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

# FORM 10-Q

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

**For the quarterly period ended September 30, 2022**

☐ **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: 001-37806**

# TWILIO INC.
(Exact name of registrant as specified in its charter)

| **Delaware** | **26-2574840** |
|---|---|
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification Number) |

**101 Spear Street, Fifth Floor**
**San Francisco, California 94105**
(Address of principal executive offices) (Zip Code)

**(415) 390-2337**
(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 |
|---|---|---|
| Class A Common Stock, par value $0.001 per share | TWLO | New York Stock Exchange<br>Long-Term Stock Exchange |

As of October 27, 2022, 174,522,799 shares of the registrant's Class A common stock and 9,817,605 shares of registrant's Class B common stock were outstanding.

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 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 ☒

**TWILIO INC.**
**Quarterly Report on Form 10-Q**
**For the Three Months Ended September 30, 2022**
**TABLE OF CONTENTS**


| | | Page |
|---|---|---|
| | **PART I - FINANCIAL INFORMATION** | |
| Item 1. | Financial Statements (unaudited) | 6 |
| | Condensed Consolidated Balance Sheets as of September 30, 2022 and December 31, 2021 | 6 |
| | Condensed Consolidated Statements of Operations for the Three and Nine Months Ended September 30, 2022 and 2021 | 7 |
| | Condensed Consolidated Statements of Comprehensive Loss for the Three and Nine Months Ended September 30, 2022 and 2021 | 8 |
| | Condensed Consolidated Statements of Stockholders' Equity for the Three and Nine Months Ended September 30, 2022 and 2021 | 9 |
| | Condensed Consolidated Statements of Cash Flows for the Nine Months Ended September 30, 2022 and 2021 | 13 |
| | Notes to Condensed Consolidated Financial Statements | 14 |
| Item 2. | Management's Discussion and Analysis of Financial Condition and Results of Operations | 28 |
| Item 3. | Quantitative and Qualitative Disclosures About Market Risk | 41 |
| Item 4. | Controls and Procedures | 42 |
| | **PART II - OTHER INFORMATION** | |
| Item 1. | Legal Proceedings | 43 |
| Item 1A. | Risk Factors | 43 |
| Item 2. | Unregistered Sales of Equity Securities and Use of Proceeds | 80 |
| Item 5. | Other Information | 80 |
| Item 6. | Exhibits | 80 |
| | Signatures | 81 |

**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 (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), 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," "can," "will," "would," "should," "expects," "plans," "anticipates," "could," "intends," "target," "projects," "contemplates," "believes," "estimates," "predicts," "forecasts," "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:

- the impact of macroeconomic uncertainties and the coronavirus disease of 2019 ("COVID-19") pandemic, or significant market volatility in the global economy on our customers, partners, employees and business;
- our future financial performance, including our revenue, cost of revenue, gross margin and operating expenses, ability to generate positive cash flow and ability to achieve and sustain profitability;
- our ability to effectively manage our growth, including maintaining our corporate culture;
- our ability to attract and retain qualified employees and key personnel;
- our ability to retain and increase revenue from existing customers and attract new customers, