 2019. The decrease was primarily attributable to our repayment of the 2019 Notes at their maturity in September 2019, offset by the issuance of the 2027 Notes in December 2019 and the 2025 Notes in March 2020.

Interest expense in the three and six months ended June 30, 2020 comprised \$39.7 million and \$72.8 million, respectively, of total interest expense related to the Notes as well as the credit facility, and \$0.1 million and \$0.3 million, respectively, related to finance leases of equipment.

Interest Income

Interest income is generated from our cash equivalents and short-term investments net of the related amortization of premium paid on such investments.

	Three Months Ended June 30,			Six Months Ended June 30,		
	2020	2019	% Change	2020	2019	% Change
	(in thousands)			(in thousands)		
Interest income	\$ 25,013	\$ 42,887	(42) %	\$ 57,910	\$ 83,428	(31) %

Interest income decreased by \$17.9 million and \$25.5 million in the three and six months ended June 30, 2020, respectively, compared to the three and six months ended June 30, 2019. The decrease was primarily attributable to lower interest rates.

Other Income (Expense), Net

Other income (expense), net, consists primarily of unrealized foreign exchange gains and losses due to re-measurement of monetary assets and liabilities denominated in non-functional currencies and realized foreign exchange gains and losses on foreign exchange transactions, and gains and losses on investments in privately-held companies. We expect our foreign exchange gains and losses will vary depending upon movements in the underlying exchange rates.

	Three Months Ended June 30,			Six Months Ended June 30,		
	2020	2019	% Change	2020	2019	% Change
	(in thousands)			(in thousands)		
Other income (expense), net	\$ (361)	\$ 7,523	(105) %	\$ (8,080)	\$ 7,087	(214) %

Other expense, net, was \$0.4 million and \$8.1 million in the three and six months ended June 30, 2020, respectively, compared to other income, net, of \$7.5 million and \$7.1 million in the three and six months ended June 30, 2019, respectively. The change was primarily attributable to impairment charges of \$0.5 million and \$8.5 million on investments in privately-held companies in the three and six months ended June 30, 2020, respectively, compared to an \$8.6 million gain net of impairment charge on investments in privately-held companies during the three and six months ended June 30, 2019.

Provision (Benefit) for Income Taxes

Our provision (benefit) for income taxes consists of federal and state income taxes in the United States and income taxes in certain foreign jurisdictions.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(in thousands)		(in thousands)	
Provision (benefit) for income taxes	\$ 1,088,899	\$ (1,031,781)	\$ 1,081,760	\$ (1,126,082)

In the three and six months ended June 30, 2020, the net provision for income taxes of \$1.09 billion and \$1.08 billion, respectively, consisted of the income tax expense of \$1.10 billion from the establishment of a valuation allowance on deferred tax assets of a foreign subsidiary, which was offset by an income tax benefit of \$12.5 million and \$19.6 million, respectively. In the three and six months ended June 30, 2019, the net benefit from income taxes of \$1.03 billion and \$1.13 billion, respectively, consisted of the benefit for income taxes of \$1.08 billion and \$1.21 billion, respectively, related to the establishment of deferred tax assets from intra-entity transfers of intangible assets and the provision for income taxes of \$50.7 million and \$80.8 million, respectively. The change in provision (benefit) for income taxes was primarily due to the valuation allowance establishment in the three and six months ended June 30, 2020, the establishment of deferred tax assets in the three and six months ended June 30, 2019, changes in income (loss) before tax by jurisdiction, foreign tax rate differences, tax deductions for stock-based compensation, and research and development credits.

We reassessed the ability to realize deferred tax assets by considering the available positive and negative evidence. As of June 30, 2020, we concluded that the deferred tax assets in a foreign subsidiary are not more-likely-than-not to be realized and recorded a valuation allowance of \$1.10 billion. In evaluating the need for a valuation allowance, we considered recent operating results which resulted in a cumulative taxable loss in a foreign subsidiary for the twelve quarters ended June 30, 2020. The twelve quarters cumulative taxable losses from operations is considered a significant piece of negative evidence and outweighs other positive evidence, such as projections of future income. The twelve quarters cumulative taxable losses and projected near-term losses in the foreign subsidiary are largely driven by the negative impact from the COVID-19 pandemic as it has caused, and may continue to cause, decreased advertiser demand. If there are favorable changes to actual operating results or to projections of future income, we may determine that it is more-likely-than-not such deferred tax assets may be realizable.

As of June 30, 2020, we had \$786.3 million of deferred tax assets for which we have not established a valuation allowance, related to the US federal, states other than Massachusetts and California, and international subsidiaries other than Ireland. The \$786.3 million deferred tax asset balance reflects the reduction in net deferred tax assets of \$1.10 billion in the three months ended June 30, 2020. As of June 30, 2020, we completed our reassessment of the ability to realize these assets and concluded that a valuation allowance was not required. Depending on the extent and severity of COVID-19's impact, our forecasted earnings and expectations may change and could result in a material non-cash income tax charge to record additional valuation allowances to further reduce our deferred tax assets to the net amount we believe is more-likely-than-not to be realized.

On June 7, 2019, the Ninth Circuit Court of Appeals issued a new opinion in the case of Altera Corp. v. Commissioner, which upheld Department of Treasury regulations which require related parties in an intercompany cost-sharing arrangement to share expenses related to stock-based compensation. We have prepared the consolidated financial statements consistent with this opinion. In February 2020, Altera Corp. filed a petition to appeal the decision with the Supreme Court of the United States. On June 22, 2020, the Supreme Court denied the petition. We have considered the impact of the Supreme Court's denial and there were no material impacts to our consolidated financial statements.

Our effective tax rate could be affected by our jurisdictional mix of income (loss) before taxes, including our allocation of centrally incurred costs to foreign jurisdictions, changes in tax rates and tax regulations, the impact of tax examinations, the impact of business combinations, changes in our corporate structure, changes in the geographic location of business functions or assets, tax effects of stock-based compensation, and changes in management's assessment of the ability to realize deferred tax assets. In addition, the provision is impacted by deferred income taxes reflecting the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Our effective tax rate is based on forecasted annual results which may fluctuate significantly through the rest of the year, in particular due to the uncertainty in our annual forecasts resulting from the unpredictable impact of the COVID-19 pandemic on our operating results.

Liquidity and Capital Resources

	Six Months Ended June 30,	
	2020	2019
	(in thousands)	
Net income (loss)	\$ (1,386,401)	\$ 1,310,364
Net cash provided by operating activities	\$ 447,783	\$ 690,666
Net cash used in investing activities	\$ (112,813)	\$ (384,382)
Net cash provided by (used in) financing activities	\$ 989,082	\$ (25,153)

Our principal sources of liquidity are our cash, cash equivalents, and short-term investments in marketable securities. Our cash equivalents and marketable securities are invested primarily in short-term fixed income securities, including government and investment-grade debt securities and money market funds. In March 2020, we also received net proceeds of approximately \$985.3 million from the issuance of the 2025 Notes, after deducting the debt issuance costs.

In March 2020, our Board of Directors authorized a program to repurchase up to \$2.0 billion of our common stock over time. Repurchases may be made from time to time through open market purchases or through privately negotiated transactions subject to market conditions, applicable legal requirements and other relevant factors. The repurchase program does not obligate us to acquire any particular amount of our common stock, and may be suspended at any time at our discretion. As of June 30, 2020, no shares have been repurchased under this program.

As of June 30, 2020, we had \$7.77 billion of cash, cash equivalents and short-term investments in marketable securities, of which \$164.9 million was held by our foreign subsidiaries. We do not plan to indefinitely reinvest these funds held by our foreign subsidiaries and have accrued the incremental taxes due as part of repatriation. While the global disruptions caused by the COVID-19 pandemic are currently expected to be temporary, there is uncertainty around its extent and duration. Our liquidity and working capital needs could be negatively impacted. We believe that our existing cash, cash equivalents and short-term investment balances, and our credit facility, together with cash generated from operations will be sufficient to meet our working capital and capital expenditure requirements for at least the next 12 months despite the uncertainty related to the COVID-19 pandemic.

Credit Facility

We have a revolving credit agreement with certain lenders which provides for a \$500.0 million revolving unsecured credit facility maturing on August 7, 2023. We are obligated to pay interest on loans under the credit facility and other customary fees for a credit facility of this size and type, including an upfront fee and an unused commitment fee. The interest rate for the credit facility is determined based on calculations using certain market rates as set forth in the credit agreement. In addition, the credit facility contains restrictions on payments including cash payments of dividends. As of June 30, 2020, no amounts had been drawn under the credit facility.

Operating Activities

Cash provided by operating activities consists of net income (loss) adjusted for certain non-cash items including depreciation and amortization, stock-based compensation, amortization of discount on our Notes, deferred income taxes, impairment of investments in privately-held companies, non-cash restructuring charges, as well as the effect of changes in working capital and other activities. We expect that cash provided by operating activities will fluctuate in future periods as a result of a number of factors, including fluctuations in our revenue, increases in operating expenses and costs related to acquisitions. For additional discussion, see "Part II—Other Information, Item 1A. Risk Factors."

Cash provided by operating activities in the six months ended June 30, 2020 was \$447.8 million, a decrease in cash inflow of \$242.9 million compared to the six months ended June 30, 2019. Cash provided by operating activities was driven by a net loss of \$1.39 billion, as adjusted for the exclusion of non-cash expenses and other adjustments totaling \$1.62 billion, of which \$1.10 billion was due to a provision for income taxes related to the establishment of a valuation allowance against deferred tax assets, \$244.5 million was related to depreciation and amortization expense, and \$230.8 million was related to stock-based compensation expense, and the effect of changes in working capital and other carrying balances that resulted in cash inflows of \$214.7 million.

Cash provided by operating activities in the six months ended June 30, 2019 was \$690.7 million. Cash provided by operating activities was driven by net income of \$1.31 billion, as adjusted for the exclusion of non-cash expenses and other adjustments totaling \$690.8 million, of which \$1.14 billion was due to a benefit from income taxes related to the establishment of deferred tax assets from intra-entity transfers of intangible assets, \$229.1 million was related to depreciation and amortization expense, and \$178.1 million was related to stock-based compensation expense, and the effect of changes in working capital and other carrying balances that resulted in cash inflows of \$71.1 million.

Investing Activities

Our primary investing activities consist of purchases of property and equipment, particularly purchases of servers and networking equipment, leasehold improvements for our facilities, purchases and disposal of marketable securities, strategic investments in privately-held companies, acquisitions of businesses and other activities.

Cash used in investing activities in the six months ended June 30, 2020 was \$112.8 million, a decrease in cash outflow of \$271.6 million compared to the six months ended June 30, 2019. The decrease was primarily due to a \$795.4 million increase in proceeds from sales of marketable securities and a \$0.8 million increase in proceeds from sales of property and equipment, offset by a \$287.8 million decrease in proceeds from maturities of marketable securities, a \$130.8 million increase in purchases of marketable securities, a \$68.3 million increase in purchases of property and equipment, a \$14.0 million increase in cash used in business combinations, as well as \$12.4 million of cash used in other investing activities in the six months ended June 30, 2020 compared to \$11.3 million of cash generated from other investing activities in the six months ended June 30, 2019.

We intend to increase capital expenditure in absolute dollars sequentially in the third quarter of 2020. The increase will allow us to address our near-term capacity needs and continue our buildout of a new data center, contingent on improvements in the IT supply chain.

Financing Activities

Our primary financing activities consist of issuance of securities, including common stock issued under our employee stock purchase plan, repayment of convertible notes, payments of finance lease obligations, and stock option exercises by employees and other service providers.

Cash provided by financing activities in the six months ended June 30, 2020 was \$989.1 million, compared to \$25.2 million cash used in financing activities in the six months ended June 30, 2019. The change was primarily due to \$985.3 million of net proceeds from the issuance of the 2025 Notes net of issuance costs in the six months ended June 30, 2020, a \$21.5 million decrease in payments of finance lease obligations, and a \$9.2 million increase in proceeds from the issuance of shares of stock from the ESPP, offset by a \$1.7 million increase in tax payments related to net share settlements of equity awards and a \$0.1 million decrease in proceeds from option exercises.

Contractual Obligations

Our principal commitments consist of obligations under the Notes (including principal and coupon interest), finance and operating leases for equipment, office space and co-located data center facilities, as well as non-cancellable contractual commitments. Refer to Note 14 – Commitments and Contingencies for more details.

Off Balance Sheet Arrangements

We do not have any off-balance sheet arrangements and did not have any such arrangements as of June 30, 2020.

Critical Accounting Policies and Estimates

We prepare our consolidated financial statements and related notes in accordance with GAAP. In doing so, we make estimates and assumptions that affect our reported amounts of assets, liabilities, revenue and expenses, as well as related disclosure of contingent assets and liabilities. To the extent that there are material differences between these estimates and actual results, our financial condition or operating results would be affected. We base our estimates on past experience and other assumptions that we believe are reasonable under the circumstances, and we evaluate these estimates on an ongoing basis. We refer to accounting estimates of this type as critical accounting policies and estimates. Please refer to “Management’s Discussion and Analysis of Financial Condition and Results of Operations” contained in Part II, Item 7 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 for a more complete discussion of our critical accounting policies and estimates.

There have been no material changes to our critical accounting policies and estimates as compared to the critical accounting policies and estimates described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

Recent Accounting Pronouncements

For information with respect to recent accounting pronouncements and the impact of these pronouncements on our consolidated financial statements, see Note 1 – “Description of Business and Summary of Significant Accounting Policies” in the notes to the consolidated financial statements included in Part I of this Quarterly Report on Form 10-Q.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We have operations both within the United States and internationally, and we are exposed to market risks in the ordinary course of our business. These risks include primarily interest rate and foreign exchange risks.

Interest Rate Fluctuation Risk

Our investment portfolio mainly consists of short-term fixed income securities, including government and investment-grade debt securities and money market funds. These securities are classified as available-for-sale and, consequently, are recorded in the consolidated balance sheets at fair value with unrealized gains or losses, net of tax reported as a separate component of accumulated other comprehensive loss. Our investment policy and strategy is focused on the preservation of capital and supporting our liquidity requirements. We do not enter into investments for trading or speculative purposes. We continue to monitor the liquidity of our investments in light of the COVID-19 pandemic. Given the uncertainty surrounding the severity and duration of the COVID-19 pandemic, we could incur future unrealized losses on available-for-sale debt securities that are attributable to credit risk.

A rise in interest rates could have a material adverse impact on the fair value of our investment portfolio. Based on our investment portfolio balance as of June 30, 2020, a hypothetical increase in interest rates of 100 basis points would result in a decrease of approximately \$38.6 million in the fair value of our available-for-sale securities. We currently do not hedge these interest rate exposures.

As of June 30, 2020, we had \$3.10 billion aggregate principal amount of Convertible Notes outstanding and \$700.0 million aggregate principal amount of 2027 Notes outstanding. We carry the Notes at face value less amortized discount on the consolidated balance sheet. Since the Notes bear interest at fixed rates, we have no financial statement risk associated with changes in interest rates. However, the fair value of the Notes changes when the market price of our stock fluctuates or interest rates change.

Foreign Currency Exchange Risk

Transaction Exposure

We transact business in various foreign currencies and have international revenue, as well as costs denominated in foreign currencies, primarily the Euro, British Pound, Singapore Dollar and Japanese Yen. This exposes us to the risk of fluctuations in foreign currency exchange rates. Accordingly, changes in exchange rates, and in particular a continuing strengthening of the U.S. dollar, would negatively affect our revenue and other operating results as expressed in U.S. dollars.

We have experienced and will continue to experience fluctuations in our net income (loss) as a result of transaction gains or losses related to revaluing and ultimately settling certain asset and liability balances that are denominated in currencies other than the functional currency of the entities in which they are recorded. Foreign currency gains were immaterial for the three and six months ended June 30, 2020 and 2019. We currently utilize foreign currency forward contracts with financial institutions to reduce the risk that our earnings may be adversely affected by the impact of exchange rate fluctuations on monetary assets or liabilities denominated in currencies other than the local currency of a subsidiary. These contracts are not designated as hedging instruments. We may in the future enter into other derivative financial instruments if it is determined that such hedging activities are appropriate to further reduce our foreign currency exchange risk. Based on our foreign currency exposures from monetary assets and liabilities net of our open hedge position, we estimated that a 10% change in exchange rates against the U.S. dollar would have resulted in a gain or loss of approximately \$11.1 million as of June 30, 2020.

Translation Exposure

We are also exposed to foreign exchange rate fluctuations as we translate the financial statements of our foreign subsidiaries into U.S. dollars in consolidation. If there is a change in foreign currency exchange rates, the translating adjustments resulting from the conversion of our foreign subsidiaries' financial statements into U.S. dollars would result in a gain or loss recorded as a component of accumulated other comprehensive loss which is part of stockholders' equity.

Item 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report on Form 10-Q. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. The design of disclosure controls and procedures and internal control over financial reporting must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of June 30, 2020, our disclosure controls and procedures were designed at a reasonable assurance level and were effective to provide reasonable assurance.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) or 15d-15(d) of the Exchange Act that occurred during the period covered by this Quarterly Report on Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. LEGAL PROCEEDINGS

We are currently involved in, and may in the future be involved in, legal proceedings, claims, investigations, and government inquiries and investigations arising in the ordinary course of business. These proceedings, which include both individual and class action litigation and administrative proceedings, have included, but are not limited to matters involving content on the platform, intellectual property, privacy, data protection, securities, employment and contractual rights. Legal risk may be enhanced in jurisdictions outside the United States where our protection from liability for content published on our platform by third parties may be unclear and where we may be less protected under local laws than we are in the United States. Future litigation may be necessary, among other things, to defend ourselves, and the people on Twitter or to establish our rights. For information regarding legal proceedings in which we are involved, see “Legal Proceedings” in Note 14 of the accompanying notes to our consolidated financial statements, which is incorporated herein by reference.

Although the results of the legal proceedings, claims, investigations, and government inquiries and investigations in which we are involved cannot be predicted with certainty, we do not believe that there is a reasonable possibility that the final outcome of these matters will have a material adverse effect on our business, financial condition, operating results, or prospects. However, the final results of any current or future proceeding cannot be predicted with certainty, and until there is final resolution on any such matter that we may be required to accrue for, we may be exposed to loss in excess of the amount accrued. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources, and other factors.

Item 1A. RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this Quarterly Report on Form 10-Q, including the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes, before making a decision to invest in our common stock. The risks and uncertainties described below may not be the only ones we face. If any of the risks actually occurs, our business, financial condition, operating results, cash flows and prospects could be materially and adversely affected. In that event, the market price of our common stock could decline, and you could lose part or all of your investment.

Risks Related to Our Business and Our Industry

The COVID-19 pandemic has disrupted and harmed, and is expected to continue to disrupt and harm, our business, financial condition and operating results. We are unable to predict the extent to which the pandemic and related impacts will continue to adversely impact our business, financial condition and operating results and the achievement of our strategic objectives.

Our business, operations and financial performance have been, and are expected to continue to be, negatively impacted by the COVID-19 pandemic and related public health responses, such as travel bans, restrictions, social distancing requirements and shelter-in-place orders. The pandemic and these related responses have caused, and are expected to continue to cause, decreased advertiser demand for our platform, global slowdown of economic activity (including the decrease in demand for a broad variety of goods and services) and significant volatility and disruption of financial markets.

The COVID-19 pandemic has subjected our operations, financial performance and financial condition to a number of risks, including, but not limited to, those discussed below:

- Declines in advertiser demand due to changes or uncertainty in the business operations and revenue of our advertisers because of the COVID-19 pandemic, including as a result of travel restrictions and declines in travel impacting the travel and hospitality industries, shelter-in-place orders and social distancing requirements impacting small and medium sized businesses and the sports and entertainment industries, and general economic uncertainty causing a number of businesses to cut costs or otherwise reduce advertising spend or focus advertising spend more on other platforms, have resulted in, and we believe may continue to result in, decreased demand for our advertising products.
- Postponements, suspensions or cancellations of major events, such as sporting events and music festivals, may lead to people perceiving the content on Twitter as less relevant or useful or of lower quality, which could negatively affect mDAU growth, or may reduce monetization opportunities in connection with such events.
- Delays in payments or defaults by our customers or partners or if customers or partners terminate their relationships with us or do not renew their agreements on economic or other terms that are favorable to us.

- The responsive measures to the COVID-19 pandemic have caused us to modify our business practices by having employees work remotely, canceling all non-essential employee travel, and cancelling, postponing or holding virtually events and meetings. We may in the future be required to, or choose voluntarily to, take additional actions for the health and safety of our workforce, whether in response to government orders or based on our own determinations of what is in the best interests of our employees. While most of our operations can be performed remotely, there is no guarantee that we will be as effective while working remotely because our team is dispersed, many employees may have additional personal needs to attend to (such as looking after children as a result of school closures or family who become sick), and employees may become sick themselves and be unable to work. To the extent our current or future measures result in decreased productivity, harm our company culture or otherwise negatively affect our business, our financial condition and operating results could be adversely affected.

The severity, magnitude and duration of the COVID-19 pandemic, the public health responses and its economic consequences are uncertain, rapidly changing and difficult to predict, the pandemic's impact on our operations and financial performance, as well as its impact on our ability to successfully execute our business strategies and initiatives, remains uncertain and difficult to predict. Further, the ultimate impact of the COVID-19 pandemic on people on Twitter, advertisers, employees, and on our business, operations and financial performance, depends on many factors that are not within our control, including, but not limited, to: governmental, business and individuals' actions that have been and continue to be taken in response to the pandemic (including restrictions on travel and transport, prohibitions on, or voluntary cancellation of, large gatherings of people and social distancing requirements, and modified workplace activities); the impact of the pandemic and actions taken in response local or regional economies, travel, and economic activity; the availability of government funding programs; general economic uncertainty in key markets and financial market volatility, including the liquidity of marketable securities in which we may invest from time to time; volatility in our stock price, global economic conditions and levels of economic growth; and the pace of recovery when the COVID-19 pandemic subsides.

If we fail to increase our mDAU, ad engagement or other general engagement on our platform, our revenue, business and operating results may be harmed.

Our mDAU and their level of engagement with advertising are critical to our success and our long-term financial performance will continue to be significantly determined by our success in increasing the growth rate of our mDAU as well as the number of ad engagements. Our mDAU growth rate has fluctuated over time, and it may slow or decline. To the extent our mDAU growth rate slows or the absolute number of mDAU declines, our revenue growth will become dependent on our ability to increase levels of engagement on Twitter and increase revenue growth from third-party publishers' websites and applications, data licensing and other offerings. We generate a substantial majority of our revenue based upon engagement with the ads that we display. A number of factors have affected and could potentially negatively affect mDAU growth and engagement, including if:

- accounts, including influential accounts, such as those of world leaders, government officials, celebrities, athletes, journalists, sports teams, media outlets and brands or certain age demographics, do not contribute unique or engaging content, including as a result of the postponement, suspension or cancellation of major events in light of the COVID-19 pandemic, such as the postponement or suspension of major sports leagues or the 2020 Summer Olympics, or engage with other products, services or activities as an alternative to ours;
- we are unable to convince people of the value and usefulness of our products and services;
- there is a decrease in the perceived quality, usefulness, trustworthiness or relevance of the content generated by people on Twitter or content partners;
- our actions taken to better foster a healthy conversation or to improve relevancy negatively impact or are perceived to negatively impact people's experiences on the platform;
- there are concerns related to communication, privacy, data protection, safety, security, spam, manipulation or other hostile or inappropriate usage or other factors, or our health efforts result in the removal of certain accounts;
- there are concerns related to the recent security breach whereby attackers gained control of certain highly-visible accounts;
- our content partners terminate their relationships with us or do not renew their agreements on economic or other terms that are favorable to us;
- we fail to introduce new and improved products or services or if we introduce new or improved products or services that are not favorably received or that negatively affect engagement;
- technical or other problems prevent us from delivering our products or services in a rapid and reliable manner or otherwise affect people's experiences on Twitter;
- people have difficulty installing, updating, or otherwise accessing our products or services on mobile devices as a result of actions by us or third parties that we rely on to distribute our products and deliver our services;

- changes in our products or services that are mandated by, or that we elect to make to address, laws (such as the General Data Protection Regulation (GDPR)) or legislation, inquiries from legislative bodies, regulatory authorities or litigation (including settlements or consent decrees) adversely affect our products or services;
- we fail to provide adequate customer service; or
- we do not maintain our brand image or reputation.

If we are unable to increase our mDAU or engagement, or if these metrics decline, our products and services could be less attractive to people on Twitter, as well as to advertisers, content partners and platform partners, which would have a material and adverse impact on our business, financial condition and operating results.

We generate the substantial majority of our revenue from advertising. The loss of advertising revenue could harm our business.

The substantial majority of our revenue is currently generated from third parties advertising on Twitter. We generate substantially all of our advertising revenue through the sale of our Promoted Products: Promoted Tweets, Promoted Accounts and Promoted Trends. As is common in our industry, our advertisers do not have long-term advertising commitments with us. As a result, we have experienced an immediate reduction in advertiser demand due to the COVID-19 pandemic as some advertisers have shifted their expenditures away from advertising spend and we expect to continue to experience reduced advertiser demand and decreased advertising revenue in future quarters. In addition, many of our advertisers purchase our advertising services through one of several large advertising agencies' holding companies. To sustain or increase our revenue, we must add new advertisers and encourage existing advertisers to maintain or increase the amount of advertising inventory purchased through our platform and adopt new features and functionalities that we add to our platform. However, advertising agencies and potential new advertisers may view our Promoted Products or any new products or services we offer as experimental and unproven, and we may need to devote additional time and resources to educate them about our products and services. Further, our advertisers' ability to effectively target their advertising to our audience's interests may be impacted by the degree to which people on Twitter agree in our settings to certain types of personalization or ad targeting, which could have an impact on our revenue. People that already have accounts may change their choices as a result of changes to our privacy control settings that we have implemented or may implement in the future, and people new to Twitter may choose varied levels of personalization, whether in connection with future changes we make to product privacy settings, regulations, regulatory actions, the customer experience, or otherwise. Changes to operating systems' practices and policies, such as Apple's upcoming iOS update that may impose heightened restrictions related to Apple device identifiers, may also reduce the quantity and quality of the data and metrics that can be collected or used by us and our partners. These limitations may adversely affect Twitter's and our advertisers' ability to effectively target advertisements and measure their performance, which could reduce the demand and pricing for our advertising products and harm our business. Over time, personalization rates will impact our ability to grow our performance advertising business. Advertisers also may choose to use our free products and services instead of our Promoted Products. Advertisers will not continue to do business with us, or they will reduce the prices they are willing to pay to advertise with us, if we do not deliver ads in an effective manner, or if they do not believe that their investment in advertising with us will generate a competitive return on investment relative to alternatives, including online, mobile and traditional advertising platforms. In addition, competition for advertising is becoming increasingly more intense and our advertising revenue could be further impacted by escalating competition for digital ad spending.

Our advertising revenue growth is primarily driven by increases in mDAU, increases in ad pricing or number of ads shown and increases in our clickthrough rate. Although we experienced increased mDAU and ad engagement growth in the three and six months ended June 30, 2020, we experienced declines in revenue for such periods due to a reduction in advertiser demand on our platform related to the COVID-19 pandemic. To date, our available advertising inventory has been greater than demand. Our future revenue growth, however, may be limited by available advertising inventory for specific ad types on certain days if we do not increase our mDAU or monetize our larger global audience. Our advertising revenue also could be affected by a number of other factors, including advertiser reaction to content published on our platform or our policies and responses thereto, bugs or other product issues that may impact our ability to effectively help advertisers target ads or share data with our measurement and ad partners. The occurrence of any of these factors could result in a reduction in demand for our ads, which may reduce the prices we receive for our ads, either of which would adversely impact our revenue, business, financial condition and operating results.

We cannot be certain of the extent of the global slowdown of economic activity, including the decrease in demand for a broad variety of goods and services (including advertiser demand for our platform), or the pace of recovery when the COVID-19 pandemic subsides.

If we are unable to compete effectively, our business and operating results could be harmed.

We face intense competition for people to use our platform, content and data partners and advertising spend. We compete for our audience against a variety of social networking platforms, messaging companies and media companies, some of which have greater financial resources, larger audiences or more established relationships with advertisers, such as Facebook (including Instagram and WhatsApp), Alphabet (including Google and YouTube), Microsoft (including LinkedIn), Snap, TikTok, and Verizon Media Group, or in certain regions WeChat, Kakao and Line. New or existing competitors may draw people towards their products or services and away from ours by introducing new product features, including features similar to those we offer, investing their greater resources in audience acquisition efforts, or otherwise developing products or services that audiences choose to engage with rather than Twitter, any of which could decrease mDAU growth or engagement and negatively affect our business.

We also compete with respect to content generated by our content partners and the availability of applications developed by platform partners. We may not establish and maintain relationships with content partners who publish on our platform or platform partners who develop applications that integrate with our platform. Our content and platform partners may choose to publish content on, or develop applications for, other platforms, and if they cease to utilize our platform or decrease their use of our platform, then mDAU, engagement, and advertising revenue may decline.

We believe that our ability to compete effectively for audiences and content partners depends upon many factors both within and beyond our control, including:

- the popularity, usefulness, ease of use, performance and reliability of our products and services compared to those of our competitors, as well as our reputation and brand, and our ability to adapt to continuously evolving preferences and expectations of people on Twitter, advertisers, content partners, platform partners and developers;
- the amount, quality and timeliness of content generated on our platform, including the relative mix of ads;
- the timing and market acceptance of our products and services;
- the prominence of our applications in application marketplaces and of our content in search engine results, as well as those of our competitors;
- our ability, in and of itself, and in comparison to the ability of our competitors, to develop new products and services and enhancements to existing products and services, and to maintain the reliability and security of our products and services as usage increases globally;
- our ability, and our ability in comparison to the ability of our competitors, to manage our business and operations during the COVID-19 pandemic and related governmental, business and individual actions that have been and continue to be taken in response to the pandemic (including restrictions on travel and modified workplace activities);
- concerns related to the recent security breach whereby attackers gained control of certain highly-visible accounts;
- changes mandated by, or that we elect to make to address legislation, regulatory authorities or litigation, including settlements, antitrust matters, consent decrees and privacy regulations, some of which may have a disproportionate effect on us compared to our competitors; and
- the continued adoption and monetization of our products and services internationally.

We also face significant competition for advertiser spend. We compete against online and mobile businesses and traditional media outlets, such as television, radio and print, for advertising budgets. We also compete with advertising networks, exchanges, demand side platforms and other platforms, such as Google AdSense, DoubleClick Ad Exchange, Nexage and Brightroll Ad Exchanges, Verizon Media Group, and Microsoft Media Network, for marketing budgets and in the development of the tools and systems for managing and optimizing advertising campaigns. In order to grow our revenue and improve our operating results, we must increase our share of spending on advertising relative to our competitors, many of which are larger companies that offer more traditional and widely accepted advertising products. In addition, some of our larger competitors have substantially broader product or service offerings and leverage their relationships based on other products or services to gain additional share of advertising budgets.

We believe that our ability to compete effectively for advertiser spend depends upon many factors both within and beyond our control, including:

- the size and composition of our audience relative to those of our competitors;
- our ad targeting and measurement capabilities, and those of our competitors;
- the timing and market acceptance of our advertising services, and those of our competitors, including our ability to demonstrate to advertisers the value of our advertising services, particularly during the periods in which they are determining their budgets, which may be annually or biannually;
- our marketing and selling efforts, and those of our competitors;
- our ability, and our ability in comparison to the ability of our competitors, to manage our business and operations during the COVID-19 pandemic;
- the pricing of our advertising services, including the actual or perceived return our advertisers receive from our advertising services, and those of our competitors; and
- our reputation and the strength of our brand relative to our competitors, including advertisers' perception of the health and safety of our platform and concerns related to the recent security breach whereby attackers gained control of certain highly-visible accounts.

Additionally, in recent years, there have been significant acquisitions and consolidation by and among our actual and potential competitors. We anticipate this trend of consolidation will continue, which will present heightened competitive challenges for our business. Acquisitions by our competitors may result in reduced functionality of our products and services. For example, following Facebook's acquisition of Instagram, Facebook disabled Instagram's photo integration with Twitter such that Instagram photos were no longer viewable within Tweets and people are instead re-directed to Instagram to view Instagram photos through a link within a Tweet. As a result, people who use Twitter may be less likely to click on links to Instagram photos in Tweets, and people who use Instagram may be less likely to Tweet or remain active on Twitter. Any similar elimination of integration with Twitter in the future, whether by Facebook or others, may adversely impact our business and operating results. Consolidation may also enable our larger competitors to offer bundled or integrated products that feature alternatives to our platform and provide alternative opportunities for advertisers.

If we are not able to compete effectively for audience, content and platform partners, and advertiser spend, our mDAU and engagement would decline and our business and operating results would be materially and adversely impacted.

Our prioritization on the long-term health of our service, and on product innovation may adversely impact our short-term operating results.

We believe that our long-term success depends on our ability to improve the health of the public conversation on Twitter. We have made this one of our top priorities and have focused our efforts on improving the quality of that conversation, including by devoting substantial internal resources to our strategy. These efforts include the reduction of abuse, harassment, spam, manipulation and malicious automation on the platform, as well as a focus on improving information quality and the health of conversation on Twitter. Some of the health initiatives that we have implemented as part of our ongoing commitment to a healthy public conversation have negatively impacted, and may in the future negatively impact, our publicly reported metrics in a few ways.

First, our health efforts include the removal of accounts pursuant to our terms and services that are abusive, spammy, fake or malicious, and these accounts may have been included in our mDAU, as well as actions taken to detect and challenge potentially automated, spammy, or malicious accounts during the sign-up process. For example, in the third and fourth quarters of 2018, year-over-year average mDAU growth was impacted by ongoing health efforts, both due to how we resourced and prioritized our work and the impact from ongoing success removing spammy and suspicious accounts.

Second, we are also making active decisions to prioritize health related initiatives over other near-term product improvements that may drive more usage of Twitter as a daily utility. These decisions may not be consistent with the short-term expectations of our advertising customers or investors and may not produce the long-term benefits that we expect, in which case our mDAU growth and engagement, our relationships with advertisers and our business and operating results could be harmed.

We also encourage employees to quickly develop and help us launch new and innovative features. We focus on improving the experience for people using our products and services, which includes protecting the privacy of people on Twitter, and on developing new and improved products and services for the advertisers on our platform. We prioritize innovation and the experience for people on Twitter and advertisers on our platform over short-term operating results. We frequently make product, product feature and service decisions that may reduce our short-term operating results if we believe that the decisions are consistent with our goals to improve the experience for people on Twitter and performance for advertisers, which we believe will improve our operating results over the long term. Our decisions to invest in the long-term health of our service and on product innovation rather than short-term results may not produce the long-term benefits that we expect, in which case our mDAU growth and engagement, our relationships with advertisers and our business and operating results would be adversely impacted, and may not be consistent with the expectations of investors, which could have a negative effect on the trading price of our common stock.

We depend on highly skilled personnel to grow and operate our business. If we are unable to hire, retain and motivate our personnel, we may not be able to grow effectively.

Our future success and strategy will depend upon our continued ability to identify, hire, develop, motivate and retain highly skilled personnel, including senior management, engineers, designers and product managers. We depend on contributions from our employees, and, in particular, our senior management team, to execute efficiently and effectively. We do not have employment agreements other than offer letters with any member of our senior management or other key employees, and we do not maintain key person life insurance for any employee. We also face significant competition for employees, particularly in the San Francisco Bay Area (where our headquarters is located) and other key markets, for engineers, designers and product managers from other Internet and high-growth companies, which include both publicly-traded and privately-held companies. As a result, we may not be able to retain our existing employees or hire new employees quickly enough to meet our needs.

From time to time, we have also experienced high voluntary attrition, and in those times, the resulting influx of new leaders and other employees has required us to expend time, attention and resources to recruit and retain talent, restructure parts of our organization, and train and integrate new employees. In addition, to attract and retain skilled personnel, we have had to offer, and believe we will need to continue to offer, highly competitive compensation packages. We may need to invest significant amounts of cash and equity to attract and retain new employees and we may not realize sufficient return on these investments. In addition, changes to U.S. immigration and work authorization laws and regulations can be significantly affected by political forces and levels of economic activity. Our business may be materially and adversely affected if legislative or administrative changes to immigration or visa laws and regulations impair our hiring processes or projects involving personnel who are not citizens of the country where the work is to be performed. If we are not able to effectively attract and retain employees, we may not be able to innovate or execute quickly on our strategy and our ability to achieve our strategic objectives will be adversely impacted, and our business will be harmed.

As a result of the COVID-19 pandemic we have slowed headcount growth and focused on critical roles while we continue to assess economic conditions.

We also believe that our culture and core values have been, and will continue to be, a key contributor to our success and our ability to foster the innovation, creativity and teamwork we believe we need to support our operations. If we fail to effectively manage our hiring needs and successfully integrate our new hires, our efficiency and ability to meet our forecasts and our culture, employee morale, productivity and retention could suffer, and our business and operating results would be adversely impacted.

Our products, mDAU growth, and engagement depend upon the availability of a variety of third-party services and systems and the effective interoperability with operating systems, networks, devices, web browsers and standards. We do not control all of these systems and cannot guarantee their availability, and we cannot guarantee that third parties will not take action that harm our products or profitability.

One of the reasons people come to Twitter every day is for real-time information, and our products and the success of our business is dependent upon the ability of people to access the Internet and the proper functioning of the various operating systems, platforms, and services upon which we rely. These systems are provided and controlled by factors outside of our control, including nation-state actors who may suppress or censor our products, and broadband and Internet access marketplace, including incumbent telephone companies, cable companies, mobile communications companies, government-owned service providers, device manufacturers and operating system providers. Any of these actors could take actions that degrade, disrupt or increase the cost of access to our products or services, which would, in turn, negatively impact our business. The adoption or repeal of any laws or regulations that adversely affect the growth, popularity or use of the Internet, including laws or practices limiting Internet neutrality, could decrease the demand for, or the usage of, our products and services, increase our cost of doing business and adversely affect our operating results. For example, access to Twitter is blocked in China and has been intermittently blocked in Turkey in the past.

We also rely on other companies to maintain reliable network systems that provide adequate speed, data capacity and security. We utilize third-party cloud computing services in connection with certain aspects of our business and operations, and any disruption of, or interference with, our use of such cloud services could adversely impact our business and operations. As the Internet continues to experience growth in the number of consumers, frequency of use and amount of data transmitted, the Internet infrastructure that we rely on may be unable to support the demands placed upon it. The failure of the Internet infrastructure that we rely on, even for a short period of time, could undermine our operations and harm our operating results.

Furthermore, these systems, devices or software or services may experience changes, bugs or technical issues, that may affect the availability of services or the accessibility of our products. We have experienced, and may in the future experience, service disruptions, outages and other performance problems due to a variety of factors, including infrastructure changes, human or software errors, hardware failure, capacity constraints due to an overwhelming number of people accessing our products and services simultaneously, computer viruses and denial of service or fraud or security attacks. In the past, we have experienced brief service outages during which Twitter.com and Twitter mobile clients were inaccessible as a result, in part, of software misconfigurations. Additionally, although we are investing significantly to improve the capacity, capability and reliability of our infrastructure, we are not currently serving traffic equally through our co-located data centers that support our platform. Accordingly, in the event of a significant issue at the data center supporting most of our network traffic, some of our products and services may become inaccessible to the public or the public may experience difficulties accessing our products and services. Any disruption or failure in our infrastructure could hinder our ability to handle existing or increased traffic on our platform, which could significantly harm our business.

The availability of these services are also dependent upon our relationships with third parties, which may change, including if they change their terms of service or policies that diminish the functionality of our products and services, make it difficult for people to access our content, limit our ability to target or measure the effectiveness of ads, impose fees related to our products or services or give preferential treatment to competitive products or services could adversely affect usage of our products and services. Additionally, some of our mobile carriers have experienced infrastructure issues due to natural disasters, which have caused deliverability errors or poor quality communications with our products. Because a majority of people on Twitter access our products and services through mobile devices, we are particularly dependent on the interoperability of our products and services with mobile devices and operating systems in order to deliver our products and services. We also may not be successful in developing relationships with key participants in the mobile industry or in developing products or services that operate effectively with these operating systems, networks, devices, web browsers and standards. Further, if the number of platforms for which we develop our product expands, it will result in an increase in our operating expenses. In order to deliver high quality products and services, it is important that our products and services work well with a range of operating systems, networks, devices, web browsers and standards that we do not control. Any such errors, regardless of whether caused by our infrastructure or that of the service provider, may result in the loss of our existing accounts or may make it difficult to attract new people to Twitter. In the event that it is difficult for people to access and use our products and services, particularly on their mobile devices, our mDAU growth and engagement could be harmed, and our business and operating results could be adversely impacted.

Our new products, product features, services and initiatives and changes to existing products, services and initiatives could fail to attract new people to Twitter, content partners, advertisers and platform partners or generate revenue.

Our industry is subject to rapid and frequent changes in technology, evolving customer needs and the frequent introduction by our competitors of new and enhanced offerings. We must constantly assess the playing field and determine whether we need to improve or re-allocate resources amongst our existing products and services or create new ones (independently or in conjunction with third parties). Our ability to increase mDAU and engagement, attract content partners, advertisers and platform partners and generate revenue will depend on those decisions. We may introduce significant changes to our existing products and services or develop and introduce new and unproven products and services, including technologies with which we have little or no prior development or operating experience. For example, we are in the early stages of exploring additional potential revenue product opportunities that could, if successful, complement our advertising business in the future, although we do not expect any revenue attributable to these opportunities in the near-term and these opportunities may not prove successful at all. We are also continuing our work to increase the stability, performance and scale of our ads platform and our MAP product, and such work will take place over multiple quarters, and any positive revenue impact will be gradual in its impact. If new or enhanced products, product features or services fail to engage people on Twitter, content partners and advertisers, we may fail to attract or retain mDAU or to generate sufficient revenue or operating profit to justify our investments, and our business, financial condition and operating results would be adversely impacted.

Our business and operating results may be harmed by our failure to timely and effectively scale and adapt our existing technology and infrastructure.

As accounts generate more content, including photos and videos hosted by Twitter, we may be required to expand and adapt our technology and infrastructure to continue to reliably store, serve and analyze this content. It may become increasingly difficult to maintain and improve the performance of our products and services, especially during peak usage times, as our products and services become more complex and our account traffic increases. In addition, because we lease our data center facilities, we cannot be assured that we will be able to expand our data center infrastructure to meet demand in a timely manner, or on favorable economic terms. If people are unable to access Twitter or we are not able to make information available rapidly on Twitter, people may seek other channels to obtain the information, and may not return to Twitter or use Twitter as often in the future, or at all. This would negatively impact our ability to attract new people to Twitter, content partners and advertisers and increase the frequency of people returning to Twitter. We expect to continue to make significant investments to maintain and improve the capacity, capability and reliability of our infrastructure. To the extent that we do not effectively address capacity constraints, upgrade our systems as needed and continually develop our technology and infrastructure to accommodate actual and anticipated changes in technology, our business and operating results may be harmed.

We continue to scale the capacity of, and enhance the capability and reliability of, our infrastructure to support mDAU growth and increased activity on our platform. We expect that investments and expenses associated with our infrastructure will continue to grow, including the expansion and improvement of our data center operations and related operating costs, additional servers and networking equipment to increase the capacity of our infrastructure, increased utilization of third-party cloud computing and associated costs thereof, increased bandwidth costs, and costs to secure our customers' data. The improvement of our infrastructure requires a significant investment of our management's time and our financial resources. If we fail to efficiently scale and manage our infrastructure, our business, financial condition and operating results would be adversely impacted.

If we are unable to maintain and promote our brand, our business and operating results may be harmed.

We believe that maintaining and promoting our brand is critical to increasing mDAU, content partners and advertiser spend. Maintaining and promoting our brand will depend largely on our ability to continue to provide timely, useful, reliable and innovative products and services with a focus on a positive experience on Twitter, which we may not do successfully. We may introduce new features, products, services or terms of service that people on Twitter, content partners, advertisers or platform partners do not like, which may negatively affect our brand. Additionally, the actions of content partners may affect our brand if people do not have a positive experience using third-party applications or websites integrated with Twitter or that make use of Twitter content. We will also continue to experience media, legislative or regulatory scrutiny of our decisions regarding privacy, data protection, security, content and other issues, which may adversely affect our reputation and brand. For example, we previously announced our discovery of content (including some advertisements) displayed on our products that may be relevant to government investigations relating to Russian interference in the 2016 U.S. presidential election, which continues to draw media and regulatory scrutiny of our actions with respect to such content. Our brand may also be negatively affected by the actions of people that are hostile or inappropriate to other people, by accounts impersonating other people, by accounts identified as spam, by use or perceived use, directly or indirectly, of our products or services by people (including governments and government-sponsored actors) to disseminate information that may be viewed as misleading (or intended to manipulate people's opinions), by accounts introducing excessive amounts of spam on our platform, by third parties obtaining control over people's accounts, such as the recent security breach whereby attackers gained control of certain highly-visible accounts, or by other security or cybersecurity incidents. For example, certain actions taken by a social media marketing company in the past to sell followers and engagement, which were in violation of our policies, drew media and regulatory scrutiny on us. Maintaining and enhancing our brand may require us to make substantial investments and these investments may not achieve the desired goals.

Additionally, we and our executive leadership receive a high degree of media coverage around the world. Negative publicity about our company or executives, including about the quality and reliability of our products or of content shared on our platform, changes to our products, policies and services, our privacy, data protection, policy enforcement and security practices (including actions taken or not taken with respect to certain accounts or reports regarding government surveillance), litigation, regulatory activity, the actions of certain accounts (including actions taken by prominent accounts on our platform or the dissemination of information that may be viewed as misleading or manipulative), even if inaccurate, could adversely affect our reputation. Such negative publicity and reputational harm could adversely affect mDAU and their confidence in and loyalty to our platform and result in decreased revenue or increased costs to reestablish our brand, which would adversely impact our business, financial condition and operating results.

Spam and fake accounts could diminish the experience on our platform, which could damage our reputation and deter people from using our products and services.

"Spam" on Twitter refers to a range of abusive activities that are prohibited by our terms of service and is generally defined as unsolicited, repeated actions that negatively impact other people with the general goal of drawing attention to a given account, site, product or idea. This includes posting large numbers of unsolicited mentions of an account, duplicate Tweets, malicious automation, misleading links (e.g., to malware or "click-jacking" pages) or other false or misleading content, and aggressively following and un-following accounts, adding accounts to lists, sending invitations, Retweeting and liking Tweets to inappropriately attract attention. Our terms of service also prohibit the creation of serial or bulk accounts, both manually or using automation, for disruptive or abusive purposes, such as to Tweet spam or to artificially inflate the popularity of accounts seeking to promote themselves on Twitter. Although we continue to invest resources to reduce spam and fake accounts on Twitter, which includes our investments to improve the health of the public conversation on Twitter, we expect spammers will continue to seek ways to act inappropriately on our platform. In addition, we expect that increases in the number of accounts on our platform will result in increased efforts by spammers to misuse our platform. We continuously combat spam and fake accounts, including by suspending or terminating accounts we believe to be spammers and launching algorithmic changes focused on curbing abusive activities. Our actions to combat spam and fake accounts require significant resources and time. If spam and fake accounts increase on Twitter, this could hurt our reputation for delivering relevant content or reduce mDAU growth rate and mDAU engagement and result in continuing operational cost to us.

Our products may contain errors or our security measures may be breached, resulting in the exposure of private information. Our products and services may be subject to attacks that degrade or deny the ability of people to access our products and services. These issues may result in the perception that our products and services are not secure, and people on Twitter and advertisers may curtail or stop using our products and services and our business and operating results could be harmed.

Our products and services involve the storage and transmission of people's and advertisers' information, and security incidents, including those caused by unintentional errors and those intentionally caused by third parties, may expose us to a risk of loss of this information, litigation, increased security costs and potential liability. We and our third-party service providers experience cyber-attacks of varying degrees on a regular basis. We expect to incur significant costs in an effort to detect and prevent security breaches and other security-related incidents, and we may face increased costs in the event of an actual or perceived security breach or other security-related incident. In particular, the COVID-19 pandemic is increasing the opportunities available to criminals, as more companies and individuals work online, and as such, the risk of a cybersecurity incident potentially occurring is increasing. We cannot provide assurances that our preventative efforts will be successful. If an actual or perceived breach of our security occurs, the market perception of the effectiveness of our security measures could be harmed, people on Twitter and our advertisers may be harmed, lose trust and confidence in us, decrease the use of our products and services or stop using our products and services in their entirety. We may also incur significant legal and financial exposure, including legal claims, higher transaction fees and regulatory fines and penalties. Any of these actions could have a material and adverse effect on our business, reputation and operating results. While our insurance policies include liability coverage for certain of these matters, if we experienced a significant security incident, we could be subject to liability or other damages that exceed our insurance coverage.

Our products and services incorporate complex software and we encourage employees to quickly develop and help us launch new and innovative features. Our software, including any open source software that is incorporated into our code, has contained, and may now or in the future contain, errors, bugs or vulnerabilities. For example, in 2019, we discovered, and took steps to remediate, bugs that primarily affected our legacy MAP product, impacting our ability to target ads and share data with our measurement and ad partners. We also discovered that certain personalization and data settings were not operating as expected. As was the case with these errors, errors in our software code may only be discovered after the product or service has been released. Errors, vulnerabilities, or other design defects within the software on which we rely may result in a negative experience for people on Twitter, partners and advertisers who use our products, delay product introductions or enhancements, result in targeting, measurement, or billing errors, compromise our ability to protect the data of the people on Twitter and/or our intellectual property or lead to reductions in our ability to provide some or all of our services. Any errors, bugs or vulnerabilities discovered in our code after release could result in damage to our reputation, loss of accounts, loss of content or platform partners, loss of advertisers or advertising revenue or liability for damages or other relief sought in lawsuits, regulatory inquiries or other proceedings, any of which could adversely impact our business and operating results.

Our products operate in conjunction with, and we are dependent upon, third-party products and components across a broad ecosystem. If there is a security vulnerability, error, or other bug in one of these third-party products or components and if there is a security exploit targeting them, we could face increased costs, liability claims, reduced revenue, or harm to our reputation or competitive position. The natural sunset of third-party products and operating systems that we use requires that our infrastructure teams reallocate time and attention to migration and updates, during which period potential security vulnerabilities could be exploited. We also work with third-party vendors to process credit card payments by our customers and are subject to payment card association operating rules.

Unauthorized parties may also gain access to Twitter handles and passwords without attacking Twitter directly and, instead, access people's accounts by using credential information from other recent breaches, using malware on victim machines that are stealing passwords for all sites, or a combination of both. In addition, some of our developers or other partners, such as third-party applications to which people have given permission to Tweet on their behalf, may receive or store information provided by us or by people on Twitter through mobile or web applications integrated with us. If these third parties or developers fail to adopt or adhere to adequate data security practices, or in the event of a breach of their networks, our data or data of people on Twitter may be improperly accessed, used, or disclosed. Unauthorized parties have obtained, and may in the future obtain, access to our data, data of people on Twitter or our advertisers' data. Any systems failure or actual or perceived compromise of our security that results in the unauthorized access to or release of data of people on Twitter or our advertisers' data, such as credit card data, could significantly limit the adoption of our products and services, as well as harm our reputation and brand and, therefore, our business.

Our security measures may also be breached due to employee error, malfeasance or otherwise. Additionally, outside parties may attempt to fraudulently induce employees, people on Twitter, or advertisers to disclose sensitive information in order to gain access to our data, data of people on Twitter or advertisers' data, or may otherwise obtain access to such data or accounts. Since people on Twitter and our advertisers may use Twitter to establish and maintain online identities, unauthorized communications from Twitter accounts that have been compromised may damage their personal security, reputations and brands as well as our reputation and brand. Because the techniques used to obtain unauthorized access, disable or degrade service or sabotage systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures.

For example, in July 2020, we became aware of what we believe to be a coordinated social engineering attack by people who successfully targeted one or more of our employees with access to internal systems and tools. The attackers used this access to target a small group of accounts (130) and to gain control of a subset of these accounts and send Tweets from those accounts and access non-public information relating to at least some of those accounts. We are continuing to assess what other malicious activity the attackers may have conducted and the extent to which non-public data related to these accounts was compromised. We are also taking steps to secure our systems while our investigations are ongoing. This security breach may have harmed the people and accounts affected by it. It may also impact the market perception of the effectiveness of our security measures, and people may lose trust and confidence in us, decrease the use of our products and services or stop using our products and services in their entirety. It may also result in damage to our reputation, loss of accounts, loss of content or platform partners, loss of advertisers or advertising revenue, or legal and financial exposure, including legal claims, regulatory inquiries or other proceedings. Any of these effects could have a material and adverse impact on our business, reputation and operating results.

Our international operations are subject to increased challenges and risks.

We have offices around the world and our products and services are available in multiple languages. However, our ability to manage our business, monetize our products and services and conduct our operations internationally requires considerable management attention and resources and is subject to the particular challenges of supporting a rapidly growing business in an environment of multiple languages, cultures, customs, legal and regulatory systems, alternative dispute systems and commercial markets. Our international operations have required and will continue to require us to invest significant funds and other resources. Operating internationally subjects us to new risks and may increase risks that we currently face, including risks associated with:

- recruiting and retaining talented and capable employees in foreign countries and maintaining our company culture across all of our offices;
- providing our products and services and operating across a significant distance, in different languages and among different cultures, including the potential need to modify our products, services, content and features to ensure that they are culturally relevant in different countries;
- increased competition from largely regional websites, mobile applications and services that provide real-time communications and have strong positions in particular countries, which have expanded and may continue to expand their geographic footprint;
- differing and potentially lower levels of mDAU growth, engagement and ad engagement in new and emerging geographies;
- different levels of advertiser demand, including fluctuations in advertiser demand due to regional activities, regional economic effects of the COVID-19 pandemic and political upheaval;
- greater difficulty in monetizing our products and services, including costs to adapt our products and services in light of the manner in which people access Twitter in such jurisdictions, such as the use of feature phones in certain emerging markets such as India and Pakistan, and challenges related to different levels of Internet access or mobile device adoption in different jurisdictions;
- compliance with applicable foreign laws and regulations, including laws and regulations with respect to privacy, data protection, data localization, data security, taxation, consumer protection, copyright, fake news, hate speech, spam and content, and the risk of penalties to the people who use our products and services and individual members of management if our practices are deemed to be out of compliance;

- actions by governments or others to restrict access to Twitter or censor content on Twitter, such as how domestic Internet service providers in China have blocked access to Twitter and other countries, including Iran, Libya, Pakistan, Turkey and Syria, have intermittently restricted access to Twitter, whether these actions are taken for political reasons, in response to decisions we make regarding governmental requests or content generated by people on Twitter, or otherwise;
- longer payment cycles in some countries;
- credit risk and higher levels of payment fraud;
- operating in jurisdictions that do not protect intellectual property rights to the same extent as the United States;
- compliance with anti-bribery laws including, without limitation, compliance with the Foreign Corrupt Practices Act and the U.K. Bribery Act, including by our business partners;
- currency exchange rate fluctuations, as we conduct business in currencies other than U.S. dollars but report our operating results in U.S. dollars and any foreign currency forward contracts into which we enter may not mitigate the impact of exchange rate fluctuations;
- foreign exchange controls that might require significant lead time in setting up operations in certain geographic territories and might prevent us from repatriating cash earned outside the United States;
- political and economic instability in some countries;
- double taxation of our international earnings and potentially adverse tax consequences due to changes in the tax laws of the United States or the foreign jurisdictions in which we operate; and
- higher costs of doing business internationally, including increased accounting, travel, infrastructure and legal compliance costs.

If our revenue from our international operations, and particularly from our operations in the countries and regions where we have focused our spending, does not exceed the expense of establishing and maintaining these operations, our business and operating results will suffer. In addition, mDAU may grow more rapidly than revenue in international regions where our monetization of our products and services is not as developed. For example, average mDAU outside the United States constituted 81% of our average mDAU in the three months ended June 30, 2020, but our international revenue, as determined based on the billing location of our customers, was approximately 47% of our consolidated revenue in the three months ended June 30, 2020. Our inability to successfully expand our business, manage the complexity of our global operations or monetize our products and services internationally could adversely impact our business, financial condition and operating results.

Our business is subject to complex and evolving U.S. and foreign laws and regulations. These laws and regulations are subject to change and uncertain interpretation, and could result in claims, changes to our business practices, monetary penalties, increased cost of operations or declines in mDAU growth, mDAU engagement or ad engagement, or otherwise harm our business.

We are subject to a variety of laws and regulations in the United States and abroad that involve matters central to our business, including privacy, data protection, security, rights of publicity, content regulation, intellectual property, competition, protection of minors, consumer protection, credit card processing and taxation. Many of these laws and regulations are still evolving and being tested in courts. As a result, it is possible that these laws and regulations may be interpreted and applied in a manner that is inconsistent from country to country and inconsistent with our current policies and practices and in ways that could harm our business, particularly in the new and rapidly evolving industry in which we operate. Additionally, the introduction of new products or services may subject us to additional laws and regulations.

From time to time, governments, regulators and others have expressed concerns about whether our products, services or practices compromise the privacy or data protection rights of the people on Twitter and others. While we strive to comply with applicable privacy and data protection laws and regulations, our privacy policies and other obligations we may have with respect to privacy and data protection, the failure or perceived failure to comply may result, and in some cases has resulted, in inquiries and other proceedings or actions against us by governments, regulators or others. A number of proposals have recently been adopted or are currently pending before federal, state and foreign legislative and regulatory bodies that could significantly affect our business. For example, the California Consumer Privacy Act (CCPA) went into effect on January 1, 2020. The CCPA requires, among other things, covered companies to provide new disclosures to California consumers and afford such consumers new abilities to opt-out of certain sales of personal information. Similar legislation has been proposed or adopted in other states. Aspects of the CCPA and these other state laws and regulations, as well as their enforcement, remain unclear, and we may be required to modify our practices in an effort to comply with them. Additionally, a new privacy law, the California Privacy Rights Act (CPRA), recently was certified by the California Secretary of State to appear on the ballot for the November 3, 2020 election. If this initiative is approved by California voters, the CPRA would significantly modify the CCPA, potentially resulting in further uncertainty and requiring us to incur additional costs and expenses. Moreover, foreign data protection, privacy, consumer protection, content regulation and other laws and regulations are often more restrictive or burdensome than those in the United States. For example, the GDPR imposes stringent operational requirements for entities processing personal information and significant penalties for non-compliance, including fines of up to €20 million or 4% of total worldwide revenue, whichever is higher. Additionally, we have historically relied upon a variety of legal bases to transfer certain personal information outside of the European Economic Area, including the EU-U.S. Privacy Shield Framework, the Swiss-U.S. Privacy Shield Framework, and EU Standard Contractual Clauses, or SCCs. These legal bases all have been, and may be, the subject of legal challenges and on July 16, 2020, the Court of Justice of the European Union (CJEU) invalidated the U.S.-EU Privacy Shield framework and imposed additional obligations on companies when relying on the SCCs. This CJEU decision may result in different European Economic Area (EEA) data protection regulators applying differing standards for, or require ad hoc verification of measures taken with respect to, certain data flows. The CJEU's decision will require us to take additional steps to legitimize impacted personal data transfers, and we may find it necessary or desirable to modify our data handling practices in connection with this decision or future legal challenges relating to cross-border data transfers. This could result in increased costs of compliance and limitations on our customers, vendors, and us. This CJEU decision or future legal challenges also could result in us being required to implement duplicative, and potentially expensive, information technology infrastructure and business operations in Europe or could limit our ability to collect or process personal information in Europe, and may serve as a basis for our personal data handling practices, or those of our customers and vendors, to be challenged. Any of these changes with respect to EU data protection law could disrupt our business and otherwise adversely impact our business, financial condition and operating results.

Further, following a referendum in June 2016 in which United Kingdom (UK) voters approved an exit from the EU, the UK officially left the EU on January 31, 2020, with a transitional period set to end on December 31, 2020 (often referred to as "Brexit"). The effect of Brexit will depend on agreements, if any, the UK makes to retain access to EU markets. Brexit creates economic and legal uncertainty in the region and could adversely affect the tax, currency, operational, legal and regulatory regimes to which our business is subject. Brexit may adversely affect our revenues and subject us to new regulatory costs and challenges, in addition to other adverse effects that we are unable effectively to anticipate. The UK implemented a Data Protection Act, effective in May 2018 and statutorily amended in 2019, that substantially implements the GDPR. Brexit has created uncertainty with regard to the future regulation of data protection in the UK and requirements for data transfers between the UK and the EU and other jurisdictions.

Legislative changes in the United States, at both the federal and state level, that could impose new obligations in areas such as privacy and liability for copyright infringement or content by third parties such as various Executive and Congressional efforts to restrict the scope of the protections available to online platforms under Section 230 of the Communications Decency Act, and our current protections from liability for third-party content in the United States could decrease or change. Additionally, recent amendments to U.S. patent laws may affect the ability of companies, including us, to protect their innovations and defend against claims of patent infringement.

In April 2019, the EU passed the Directive on Copyright in the Digital Single Market (the EU Copyright Directive), which expands the liability of online platforms for user-generated content. Each EU member state has two years to implement it. The EU Copyright Directive may increase our costs of operations, our liability for user-generated content, and our litigation costs.

Additionally, we have relationships with third parties that perform a variety of functions such as payments processing, tokenization, vaulting, currency conversion, fraud prevention and data security audits. The laws and regulations related to online payments and other activities of these third parties, including those relating to the processing of data, are complex, subject to change, and vary across different jurisdictions in the United States and globally. As a result, we may be required to spend significant time, effort and expense to comply with applicable laws and regulations. Any failure or claim of our failure to comply, or any failure or claim of failure by the above-mentioned third parties to comply, could increase our costs or could result in liabilities. Additionally, because we accept payment via credit cards, we are subject to global payments industry operating rules and certification requirements governed by PCI Security Standards Council, including the Payment Card Industry Data Security Standard. Any failure by us to comply with these operating rules and certification requirements also may result in costs and liabilities and may result in us losing our ability to accept certain payment cards.

The U.S. and foreign laws and regulations described above, as well as any associated inquiries or investigations or any other regulatory actions, may be costly to comply with and may delay or impede the development of new products and services, result in negative publicity, increase our operating costs, require significant management time and attention, and subject us to remedies that may result in a loss of mDAU or advertisers and otherwise harm our business, including fines or demands or orders that we modify or cease existing business practices.

We currently allow use of our platform without the collection of extensive personal information. We may experience additional pressure to expand our collection of personal information in order to comply with new and additional legal or regulatory demands or we may independently decide to do so. If we obtain such additional personal information, we may be subject to additional legal or regulatory obligations.

Regulatory investigations and settlements could cause us to incur additional expenses or change our business practices in a manner material and adverse to our business.

From time to time we notify the Irish Data Protection Commission and other regulators of certain personal data breaches and privacy or data protection issues, and are subject to inquiries and investigations regarding various aspects of our regulatory compliance. We are currently the subject of inquiries by the Irish Data Protection Commission with respect to our compliance with the GDPR. In the past, we have been subject to regulatory investigations, and we expect to continue to be subject to regulatory scrutiny as our business grows and awareness of our brand increases.

In March 2011, to resolve an investigation into various incidents, we entered into a consent order with the FTC that, among other things, required us to establish an information security program designed to protect non-public consumer information and also requires that we obtain biennial independent security assessments. The obligations under the consent order remain in effect until the later of March 2, 2031, or the date 20 years after the date, if any, on which the U.S. government or the FTC files a complaint in federal court alleging any violation of the order. We expect to continue to be the subject of regulatory inquiries, investigations and audits in the future by the FTC and other regulators around the world. Violation of existing or future regulatory orders, settlements or consent decrees could subject us to substantial fines and other penalties that would adversely impact our financial condition and operating results. For example, on July 28, 2020, we received a draft complaint from the FTC alleging violations of the 2011 consent order with the FTC and the FTC Act. The allegations relate to our use of phone number and/or email address data provided for safety and security purposes for targeted advertising during periods between 2013 and 2019. We estimate that the range of probable loss in this matter is \$150.0 million to \$250.0 million. The matter remains unresolved, and there can be no assurance as to the timing or the terms of any final outcome.

It is possible that a regulatory inquiry, investigation or audit could cause us to incur substantial fines and costs, result in reputational harm, prevent us from offering certain products, services, features or functionalities, require us to change our policies or practices, divert management and other resources from our business, or otherwise materially and adversely impact our business, financial condition and operating results.

We may face lawsuits or incur liability as a result of content published or made available through our products and services.

We have faced and will continue to face claims relating to content that is published or made available through our products and services or third-party products or services. In particular, the nature of our business exposes us to claims related to defamation, intellectual property rights, rights of publicity and privacy, illegal content, misinformation, content regulation and personal injury torts. The laws relating to the liability of providers of online products or services for activities of the people who use them remains somewhat unsettled, both within the United States and internationally. This risk may be enhanced in certain jurisdictions outside the United States where we may be less protected under local laws than we are in the United States. For example, we are subject to legislation in Germany that may impose significant fines for failure to comply with certain content removal and disclosure obligations. Other countries, including Singapore, India, Australia, and the United Kingdom, have implemented or are considering similar legislation imposing penalties for failure to remove certain types of content. In addition, the public nature of communications on our platform exposes us to risks arising from the creation of impersonation accounts intended to be attributed to people on Twitter or our advertisers. We could incur significant costs investigating and defending these claims. If we incur material costs or liability as a result of these occurrences, our business, financial condition and operating results would be adversely impacted.

Our intellectual property rights are valuable, and any inability to protect them could reduce the value of our products, services and brand.

Intellectual property rights are important assets of our business and we seek protection for such rights as appropriate. To establish and protect our trade secrets, trademarks, copyrights, and patents as well as restrictions in confidentiality, license and intellectual property assignment agreements we enter into with our employees, consultants and third parties. Various circumstances and events outside of our control, however, pose threats to our intellectual property rights. We may fail to obtain effective intellectual property protection, effective intellectual property protection may not be available in every country in which our products and services are available, or such laws may provide only limited protection. Also, the efforts we have taken to protect our intellectual property rights may not be sufficient or effective, and any of our intellectual property rights may be challenged, circumvented, infringed or misappropriated which could result in them being narrowed in scope or declared invalid or unenforceable. There can be no assurance our intellectual property rights will be sufficient to protect against others offering products or services that are substantially similar to ours and compete with our business.

We rely on restrictions on the use and disclosure of our trade secrets and other proprietary information contained in agreements we sign with our employees, contractors, and other third parties to limit and control access to and disclosure of our trade secrets and confidential information. These agreements may be breached, or this intellectual property may otherwise be disclosed or become known to our competitors, including through hacking or theft, which could cause us to lose any competitive advantage resulting from these trade secrets and proprietary information.

We are pursuing registration of trademarks and domain names in the United States and in certain jurisdictions outside of the United States. Effective protection of trademarks and domain names is expensive and difficult to maintain, both in terms of application and registration costs as well as the costs of defending and enforcing those rights. We may be required to protect our rights in an increasing number of countries, a process that is expensive and may not be successful or which we may not pursue in every country in which our products and services are distributed or made available.

We are party to numerous agreements that grant licenses to third parties to use our intellectual property. For example, many third parties distribute their content through Twitter, or embed Twitter content in their applications or on their websites, and make use of our trademarks in connection with their services. We have a policy designed to assist third parties in the proper use of our trademarks, and an internal team dedicated to enforcing this policy and protecting our brand. This team routinely reviews reports of improper and unauthorized use of the Twitter trademarks and issues takedown notices or initiates discussions with the third parties to correct the issues. However, there can be no assurance that we will be able to protect against the unauthorized use of our brand or trademarks. If the licensees of our trademarks are not using our trademarks properly and we fail to maintain and enforce our trademark rights, we may limit our ability to protect our trademarks which could result in diminishing the value of our brand or in our trademarks being declared invalid or unenforceable. There is also a risk that one or more of our trademarks could become generic, which could result in such trademark being declared invalid or unenforceable. For example, there is a risk that the word "Tweet" could become so commonly used that it becomes synonymous with any short comment posted publicly on the Internet, and if this happens, we could lose protection of this trademark.

We also seek to obtain patent protection for some of our technology. We may be unable to obtain patent protection for our technologies. Even if patents are issued from our patent applications, which is not certain, our existing patents, and any patents that may be issued in the future, may not provide us with competitive advantages or distinguish our products and services from those of our competitors. In addition, any patents may be contested, circumvented, or found unenforceable or invalid, and we may not be able to prevent third parties from infringing or otherwise violating them. Effective protection of patent rights is expensive and difficult to maintain, both in terms of application and maintenance costs, as well as the costs of defending and enforcing those rights.

Our Innovator's Patent Agreement, or IPA, also can limit our ability to prevent infringement of our patents. In May 2013, we implemented the IPA, which we enter into with our employees and consultants, including our founders. The IPA, which applies to our current and future patents, allows us to assert our patents defensively. The IPA also allows us to assert our patents offensively with the permission of the inventors of the applicable patent. Under the IPA, an assertion of claims is considered to be for a defensive purpose if the claims are asserted: (i) against an entity that has filed, maintained, threatened or voluntarily participated in a patent infringement lawsuit against us or any people on Twitter, or any of our affiliates, customers, suppliers or distributors; (ii) against an entity that has used its patents offensively against any other party in the past ten years, so long as the entity has not instituted the patent infringement lawsuit defensively in response to a patent litigation threat against the entity; or (iii) otherwise to deter a patent litigation threat against us or people on Twitter, or any of our affiliates, customers, suppliers or distributors. In addition, the IPA provides that the above limitations apply to any future owner or exclusive licensee of any of our patents, which could limit our ability to sell or license our patents to third parties. In this case, while we may be able to claim protection of our intellectual property under other rights (such as trade secrets or contractual obligations with our employees not to disclose or use confidential information), we may be unable to assert our patent rights against third parties that we believe are infringing our patents, even if such third parties are developing products and services that compete with our products and services. For example, in the event that an inventor of one of our patents goes to work for another company and that company uses the inventor's patented invention to compete with us, we would not be able to assert that patent against such other company unless the assertion of the patent right is for a defensive purpose since it would be unlikely the employee would consent to offensive use of the patent against his or her current employer. In such event, we would need to rely on trade secret protection or the contractual obligation of the inventor to us not to disclose or use our confidential information. In addition, the terms of the IPA could affect our ability to monetize our intellectual property portfolio.

Significant impairments of our intellectual property rights, and limitations on our ability to assert our intellectual property rights against others, could harm our business and our ability to compete.

Also, obtaining, maintaining and enforcing our intellectual property rights is costly and time consuming. Any increase in the unauthorized use of our intellectual property would adversely impact our business, financial condition and operating results.

We are currently, and expect to be in the future, party to intellectual property rights claims that are expensive and time consuming to defend, and, if resolved adversely, would adversely impact our business, financial condition and operating results.

Companies in the internet, technology and media industries are subject to litigation based on allegations of infringement, misappropriation or other violations of intellectual property rights. Many companies in these industries, including many of our competitors, have substantially larger patent and intellectual property portfolios than we do, which could make us a target for litigation as we may not be able to assert counterclaims against parties that sue us for patent, or other intellectual property infringement. In addition, various “non-practicing entities” that own patents and other intellectual property rights often attempt to assert claims in order to extract value from technology companies. From time to time we receive claims from third parties which allege that we have infringed upon their intellectual property rights. Further, from time to time we may introduce new products, product features and services, including in areas where we currently do not have an offering, which could increase our exposure to patent and other intellectual property claims from competitors and non-practicing entities. In addition, although our standard terms and conditions for our Promoted Products and public APIs do not provide advertisers and platform partners with indemnification for intellectual property claims against them, some of our agreements with advertisers, content partners, platform partners and data partners require us to indemnify them for certain intellectual property claims against them, which could require us to incur considerable costs in defending such claims, and may require us to pay significant damages in the event of an adverse ruling. Such advertisers, content partners, platform partners and data partners may also discontinue use of our products, services and technologies as a result of injunctions or otherwise, which could result in loss of revenue and adversely impact our business.

We presently are involved in a number of intellectual property lawsuits, and as we face increasing competition and develop new products, we expect the number of patent and other intellectual property claims against us may grow. There may be intellectual property or other rights held by others, including issued or pending patents, that cover significant aspects of our products and services, and we cannot be sure that we are not infringing or violating, and have not infringed or violated, any third-party intellectual property rights or that we will not be held to have done so or be accused of doing so in the future. Any claim or litigation alleging that we have infringed or otherwise violated intellectual property or other rights of third parties, with or without merit, and whether or not settled out of court or determined in our favor, could be time-consuming and costly to address and resolve, and could divert the time and attention of our management and technical personnel. Some of our competitors have substantially greater resources than we do and are able to sustain the costs of complex intellectual property litigation to a greater degree and for longer periods of time than we could. The outcome of any litigation is inherently uncertain, and there can be no assurances that favorable final outcomes will be obtained in all cases. In addition, plaintiffs may seek, and we may become subject to, preliminary or provisional rulings in the course of any such litigation, including potential preliminary injunctions requiring us to cease some or all of our operations. We may decide to settle such lawsuits and disputes on terms that are unfavorable to us. Similarly, if any litigation to which we are a party is resolved adversely, we may be subject to an unfavorable judgment that may not be reversed upon appeal. The terms of such a settlement or judgment may require us to cease some or all of our operations or pay substantial amounts to the other party. In addition, we may have to seek a license to continue practices found to be in violation of a third-party’s rights. If we are required, or choose to enter into royalty or licensing arrangements, such arrangements may not be available on reasonable terms, or at all, and may significantly increase our operating costs and expenses. As a result, we may also be required to develop or procure alternative non-infringing technology, which could require significant effort and expense or discontinue use of the technology. An unfavorable resolution of the disputes and litigation referred to above would adversely impact our business, financial condition and operating results.

We have incurred significant operating losses in the past, and we may not be able to maintain profitability or accurately predict fluctuations in our operating results from quarter to quarter.

In the three and six months ended June 30, 2020, as well as other periods in the past, we have incurred significant operating losses. While we were profitable on a GAAP basis for 2018 and 2019, our quarterly operating results have fluctuated in the past and will fluctuate in the future. As a result, our past quarterly operating results are not necessarily indicators of future performance. Our operating results in any given quarter can be influenced by numerous factors, many of which we are unable to predict or are outside of our control, including:

- our ability to attract and retain mDAU, advertisers, content partners and platform partners;
- the occurrence of planned significant events, such as major sporting events, political elections, or awards shows, or unplanned significant events, such as natural disasters and political revolutions, as well as seasonality which may differ from our expectations;
- the impacts of the COVID-19 pandemic and governmental and business actions in response thereto on the global economy;
- the pricing of our advertising services or data licensing, and our ability to maintain or improve revenue and margins;
- the development and introduction of new products or services, changes in features of existing products or services or de-emphasis or termination of existing products, product features or services;
- the actions of our competitors;

- increases in research and development, marketing and sales and other operating expenses that we may incur to grow and expand our operations and to remain competitive, including stock-based compensation expense and costs related to our technology infrastructure;
- costs related to the acquisition of businesses, talent, technologies or intellectual property, including potentially significant amortization costs;
- system failures resulting in the inaccessibility of our products and services;
- actual or perceived breaches of security or privacy, and the costs associated with remediating any such breaches;
- adverse litigation judgments, settlements or other litigation-related costs, and the fees associated with investigating and defending claims;
- changes in the legislative or regulatory environment, including with respect to security, tax, privacy, data protection, or content, or enforcement by government regulators, including fines, orders or consent decrees;
- changes in reserves or other non-cash credits or charges, such as establishment or releases of deferred tax assets valuation allowance, impairment charges or purchase accounting adjustments;
- changes in our expected estimated useful life of property and equipment and intangible assets;
- fluctuations in currency exchange rates and changes in the proportion of our revenue and expenses denominated in foreign currencies;
- changes in U.S. generally accepted accounting principles; and
- changes in global or regional business or macroeconomic conditions.

Given the rapidly evolving markets in which we compete, our historical operating results may not be useful to you in predicting our future operating results. If our revenue growth rate slows, we expect that the seasonality in our business may become more pronounced and may in the future cause our operating results to fluctuate. For example, advertising spending is traditionally seasonally strong in the fourth quarter of each year, and we believe that this seasonality affects our quarterly results, which generally reflect higher sequential advertising revenue growth from the third to fourth quarter compared to sequential advertising revenue growth from the fourth quarter to the subsequent first quarter. Additionally, certain new revenue products or product features may carry higher costs relative to our other products, which may decrease our margins, and we may incur increased costs to scale our operations if mDAU and engagement on our platform increase. If we are unable to generate adequate revenue growth and to manage our expenses, we may incur significant losses in future periods and may not be able to maintain profitability.

Many of our products and services contain open source software, and we license some of our software through open source projects, which may pose particular risks to our proprietary software, products, and services in a manner that could adversely impact our business.

We use open source software in our products and services and will use open source software in the future. In addition, we regularly contribute software source code to open source projects under open source licenses or release internal software projects under open source licenses, and anticipate doing so in the future. The terms of many open source licenses to which we are subject have not been interpreted by U.S. or foreign courts, and there is a risk that open source software licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to provide or distribute our products or services. Additionally, under some open source licenses, if we combine our proprietary software with open source software in a certain manner, third parties may claim ownership of, or demand release of, the open source software or derivative works that we developed using such software, which could include our proprietary source code. Such third parties may also seek to enforce the terms of the applicable open source license through litigation which, if successful, could require us to make our proprietary software source code freely available, purchase a costly license or cease offering the implicated products or services unless and until we can re-engineer them to avoid infringement. This re-engineering process could require significant additional research and development resources, and we may not be able to complete it successfully. In addition to risks related to open source license requirements, use of certain open source software may pose greater risks than use of third-party commercial software, since open source licensors generally do not provide warranties or controls on the origin of software. Any of these risks could be difficult to eliminate or manage, and, if not addressed, could adversely impact our business, financial condition and operating results.

We rely on assumptions and estimates to calculate certain of our key metrics, and real or perceived inaccuracies in such metrics may harm our reputation and negatively affect our business.

We calculate our mDAU using internal company data that has not been independently verified. While these numbers are based on what we believe to be reasonable calculations for the applicable period of measurement, there are inherent challenges in measuring mDAU and mDAU engagement. For example, there are a number of false or spam accounts in existence on our platform. We estimate that the average of false or spam accounts during the first quarter of 2020 continued to represent fewer than 5% of our mDAU during the quarter. However, this estimate is based on an internal review of a sample of accounts and we apply significant judgment in making this determination. As such, our estimation of false or spam accounts may not accurately represent the actual number of such accounts, and the actual number of false or spam accounts could be higher than we have currently estimated. We are continually seeking to improve our ability to estimate the total number of spam accounts and eliminate them from the calculation of our mDAU, but we otherwise treat multiple accounts held by a single person or organization as multiple accounts for purposes of calculating our mDAU because we permit people and organizations to have more than one account. Additionally, some accounts used by organizations are used by many people within the organization. As such, the calculations of our mDAU may not accurately reflect the actual number of people or organizations using our platform. We regularly review and may adjust our processes for calculating our internal metrics to improve their accuracy. Our measures of mDAU growth and engagement may differ from estimates published by third parties or from similarly-titled metrics of our competitors due to differences in methodology. If advertisers, content or platform partners or investors do not perceive our metrics to be accurate representations of our total accounts or mDAU engagement, or if we discover material inaccuracies in our metrics, our reputation may be harmed and content partners, advertisers and platform partners may be less willing to allocate their budgets or resources to our products and services, which could negatively affect our business and operating results. Further, as our business develops, we may revise or cease reporting metrics if we determine that such metrics are no longer accurate or appropriate measures of our performance. For example, we believe that mDAU, and its related growth, are the best ways to measure our success against our objectives and to show the size of our audience and engagement going forward, so we discontinued disclosing monthly active usage after the first quarter of 2019. If investors, analysts or customers do not believe our reported measures, such as mDAU, are sufficient or accurately reflect our business, we may receive negative publicity and our operating results may be adversely impacted.

Acquisitions, divestitures and investments could disrupt our business and harm our financial condition and operating results.

Our success will depend, in part, on our ability to expand our products, product features and services, and grow our business in response to changing technologies, demands of people on Twitter and our advertisers and competitive pressures. In some circumstances, we may determine to do so through the acquisition of complementary businesses and technologies rather than through internal development, including, for example, our acquisitions of Periscope, a live-streaming video mobile application, and MoPub, a mobile-focused advertising exchange. The identification of suitable acquisition candidates can be difficult, time-consuming and costly, and we may not be able to successfully complete identified acquisitions. The risks we face in connection with acquisitions include:

- diversion of management time and focus from operating our business to addressing acquisition integration challenges;
- retention of key employees from the acquired company;
- cultural challenges associated with integrating employees from the acquired company into our organization;
- integration of the acquired company's accounting, management information, human resources and other administrative systems and processes;
- the need to implement or improve controls, procedures, and policies at a business that prior to the acquisition may have lacked effective controls, procedures and policies;
- liability for activities of the acquired company before the acquisition, including intellectual property infringement claims, violations of laws, commercial disputes, tax liabilities and other known and unknown liabilities;
- unanticipated write-offs or charges; and
- litigation or other claims in connection with the acquired company, including claims from terminated employees, former stockholders or other third parties.

Our failure to address these risks or other problems encountered in connection with our past or future acquisitions and investments could cause us to fail to realize the anticipated benefits of these acquisitions or investments, cause us to incur unanticipated liabilities, and harm our business generally. Future acquisitions could also result in dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities, amortization expenses, incremental operating expenses or the impairment of goodwill, any of which could adversely impact our financial condition and operating results.

We also make investments in privately-held companies in furtherance of our strategic objectives. Many of the instruments in which we invest are non-marketable at the time of our initial investment. We may not realize a return and may recognize a loss on such investments.

In certain cases, we have also divested or stopped investing in certain products, including products that we acquired. In these cases, we have needed to and we may in the future need to restructure operations, terminate employees and/or incur other expenses. We may not realize the expected benefits and cost savings of these actions and our operating results may be adversely impacted.

If we fail to maintain an effective system of disclosure controls and internal control over financial reporting, our ability to produce timely and accurate financial statements or comply with applicable regulations could be impaired.

As a public company, we are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, and the listing standards of the New York Stock Exchange. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. In order to maintain and improve the effectiveness of our disclosure controls and procedures and internal control over financial reporting, we have expended, and anticipate that we will continue to expend, significant resources, including accounting-related costs and significant management oversight.

Any failure to develop or maintain effective controls, or any difficulties encountered in their implementation or improvement, could cause us to be subject to one or more investigations or enforcement actions by state or federal regulatory agencies, stockholder lawsuits or other adverse actions requiring us to incur defense costs, pay fines, settlements or judgments. Any such failures could also cause investors to lose confidence in our reported financial and other information, which would likely have a negative effect on the trading price of our common stock. In addition, if we are unable to continue to meet these requirements, we may not be able to remain listed on the New York Stock Exchange.

Our debt obligations could adversely affect our financial condition.

In 2014, we issued \$954.0 million in aggregate principal amount of 1.00% convertible senior notes due 2021, or the 2021 Notes, in private placements to qualified institutional buyers. In 2018, we issued an additional \$1.15 billion in aggregate principal amount of 0.25% convertible senior notes due 2024, or the 2024 Notes, in a private placement to qualified institutional buyers. In December 2019, we issued \$700.0 million in aggregate principal amount of 3.875% senior notes due 2027, which we refer to as the 2027 Notes. In March 2020, we issued \$1.0 billion in aggregate principal amount of 0.375% convertible senior notes due 2025, or the 2025 Notes. We refer to the 2021 Notes, the 2024 Notes and the 2025 Notes as the Convertible Notes, and we refer to the Convertible Notes and the 2027 Notes as the Notes. As of June 30, 2020, we had \$3.80 billion in aggregate principal amount of outstanding Notes. As of June 30, 2020, we also had an undrawn unsecured revolving credit facility providing for loans in the aggregate principal amount of \$500.0 million.

Our debt obligations could adversely impact us. For example, these obligations could:

- require us to use a substantial portion of our cash flow from operations to pay principal and interest on debt, including the Notes, or to repurchase our Notes when required upon the occurrence of certain change of control events or otherwise pursuant to the terms thereof, which will reduce the amount of cash flow available to fund working capital, capital expenditures, acquisitions, and other business activities;
- require us to use cash and/or issue shares of our common stock to settle any conversion obligations of the Convertible Notes;
- result in certain of our debt instruments, including the Notes, being accelerated or being deemed to be in default if certain terms of default are triggered, such as applicable cross payment default and/or cross-acceleration provisions;
- adversely impact our credit rating, which could increase future borrowing costs;
- limit our future ability to raise funds for capital expenditures, strategic acquisitions or business opportunities, and other general corporate requirements;
- restrict our ability to create or incur liens and enter into sale-leaseback financing transactions;
- increase our vulnerability to adverse economic and industry conditions;
- with respect to indebtedness other than the Notes, increase our exposure to interest rate risk from variable rate indebtedness;
- dilute our earnings per share as a result of the conversion provisions in the Convertible Notes; and
- place us at a competitive disadvantage compared to our less leveraged competitors.

Our ability to meet our payment obligations under our debt instruments depends on our ability to generate significant cash flows in the future. This, to some extent, is subject to market, economic, financial, competitive, legislative, and regulatory factors as well as other factors that are beyond our control. There can be no assurance that our business will generate cash flow from operations, or that additional capital will be available to us, in amounts sufficient to enable us to meet our debt payment obligations and to fund other liquidity needs. Additionally, events and circumstances may occur which would cause us to not be able to satisfy applicable draw-down conditions and utilize our revolving credit facility. If we are unable to generate sufficient cash flows to service our debt payment obligations, we may need to refinance or restructure our debt, sell assets, reduce or delay capital investments, or seek to raise additional capital. If we are unable to implement one or more of these alternatives on commercially reasonable terms or at all, we may be unable to meet our debt payment obligations, which would materially and adversely impact our business, financial condition and operating results.

Our business is subject to the risks of earthquakes, fire, power outages, floods and other catastrophic events, and to interruption by man-made problems such as terrorism.

A significant natural disaster, such as the COVID-19 pandemic or an earthquake, fire, flood or significant power outage could have a material adverse impact on our business, operating results, and financial condition. For example, the COVID-19 pandemic has led to certain business disruptions as described in our other risk factors, including travel bans and restrictions, shelter-in-place orders and the postponement or cancellation of major events, which have adversely affected demand for our advertising products and the economy as a whole, and which may continue to have an adverse effect on our business, financial condition and operating results. Our headquarters and certain of our co-located data center facilities are located in the San Francisco Bay Area, a region known for seismic activity. Despite any precautions we may take, the occurrence of a natural disaster or other unanticipated problems at our data centers could result in lengthy interruptions in our services. In addition, acts of terrorism and other geo-political unrest could cause disruptions in our business. All of the aforementioned risks may be further increased if our disaster recovery plans prove to be inadequate. We have implemented a disaster recovery program, which allows us to move production to a back-up data center in the event of a catastrophe. Although this program is functional, we do not currently serve network traffic equally from each data center, so if our primary data center shuts down, there will be a period of time that our products or services, or certain of our products or services, will remain inaccessible or people may experience severe issues accessing our products and services. We do not carry business interruption insurance sufficient to compensate us for the potentially significant losses, including the potential harm to our business that may result from interruptions in our ability to provide our products and services. Any such natural disaster or man-made problem could adversely impact our business, financial condition and operating results.

We may have exposure to greater than anticipated tax liabilities, which could adversely impact our operating results.

Our income tax obligations are based in part on our corporate operating structure, including the manner in which we develop, value and use our intellectual property and the scope of our international operations. We are subject to review and audit by tax authorities in the United States (federal and state), Ireland, and other foreign jurisdictions and the laws in those jurisdictions are subject to interpretation. Tax authorities may disagree with and challenge some of the positions we have taken and any adverse outcome of such an audit could have a negative effect on our financial position and operating results. In addition, our future income taxes could be adversely affected by earnings being lower than anticipated in jurisdictions that have lower statutory tax rates and higher than anticipated in jurisdictions that have higher statutory tax rates, by changes in the valuation of our deferred tax assets and liabilities, or by changes in tax laws, regulations or accounting principles, as well as certain discrete items. For example, the legislation commonly referred to as the 2017 Tax Cuts and Jobs Act significantly affected U.S. tax law by changing how U.S. income tax is assessed on multinational corporations. The U.S. Department of Treasury has issued and will continue to issue regulations and interpretive guidance that may significantly impact how we will apply the law and impact our results of operations.

In addition, the Organization for Economic Cooperation and Development (OECD) has published proposals covering a number of issues, including country-by-country reporting, permanent establishment rules, transfer pricing rules, tax treaties and taxation of the digital economy. Future tax reform resulting from this development may result in changes to long-standing tax principles, which could adversely affect our effective tax rate or result in higher cash tax liabilities. In 2018, the European Commission proposed a series of measures aimed at ensuring a fair and efficient taxation of digital businesses operating within the European Union. Some countries, in the European Union and beyond, have unilaterally moved to introduce their own digital services tax (DST) to capture tax revenue on digital services more immediately. Notably France, Italy, Austria, the United Kingdom, Turkey, India and Spain have enacted or will soon enact a digital tax. Such laws would increase our tax obligations in those countries or change the manner in which we operate our business.

On June 7, 2019, the Ninth Circuit Court of Appeals issued a new opinion in the case of Altera Corp. v. Commissioner, which upheld Department of Treasury regulations which require related parties in an intercompany cost-sharing arrangement to share expenses related to stock-based compensation. We have prepared the consolidated financial statements consistent with this opinion. In February 2020, Altera Corp. filed a petition to appeal the decision with the Supreme Court of the United States. On June 22, 2020, the Supreme Court denied the petition. We have considered the impact of the Supreme Court's denial and there were no material impacts to our consolidated financial statements.

If our goodwill or intangible assets become impaired, we may be required to record a significant charge to earnings.

Under generally accepted accounting principles in the United States, or GAAP, we review our intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. Goodwill is required to be tested for impairment at least annually. An adverse change in market conditions or financial results, particularly if such change has the effect of changing one of our critical assumptions or estimates, could result in a change to the estimation of fair value that could result in an impairment charge to our goodwill or intangible assets. Any such material charges may have a material and adverse impact on our operating results.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

As of December 31, 2019, we had U.S. federal net operating loss carryforwards of approximately \$2.34 billion and state net operating loss carryforwards of approximately \$1.26 billion. As of December 31, 2019, we had federal and state research and development credit carryforwards of \$345.2 million and \$264.8 million, respectively. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an "ownership change," the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes, such as research tax credits, to offset its post-change income and taxes may be limited. In general, an "ownership change" occurs if there is a cumulative change in our ownership by "5% shareholders" that exceeds 50 percentage points over a rolling three-year period. Similar rules may apply under state tax laws. In the event that we have experienced an ownership change, or if we experience one or more ownership changes in the future, then we may be limited in our ability to use our net operating loss carryforwards and other tax assets to reduce taxes owed on the net taxable income that we earn. Any such limitations on the ability to use our net operating loss carryforwards and other tax assets could adversely impact our business, financial condition and operating results.

Risks Related to Ownership of Our Common Stock

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

Our amended and restated certificate of incorporation, amended and restated bylaws and Delaware law contain provisions which could have the effect of rendering more difficult, delaying, or preventing an acquisition deemed undesirable by our board of directors. Among other things, our amended and restated certificate of incorporation and amended and restated bylaws include provisions:

- creating a classified board of directors whose members serve staggered three-year terms;
- authorizing "blank check" preferred stock, which could be issued by our board of directors without stockholder approval and may contain voting, liquidation, dividend and other rights superior to our common stock;
- limiting the liability of, and providing indemnification to, our directors and officers;
- limiting the ability of our stockholders to call and bring business before special meetings;
- requiring advance notice of stockholder proposals for business to be conducted at meetings of our stockholders and for nominations of candidates for election to our board of directors; and
- controlling the procedures for the conduct and scheduling of stockholder meetings.

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

As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation law, which prevents certain stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations without approval of the holders of at least two-thirds of our outstanding common stock not held by such 15% or greater stockholder.

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

The market price of our common stock has been and will likely continue to be volatile, and you could lose all or part of your investment.

The market price of our common stock has been and may continue to be highly volatile in response to various factors, some of which are beyond our control. In addition to the factors discussed in this “Risk Factors” section and elsewhere in this Quarterly Report on Form 10-Q, factors that could cause fluctuations in the market price of our common stock include the following:

- price and volume fluctuations in the overall stock market from time to time, including fluctuations due to general economic uncertainty or negative market sentiment, in particular related to the COVID-19 pandemic;
- volatility in the market prices and trading volumes of technology stocks;
- changes in operating performance and stock market valuations of other technology companies generally, or those in our industry in particular;
- sales of shares of our common stock by us or our stockholders;
- rumors and market speculation involving us or other companies in our industry;
- failure of securities analysts to maintain coverage of us, changes in financial estimates by securities analysts who follow our company, or our failure to meet these estimates or the expectations of investors;
- the financial or non-financial metric projections we may provide to the public, any changes in those projections or our failure to meet those projections;
- announcements by us or our competitors of new products or services;
- the public’s reaction to our press releases, other public announcements and filings with the SEC;
- actual or anticipated changes in our operating results or fluctuations in our operating results;
- actual or anticipated developments in our business, our competitors’ businesses or the competitive landscape generally;
- our issuance of shares of our common stock, whether in connection with an acquisition or upon conversion of some or all of our outstanding Convertible Notes;
- litigation or regulatory action involving us, our industry or both, or investigations by regulators into our operations or those of our competitors;
- developments or disputes concerning our intellectual property or other proprietary rights;
- announced or completed acquisitions of businesses or technologies by us or our competitors;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business;
- changes in accounting standards, policies, guidelines, interpretations or principles;
- any significant change in our management; and
- general economic conditions and slow or negative growth of our markets.

In addition, in the past, following periods of volatility in the overall market and the market price of a particular company’s securities, securities class action litigation has often been instituted against these companies. Any securities litigation can result in substantial costs and a diversion of our management’s attention and resources. We are currently subject to securities litigation and may experience more such litigation following any future periods of volatility.

The note hedge and warrant transactions may affect the value of our common stock.

Concurrent with the issuance of the 2021 Notes and 2024 Notes, we entered into note hedge transactions with certain financial institutions, which we refer to as the option counterparties. The note hedge transactions are generally expected to reduce the potential dilution upon any conversion of the 2021 Notes and 2024 Notes and/or offset any cash payments we are required to make in excess of the principal amount converted with respect to the 2021 Notes or 2024 Notes, as the case may be. We also entered into warrant transactions with the option counterparties. However, the warrant transactions could separately have a dilutive effect to the extent that the market price of our common stock exceeds the applicable strike price of the warrants.

The option counterparties or their respective affiliates may modify their initial hedge positions by entering into or unwinding various derivatives contracts with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions prior to the maturity of the 2021 Notes and 2024 Notes, as applicable (and are likely to do so during any applicable observation period related to a conversion of the 2021 Notes and 2024 Notes, as applicable, or following any repurchase of the 2021 Notes and 2024 Notes, as applicable, by us on any fundamental change repurchase date or otherwise). This activity could cause or avoid an increase or a decrease in the market price of our common stock.

In addition, if any such convertible note hedge and warrant transactions fail to become effective, the option counterparties or their respective affiliates may unwind their hedge positions with respect to our common stock, which could adversely affect the value of our common stock.

If securities or industry analysts change their recommendations regarding our common stock adversely, the price of our common stock and trading volume could decline.

The trading market for our common stock is influenced, to some extent, by the research and reports that securities or industry analysts publish about us, our business, our industry, our market or our competitors. If any of the analysts who cover us change their recommendation regarding our common stock adversely, or provide more favorable relative recommendations about our competitors, the price of our common stock would likely decline.

Item 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Unregistered Sales of Equity Securities

During the three months ended June 30, 2020, we issued a total of 1,002,235 shares of our common stock in connection with the acquisition of one company to certain former shareholders of the acquired company.

The foregoing transaction did not involve any underwriters, any underwriting discounts or commissions, or any public offering. We believe the offer, sale, and issuance of the above securities was exempt from registration under the Securities Act of 1933, as amended (the "Act") by virtue of Section 4(a)(2) of the Act, because the issuance of securities to the recipients did not involve a public offering. The recipients of the securities in the transaction represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates issued in the transaction. All recipients had adequate access, through their relationships with us or otherwise, to information about us. The issuance of these securities was made without any general solicitation or advertising.

Item 6. EXHIBITS

The documents listed in the Exhibit Index of this Quarterly Report on Form 10-Q are incorporated by reference or are filed with this Quarterly Report on Form 10-Q, in each case as indicated therein (numbered in accordance with Item 601 of Regulation S-K).

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Form	File No.	Incorporated by Reference Exhibit	Filing Date
10.1	Form of Amended and Restated Indemnification Agreement				
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
32.1†	Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
101	The following financial statements from the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020, formatted in Inline XBRL: (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Comprehensive Income (Loss), (iv) Consolidated Statements of Stockholders' Equity, (v) Consolidated Statements of Cash Flows, and (vi) Notes to Consolidated Financial Statements.				
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				

† The certifications attached as Exhibit 32.1 that accompany this Quarterly Report on Form 10-Q, are deemed furnished and not filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of Twitter, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Quarterly Report on Form 10-Q, irrespective of any general incorporation language contained in such filing

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Quarterly Report on Form 10-Q to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: August 3, 2020

TWITTER, INC.

By: /s/ Jack Dorsey

Jack Dorsey
Chief Executive Officer
(Principal Executive Officer)

Date: August 3, 2020

By: /s/ Ned Segal

Ned Segal
Chief Financial Officer
(Principal Financial Officer)

DIRECTOR & OFFICER INDEMNIFICATION AGREEMENT

THIS INDEMNIFICATION AGREEMENT (the "Agreement") is made and entered into as of _____, between Twitter, Inc., a Delaware corporation (the "Company"), and _____ ("Indemnitee").

WITNESSETH THAT:

WHEREAS, highly competent persons have become more reluctant to serve corporations as directors or in other capacities unless they are provided with adequate protection through insurance or adequate indemnification against inordinate risks of claims and actions against them arising out of their service to and activities on behalf of the corporation;

WHEREAS, the Board of Directors of the Company (the "Board") has determined that, in order to attract and retain qualified individuals, the Company will attempt to maintain on an ongoing basis, at its sole expense, liability insurance to protect persons serving the Company and its subsidiaries from certain liabilities. Although the furnishing of such insurance has been a customary and widespread practice among United States-based corporations and other business enterprises, the Company believes that, given current market conditions and trends, such insurance may be available to it in the future only at higher premiums and with more exclusions. At the same time, directors, officers, and other persons in service to corporations or business enterprises are being increasingly subjected to expensive and time-consuming litigation relating to, among other things, matters that traditionally would have been brought only against the Company or business enterprise itself. Indemnitee may also be entitled to indemnification pursuant to the General Corporation Law of the State of Delaware ("DGCL"). The Bylaws and the DGCL expressly provide that the indemnification provisions set forth therein are not exclusive, and thereby contemplate that contracts may be entered into between the Company and members of the board of directors, officers and other persons with respect to indemnification;

WHEREAS, the uncertainties relating to such insurance and to indemnification have increased the difficulty of attracting and retaining such persons;

WHEREAS, the Board has determined that the increased difficulty in attracting and retaining such persons is detrimental to the best interests of the Company's stockholders and that the Company should act to assure such persons that there will be increased certainty of such protection in the future;

WHEREAS, it is reasonable, prudent and necessary for the Company contractually to obligate itself to indemnify, and to advance expenses on behalf of, such persons to the fullest extent permitted by applicable law so that they will serve or continue to serve the Company free from undue concern that they will not be so indemnified;

WHEREAS, this Agreement is a supplement to and in furtherance of the Bylaws of the Company and any resolutions adopted pursuant thereto, and shall not be deemed a substitute therefor, nor to diminish or abrogate any rights of Indemnitee thereunder;

WHEREAS, Indemnitee does not regard the protection available under the Company's Bylaws and insurance as adequate in the present circumstances, and may not be willing to serve as an officer or director without adequate protection, and the Company desires Indemnitee to serve in such capacity. Indemnitee is willing to serve, continue to serve and to take on additional service for or on behalf of the Company on the condition that he be so indemnified; and

NOW, THEREFORE, in consideration of Indemnitee's agreement to serve as an officer or director after the date hereof, the parties hereto agree as follows:

1. Indemnity of Indemnitee. The Company hereby agrees to hold harmless and indemnify Indemnitee to the fullest extent permitted by law, as such may be amended from time to time. In furtherance of the foregoing indemnification, and without limiting the generality thereof:

(a) Proceedings Other Than Proceedings by or in the Right of the Company. Indemnitee shall be entitled to the rights of indemnification provided in this Section 1(a) if, by reason of his Corporate Status (as hereinafter defined), the Indemnitee is, or is threatened to be made, a party to or participant in any Proceeding (as hereinafter defined) other than a Proceeding by or in the right of the Company. Pursuant to this Section 1(a), Indemnitee shall be indemnified against all Expenses (as hereinafter defined), judgments, penalties, fines, and amounts paid in settlement, actually and reasonably incurred by him or on his behalf, in connection with such Proceeding or any claim, issue or matter therein, if the Indemnitee acted in good faith and in a manner the Indemnitee

reasonably believed to be in or not opposed to the best interests of the Company, and with respect to any criminal Proceeding, had no reasonable cause to believe the Indemnitee's conduct was unlawful.

(b) Proceedings by or in the Right of the Company. Indemnitee shall be entitled to the rights of indemnification provided in this Section 1(b) if, by reason of his Corporate Status, the Indemnitee is, or is threatened to be made, a party to or participant in any Proceeding brought by or in the right of the Company. Pursuant to this Section 1(b), Indemnitee shall be indemnified against all Expenses actually and reasonably incurred by the Indemnitee or on the Indemnitee's behalf, in connection with such Proceeding if the Indemnitee acted in good faith and in a manner the Indemnitee reasonably believed to be in or not opposed to the best interests of the Company; provided, however, if applicable law so provides, no indemnification against such Expenses shall be made in respect of any claim, issue or matter in such Proceeding as to which Indemnitee shall have been adjudged to be liable to the Company unless and to the extent that the Court of Chancery of the State of Delaware shall determine that such indemnification may be made.

(c) Indemnification for Expenses of a Party Who is Wholly or Partly Successful. Notwithstanding any other provision of this Agreement, to the extent that Indemnitee is, by reason of his Corporate Status, a party to and is successful, on the merits or otherwise, in any Proceeding, he shall be indemnified to the maximum extent permitted by law, as such may be amended from time to time, against all Expenses actually and reasonably incurred by him or on his behalf in connection therewith. If Indemnitee is not wholly successful in such Proceeding but is successful, on the merits or otherwise, as to one or more but less than all claims, issues or matters in such Proceeding, the Company shall indemnify Indemnitee against all Expenses actually and reasonably incurred by him or on his behalf in connection with each successfully resolved claim, issue or matter. For purposes of this Section and without limitation, the termination of any claim, issue or matter in such a Proceeding by dismissal, with or without prejudice, shall be deemed to be a successful result as to such claim, issue or matter.

(d) Partial Indemnification. If Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of Expenses, but not, however, for the total amount thereof, the Company shall nevertheless indemnify Indemnitee for the portion thereof to which Indemnitee is entitled.

2. Additional Indemnity. In addition to, and without regard to any limitations on, the indemnification provided for in Section 1 of this Agreement, the Company shall and hereby does indemnify and hold harmless Indemnitee against all Expenses, judgments, penalties, fines and amounts paid in settlement actually and reasonably incurred by him or on his behalf if, by reason of his Corporate Status, he is, or is threatened to be made, a party to or participant in any Proceeding (including a Proceeding by or in the right of the Company), including, without limitation, all liability arising out of the negligence or active or passive wrongdoing of Indemnitee. The only limitation that shall exist upon the Company's obligations pursuant to this Agreement shall be that the Company shall not be obligated to make any payment to Indemnitee that is finally determined (under the procedures, and subject to the presumptions, set forth in Sections 6 and 7 hereof) to be unlawful.

3. Contribution. If the indemnification provided for in this Agreement is unavailable to Indemnitee for any reason whatsoever in connection with a Proceeding in which Indemnitee is or was a party by reason of his Corporate Status and in which the Company is jointly liable with Indemnitee (or would be if joined in such Proceeding), then to the fullest extent permissible under applicable law and public policy, the Company, in lieu of indemnifying Indemnitee, shall contribute to the amount incurred by Indemnitee, whether for judgments, fines, penalties, excise taxes, amounts paid or to be paid in settlement and/or for Expenses, in such proportion as is deemed fair and reasonable in light of all of the circumstances of such Proceeding in order to reflect (i) the relative benefits received by the Company and Indemnitee as a result of the event(s) and/or transaction(s) giving cause to such Proceeding; and/or (ii) the relative fault of the Company (and its directors, officers, employees and agents) and Indemnitee in connection with such event(s) and/or transaction(s).

4. Indemnification for Expenses of a Witness. Notwithstanding any other provision of this Agreement, to the extent that Indemnitee is, by reason of his Corporate Status, a witness in any Proceeding to which Indemnitee is not a party, he shall be indemnified against all Expenses actually and reasonably incurred by him or on his behalf in connection therewith.

5. Advancement of Expenses. Notwithstanding any other provision of this Agreement, the Company shall advance all Expenses incurred by or on behalf of Indemnitee in connection with any Proceeding by reason of Indemnitee's Corporate Status within thirty (30) days after the receipt by the Company of a statement or statements from Indemnitee requesting such advance or advances from time to time prior to final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by Indemnitee and shall include or be preceded or accompanied by an undertaking by or on behalf of Indemnitee to repay any Expenses advanced if it shall ultimately be determined that Indemnitee is not entitled to be indemnified against such Expenses. If, when and to the extent that it is so determined that Indemnitee would not be permitted to be so indemnified under applicable law, the

Company shall be entitled to be reimbursed by Indemnitee (who hereby agrees to reimburse the Company) for all such amounts theretofore paid. Any advances and undertakings to repay pursuant to this Section 5 shall be unsecured and interest free.

6. Procedures and Presumptions for Determination of Entitlement to Indemnification. It is the intent of this Agreement to secure for Indemnitee rights of indemnity that are as favorable as may be permitted under the Delaware General Corporation Law and public policy of the State of Delaware. Accordingly, the parties agree that the following procedures and presumptions shall apply in the event of any question as to whether Indemnitee is entitled to indemnification under this Agreement:

(a) To obtain indemnification under this Agreement, Indemnitee shall submit to the Company a written request, including therein or therewith such documentation and information as is reasonably available to Indemnitee and is reasonably necessary to determine whether and to what extent Indemnitee is entitled to indemnification. The Secretary of the Company shall, promptly upon receipt of such a request for indemnification, advise the Board of Directors in writing that Indemnitee has requested indemnification.

(b) Upon written request by Indemnitee for indemnification pursuant to the first sentence of Section 6(a) hereof, a determination, if required by applicable law, with respect to Indemnitee's entitlement thereto shall be made in the specific case by one of the following four methods (which shall be at the election of the board if there has not been a Change of Control, and which shall be at the election of the Indemnitee if there has been a Change of Control: (1) by a majority vote of the Disinterested Directors, even though less than a quorum, (2) by a committee of Disinterested Directors designated by a majority vote of the Disinterested Directors, even though less than a quorum, (3) if there are no Disinterested Directors or if the Disinterested Directors so direct, by Independent Counsel in a written opinion to the Board of Directors, a copy of which shall be delivered to the Indemnitee, or (4) if so directed by the Board of Directors, by the stockholders of the Company.

(c) If the determination of entitlement to indemnification is to be made by Independent Counsel pursuant to Section 6(b) hereof, the Independent Counsel shall be selected as provided in this Section 6(c). The Independent Counsel shall be selected by the Board of Directors if there has not been a Change of Control. The Independent Counsel shall be selected by the Indemnitee if there has been a Change of Control. In either case, the non-selecting party may, within 10 days after such written notice of selection shall have been given, deliver to the Company or Indemnitee, as the case may be, a written objection to such selection; provided, however, that such objection may be asserted only on the ground that the Independent Counsel so selected does not meet the requirements of "Independent Counsel" as defined in Section 13 of this Agreement, and the objection shall set forth with particularity the factual basis of such assertion. Absent a proper and timely objection, the person so selected shall act as Independent Counsel. If a written objection is made and substantiated, the Independent Counsel selected may not serve as Independent Counsel unless and until such objection is withdrawn or a court has determined that such objection is without merit. If, within 20 days after submission by Indemnitee of a written request for indemnification pursuant to Section 6(a) hereof, no Independent Counsel shall have been selected and not objected to, either the Company or Indemnitee may petition the Court of Chancery of the State of Delaware or other court of competent jurisdiction for resolution of any objection which shall have been made by the Indemnitee to the Company's selection of Independent Counsel and/or for the appointment as Independent Counsel of a person selected by the court or by such other person as the court shall designate, and the person with respect to whom all objections are so resolved or the person so appointed shall act as Independent Counsel under Section 6(b) hereof. The Company shall pay any and all reasonable fees and expenses of Independent Counsel incurred by such Independent Counsel in connection with acting pursuant to Section 6(b) hereof, and the Company shall pay all reasonable fees and expenses incident to the procedures of this Section 6(c), regardless of the manner in which such Independent Counsel was selected or appointed.

(d) In making a determination with respect to entitlement to indemnification hereunder, the person or persons or entity making such determination shall presume that Indemnitee is entitled to indemnification under this Agreement. Anyone seeking to overcome this presumption shall have the burden of proof and the burden of persuasion. Neither the failure of the Company (including by its directors or independent legal counsel) to have made a determination prior to the commencement of any action pursuant to this Agreement that indemnification is proper in the circumstances because Indemnitee has met the applicable standard of conduct, nor an actual determination by the Company (including by its directors or independent legal counsel) that Indemnitee has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that Indemnitee has not met the applicable standard of conduct.

(e) Indemnitee shall be deemed to have acted in good faith if Indemnitee's action is based on the records or books of account of the Enterprise, including financial statements, or on information supplied to Indemnitee by the officers of the Enterprise (as hereinafter defined) in the course of their duties, or on the advice of legal counsel for the Enterprise or on information or records given or reports made to the Enterprise by an

independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Enterprise. In addition, the knowledge and/or actions, or failure to act, of any director, officer, agent or employee of the Enterprise shall not be imputed to Indemnitee for purposes of determining the right to indemnification under this Agreement. Whether or not the foregoing provisions of this Section 6(e) are satisfied, it shall in any event be presumed that Indemnitee has at all times acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Company. Anyone seeking to overcome this presumption shall have the burden of proof and the burden of persuasion.

(f) If the person, persons or entity empowered or selected under Section 6 to determine whether Indemnitee is entitled to indemnification shall not have made a determination within sixty (60) days after receipt by the Company of the request therefor, the requisite determination of entitlement to indemnification shall be deemed to have been made and Indemnitee shall be entitled to such indemnification absent (i) a misstatement by Indemnitee of a material fact, or an omission of a material fact necessary to make Indemnitee's statement not materially misleading, in connection with the request for indemnification, or (ii) a prohibition of such indemnification under applicable law; provided, however, that such 60-day period may be extended for a reasonable time, not to exceed an additional thirty (30) days, if the person, persons or entity making such determination with respect to entitlement to indemnification in good faith requires such additional time to obtain or evaluate documentation and/or information relating thereto; and provided, further, that the foregoing provisions of this Section 6(g) shall not apply if the determination of entitlement to indemnification is to be made by the stockholders pursuant to Section 6(b) of this Agreement and if (A) within fifteen (15) days after receipt by the Company of the request for such determination, the Board of Directors or the Disinterested Directors, if appropriate, resolve to submit such determination to the stockholders for their consideration at an annual meeting thereof to be held within seventy-five (75) days after such receipt and such determination is made thereat, or (B) a special meeting of stockholders is called within fifteen (15) days after such receipt for the purpose of making such determination, such meeting is held for such purpose within sixty (60) days after having been so called and such determination is made thereat.

(g) Indemnitee shall cooperate with the person, persons or entity making such determination with respect to Indemnitee's entitlement to indemnification, including providing to such person, persons or entity upon reasonable advance request any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to Indemnitee and reasonably necessary to such determination. Any Independent Counsel, member of the Board of Directors or stockholder of the Company shall act reasonably and in good faith in making a determination regarding the Indemnitee's entitlement to indemnification under this Agreement. Any costs or expenses (including attorneys' fees and disbursements) incurred by Indemnitee in so cooperating with the person, persons or entity making such determination shall be borne by the Company (irrespective of the determination as to Indemnitee's entitlement to indemnification) and the Company hereby indemnifies and agrees to hold Indemnitee harmless therefrom.

(h) The termination of any Proceeding or of any claim, issue or matter therein, by judgment, order, settlement or conviction, or upon a plea of nolo contendere or its equivalent, shall not (except as otherwise expressly provided in this Agreement) of itself adversely affect the right of Indemnitee to indemnification or create a presumption that Indemnitee did not act in good faith and in a manner which he reasonably believed to be in or not opposed to the best interests of the Company or, with respect to any criminal Proceeding, that Indemnitee had reasonable cause to believe that his conduct was unlawful.

7. Company's Right to Defend. In the event the Company may be obligated to make any indemnity in connection with a Proceeding, the Company shall be entitled to assume the defense of such Proceeding with counsel approved by Indemnitee, which approval shall not be unreasonably withheld, upon the delivery to Indemnitee of written notice of its election to do so. After delivery of such notice, approval of such counsel by Indemnitee and the retention of such counsel by the Company, the Company will not be liable to Indemnitee for any fees or expenses of other counsel subsequently incurred by Indemnitee with respect to the same Proceeding; provided, however, that notwithstanding the Company's assumption of the defense of any such Proceeding, the Company shall be obligated to pay such subsequent fees and expenses of Indemnitee's other counsel to the extent (i) the employment of counsel by Indemnitee is authorized by the Company, (ii) counsel for the Company or Indemnitee shall have reasonably concluded that there is an actual or potential conflict of interest between the Company and Indemnitee in the conduct of any such Proceeding or any defense related to such Proceeding, (iii) the Company is not financially or legally able to perform its indemnification obligations or (iv) the Company shall not have retained, or shall not continue to retain, such counsel to defend such Proceeding. The Company shall have the right to conduct such defense as it sees fit in its sole discretion. Regardless of any provision in this Agreement, Indemnitee shall have the right to employ counsel in any Proceeding at Indemnitee's personal expense. The Company shall not be entitled, without the consent of Indemnitee, to assume the defense of any claim brought by or in the right of the Company.

i. Indemnitee shall give the Company such information and cooperation in connection with the Proceeding as may be reasonably appropriate.

ii. The Company shall not be liable to indemnify Indemnitee for any settlement of any Proceeding (or any part thereof) without the Company's prior written consent, which shall not be unreasonably withheld.

iii. The Company shall have the right to settle any Proceeding (or any part thereof) without the consent of Indemnitee, provided, however, that the Company shall not settle any action or claim in a manner that would impose any penalty or admission of guilt or liability on Indemnitee without Indemnitee's written consent, which consent Indemnitee will not unreasonably withhold.

8. Remedies of Indemnitee.

(a) In the event that (i) a determination is made pursuant to Section 6 of this Agreement that Indemnitee is not entitled to indemnification under this Agreement, (ii) advancement of Expenses is not timely made pursuant to Section 5 of this Agreement, (iii) no determination of entitlement to indemnification is timely made pursuant to Section 6(b) of this Agreement, or (iv) payment of indemnification is not made within ten (10) days after a determination has been made that Indemnitee is entitled to indemnification or such determination is deemed to have been made pursuant to Section 6 of this Agreement, Indemnitee shall be entitled to an adjudication in an appropriate court of the State of Delaware of Indemnitee's entitlement to such indemnification. The Company shall not oppose Indemnitee's right to seek any such adjudication.

(b) In the event that a determination shall have been made pursuant to Section 6(b) of this Agreement that Indemnitee is not entitled to indemnification, any judicial proceeding commenced pursuant to this Section 8 shall be conducted in all respects as a de novo trial on the merits, and Indemnitee shall not be prejudiced by reason of the adverse determination under Section 6(b).

(c) If a determination shall have been made pursuant to Section 6(b) of this Agreement that Indemnitee is entitled to indemnification, the Company shall be bound by such determination in any judicial proceeding commenced pursuant to this Section 8, absent (i) a misstatement by Indemnitee of a material fact, or an omission of a material fact necessary to make Indemnitee's misstatement not materially misleading in connection with the application for indemnification, or (ii) a prohibition of such indemnification under applicable law.

(d) The Company shall be precluded from asserting in any judicial proceeding commenced pursuant to this Section 8 that the procedures and presumptions of this Agreement are not valid, binding and enforceable and shall stipulate in any such court that the Company is bound by all the provisions of this Agreement. The Company shall indemnify Indemnitee against any and all Expenses and, if requested by Indemnitee, shall (within ten (10) days after receipt by the Company of a written request therefore) advance, to the extent not prohibited by law, such expenses to Indemnitee, which are incurred by Indemnitee in connection with any action brought by Indemnitee for indemnification or advance of Expenses from the Company under this Agreement or under any directors' and officers' liability insurance policies maintained by the Company, regardless of whether Indemnitee ultimately is determined to be entitled to such indemnification, advancement of Expenses or insurance recovery, as the case may be, *unless*, as part of such judicial proceeding, the Court determines that each of the material assertions made by Indemnitee was either frivolous or not made in good faith.

(e) Notwithstanding anything in this Agreement to the contrary, no determination as to entitlement to indemnification under this Agreement shall be required to be made prior to the final disposition of the Proceeding.

9. Non-Exclusivity; Survival of Rights; Insurance; Subrogation.

(a) The rights of indemnification as provided by this Agreement shall not be deemed exclusive of any other rights to which Indemnitee may at any time be entitled under applicable law, the certificate of incorporation of the Company, the Bylaws, any agreement, a vote of stockholders, a resolution of directors or otherwise. No amendment, alteration or repeal of this Agreement or of any provision hereof shall limit or restrict any right of Indemnitee under this Agreement in respect of any action taken or omitted by such Indemnitee in his Corporate Status prior to such amendment, alteration or repeal. To the extent that a change in the Delaware General Corporation Law, whether by statute or judicial decision, permits greater indemnification than would be afforded currently under the Bylaws and this Agreement, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits so afforded by such change. No right or remedy herein conferred is intended to be exclusive of any other right or remedy, and every other right and remedy shall be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other right or remedy.

(b) The Company's obligation to indemnify or advance Expenses hereunder to Indemnitee in respect of or relating to Indemnitee's service at the request of the Company as a director, officer, employee, fiduciary, trustee, representative, partner or agent of any affiliate of the Company shall be reduced by any amount Indemnitee has actually received as payment of indemnification or advancement of Expenses from such other affiliate, except to the extent that such indemnification payments and advance payment of Expenses when taken together with any such amount actually received from other affiliate or under director and officer insurance policies maintained by one or more affiliates are inadequate to fully pay all costs, Expenses or other items to the full extent that Indemnitee is otherwise entitled to indemnification or other payment hereunder.

(c) To the extent that the Company maintains an insurance policy or policies providing liability insurance for directors, officers, employees, or agents or fiduciaries of the Company or of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise that such person serves at the request of the Company, Indemnitee shall be covered by such policy or policies in accordance with its or their terms to the maximum extent of the coverage available for any director, officer, employee, agent or fiduciary under such policy or policies. If, at the time of the receipt of a notice of a claim pursuant to the terms hereof, the Company has director and officer liability insurance in effect, the Company shall give prompt notice of the commencement of such proceeding to the insurers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of the Indemnitee, all amounts payable as a result of such proceeding in accordance with the terms of such policies.

(d) In the event of any payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee, who shall execute all papers required and take all action necessary to secure such rights, including execution of such documents as are necessary to enable the Company to bring suit to enforce such rights.

(e) The Company shall not be liable under this Agreement to make any payment of amounts otherwise indemnifiable hereunder if and to the extent that Indemnitee has otherwise actually received such payment under any insurance policy, contract, agreement or otherwise.

(f) The Company's obligation to indemnify or advance Expenses hereunder to Indemnitee who is or was serving at the request of the Company as a director, officer, employee or agent of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall be reduced by any amount Indemnitee has actually received as indemnification or advancement of expenses from such other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise.

10. Exception to Right of Indemnification. Notwithstanding any provision in this Agreement, the Company shall not be obligated under this Agreement to make any indemnity:

(a) for which payment has actually been made to or on behalf of Indemnitee under any insurance policy or other indemnity provision, except with respect to any excess beyond the amount paid under any insurance policy or other indemnity provision; or

(b) for an accounting of profits made from the purchase and sale (or sale and purchase) by Indemnitee of securities of the Company within the meaning of Section 16(b) of the Securities Exchange Act of 1934, as amended, or similar provisions of state statutory law or common law; or

(c) for any reimbursement of the Company by the Indemnitee of any bonus or other incentive-based or equity-based compensation or of any profits realized by the Indemnitee from the sale of securities of the Company, as required in each case under the Exchange Act (including any such reimbursements that arise from an accounting restatement of the Company pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"), or the payment to the Company of profits arising from the purchase and sale by Indemnitee of securities in violation of Section 306 of the Sarbanes-Oxley Act); or

(d) in connection with any Proceeding (or any part of any Proceeding) initiated by Indemnitee, including any Proceeding (or any part of any Proceeding) initiated by Indemnitee against the Company or its directors, officers, employees or other indemnitees, unless (i) the Board of Directors of the Company authorized the Proceeding (or any part of any Proceeding) prior to its initiation, or (ii) such Proceeding is one brought pursuant to Section 7 above to enforce or interpret Indemnitee's rights under this Agreement or under any directors' and officers' liability insurance policies maintained by the Company.

11. Duration of Agreement. All agreements and obligations of the Company contained herein shall continue during the period Indemnitee is an officer or director of the Company (or is or was serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise) and shall continue thereafter so long as Indemnitee shall be subject to any Proceeding (or any proceeding commenced under Section 7 hereof) by reason of his Corporate Status, whether or not he is acting or serving in any such capacity at the time any liability or expense is incurred for which indemnification can be provided under this Agreement. This Agreement shall be binding upon and inure to the benefit of and be enforceable by the parties hereto and their respective successors (including any direct or indirect successor by purchase, merger, consolidation, sale of all or substantially all of the business or assets of the Company, or otherwise), assigns, spouses, heirs, executors and personal and legal representatives.

12. Security. To the extent requested by Indemnitee and approved by the Board of Directors of the Company, the Company may at any time and from time to time provide security to Indemnitee for the Company's obligations hereunder through an irrevocable bank line of credit, funded trust or other collateral. Any such security, once provided to Indemnitee, may not be revoked or released without the prior written consent of the Indemnitee.

13. Enforcement.

(a) The Company expressly confirms and agrees that it has entered into this Agreement and assumes the obligations imposed on it hereby in order to induce Indemnitee to serve as an officer or director of the Company, and the Company acknowledges that Indemnitee is relying upon this Agreement in serving as an officer or director of the Company.

(b) This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof and supersedes all prior agreements and understandings, oral, written and implied, between the parties hereto with respect to the subject matter hereof.

14. Definitions. For purposes of this Agreement:

(a) A "Change of Control" shall be deemed to occur upon the earliest to occur after the date of this Agreement of any of the following events:

(i) Acquisition of Stock by Third Party. Any Person (as defined below) is or becomes the Beneficial Owner (as defined below), directly or indirectly, of securities of the Company representing fifteen percent (15%) or more of the combined voting power of the Company's then outstanding securities;

(ii) Change in Board Composition. During any period of two consecutive years (not including any period prior to the execution of this Agreement), individuals who at the beginning of such period constitute the Company's board of directors, and any new directors (other than a director designated by a person who has entered into an agreement with the Company to effect a transaction described in this Section 14) whose election by the board of directors or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the beginning of the period or whose election or nomination for election was previously so approved, cease for any reason to constitute at least a majority of the members of the Company's board of directors;

(iii) Corporate Transactions. The effective date of a merger or consolidation of the Company with any other entity, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior to such merger or consolidation continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than 50% of the combined voting power of the voting securities of the surviving entity outstanding immediately after such merger or consolidation and with the power to elect at least a majority of the board of directors or other governing body of such surviving entity;

(iv) Liquidation. The approval by the stockholders of the Company of a complete liquidation of the Company or an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets; and

(v) Other Events. Any other event of a nature that would be required to be reported in response to Item 6(e) of Schedule 14A of Regulation 14A (or in response to any similar item on any similar schedule or form) promulgated under the Securities Exchange Act of 1934, as amended, whether or not the Company is then subject to such reporting requirement.

For purposes of this Section 14(a), the following terms shall have the following meanings:

(A) "Person" shall have the meaning as set forth in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended; *provided, however*, that "Person" shall exclude (i) the Company, (ii) any trustee or other fiduciary holding securities under an employee benefit plan of the Company, and (iii) any corporation owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company.

(B) "Beneficial Owner" shall have the meaning given to such term in Rule 13d-3 under the Securities Exchange Act of 1934, as amended; *provided, however*, that "Beneficial Owner" shall exclude any Person otherwise becoming a Beneficial Owner by reason of (i) the stockholders of the Company approving a merger of the Company with another entity or (ii) the Company's board of directors approving a sale of securities by the Company to such Person.

(b) "Corporate Status" describes the status of a person who is or was a director, officer, employee, agent or fiduciary of the Company or of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise that such person is or was serving at the express written request of the Company.

(c) "Disinterested Director" means a director of the Company who is not and was not a party to the Proceeding in respect of which indemnification is sought by Indemnitee.

(d) "Enterprise" shall mean the Company and any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise that Indemnitee is or was serving at the express written request of the Company as a director, officer, employee, agent or fiduciary.

(e) "Expenses" shall include all reasonable attorneys' fees, retainers, court costs, transcript costs, fees of experts, witness fees, travel expenses, duplicating costs, printing and binding costs, telephone charges, postage, delivery service fees and all other disbursements or expenses of the types customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, participating, or being or preparing to be a witness in a Proceeding. Expenses also shall include Expenses incurred in connection with any appeal resulting from any Proceeding, including without limitation the premium, security for, and other costs relating to any cost bond, supersede as bond, or other appeal bond or its equivalent. Expenses, however, shall not include amounts paid in settlement by Indemnitee or the amount of judgments or fines against Indemnitee.

(f) "Independent Counsel" means a law firm, or a member of a law firm, that is experienced in matters of corporation law and neither presently is, nor in the past five years has been, retained to represent: (i) the Company or Indemnitee in any matter material to either such party (other than with respect to matters concerning Indemnitee under this Agreement, or of other indemnitees under similar indemnification agreements), or (ii) any other party to the Proceeding giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term "Independent Counsel" shall not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Company or Indemnitee in an action to determine Indemnitee's rights under this Agreement. The Company agrees to pay the reasonable fees of the Independent Counsel referred to above and to fully indemnify such counsel against any and all Expenses, claims, liabilities and damages arising out of or relating to this Agreement or its engagement pursuant hereto.

(g) "Proceeding" includes any threatened, pending or completed action, suit, arbitration, alternate dispute resolution mechanism, investigation, inquiry, administrative hearing or any other actual, threatened or completed proceeding, whether brought by or in the right of the Company or otherwise and whether civil, criminal, administrative or investigative, in which Indemnitee was, is or will be involved as a party or otherwise, by reason of the fact that Indemnitee is or was an officer or director of the Company, by reason of any action taken by him or of any inaction on his part while acting as an officer or director of the Company, or by reason of the fact that he is or was serving at the express written request of the Company as a director, officer, employee, agent or fiduciary of another corporation, partnership, joint venture, trust or other Enterprise; in each case whether or not he is acting or serving in any such capacity at the time any liability or expense is incurred for which indemnification can be provided under this Agreement; including one pending on or before the date of this Agreement.

15. Severability. The invalidity of unenforceability of any provision hereof shall in no way affect the validity or enforceability of any other provision. Without limiting the generality of the foregoing, this Agreement is intended to confer upon Indemnitee indemnification rights to the fullest extent permitted by applicable laws. In the event any provision hereof conflicts with any applicable law, such provision shall be deemed modified, consistent with the aforementioned intent, to the extent necessary to resolve such conflict.

16. Modification and Waiver. No supplement, modification, termination or amendment of this Agreement shall be binding unless executed in writing by both of the parties hereto. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provisions hereof (whether or not similar) nor shall such waiver constitute a continuing waiver.

17. Notice By Indemnitee. Indemnitee agrees promptly to notify the Company in writing upon being served with or otherwise receiving any summons, citation, subpoena, complaint, indictment, information or other document relating to any Proceeding or matter which may be subject to indemnification covered hereunder. The failure to so notify the Company shall not relieve the Company of any obligation which it may have to Indemnitee under this Agreement or otherwise unless and only to the extent that such failure or delay materially prejudices the Company.

18. Notices. All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by confirmed electronic mail or facsimile if sent during normal business hours of the recipient, and if not so confirmed, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent:

hereto. (a) To Indemnitee at the address set forth below Indemnitee signature

(b) To the Company at:

1355 Market Street, Suite 900
San Francisco, CA 94103
Attention: General Counsel

With a copy, not constituting notice to:

Wilson Sonsini Goodrich & Rosati PC
Attention: Katharine Martin, Esq.
650 Page Mill Road
Palo Alto, California 94304

or to such other address as may have been furnished to Indemnitee by the Company or to the Company by Indemnitee, as the case may be.

19. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Agreement. This Agreement may also be executed and delivered by facsimile signature and in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

20. Headings. The headings of the paragraphs of this Agreement are inserted for convenience only and shall not be deemed to constitute part of this Agreement or to affect the construction thereof.

21. Governing Law and Consent to Jurisdiction. This Agreement and the legal relations among the parties shall be governed by, and construed and enforced in accordance with, the laws of the State of Delaware, without regard to its conflict of laws rules. The Company and Indemnitee hereby irrevocably and unconditionally (i) agree that any action or proceeding arising out of or in connection with this Agreement shall be brought only in the Chancery Court of the State of Delaware (the "Delaware Court"), and not in any other state or federal court in the United States of America or any court in any other country, (ii) consent to submit to the exclusive jurisdiction of the Delaware Court for purposes of any action or proceeding arising out of or in connection with this Agreement, (iii) appoint, to the extent such party is not otherwise subject to service of process in the State of Delaware, irrevocably Incorporating Services, Ltd. 3500 South Dupont Highway, Dover, Delaware 19901 as its agent in the State of Delaware as such party's agent for acceptance of legal process in connection with any such action or proceeding against such party with the same legal force and validity as if served upon such party personally within the State of Delaware, (iv) waive any objection to the laying of venue of any such action or proceeding in the Delaware Court, and (v) waive, and agree not to plead or to make, any claim that any such action or proceeding brought in the Delaware Court has been brought in an improper or inconvenient forum.

SIGNATURE PAGE TO FOLLOW

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on and as of the day and year first above written.

COMPANY

By: _____
Name:
Title:

INDEMNITEE

Name:
Address:

**CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002**

I, Jack Dorsey, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Twitter, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and;
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 3, 2020

/s/ Jack Dorsey

Jack Dorsey
Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002**

I, Ned Segal, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Twitter, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and;
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 3, 2020

/s/ Ned Segal

Ned Segal
Chief Financial Officer
(Principal Financial Officer)

**CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Jack Dorsey, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q of Twitter, Inc. for the fiscal quarter ended June 30, 2020 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Twitter, Inc.

Date: August 3, 2020

By: /s/ Jack Dorsey
Name: Jack Dorsey
Title: Chief Executive Officer

I, Ned Segal, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q of Twitter, Inc. for the fiscal quarter ended June 30, 2020 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Quarterly Report on Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of Twitter, Inc.

Date: August 3, 2020

By: /s/ Ned Segal
Name: Ned Segal
Title: Chief Financial Officer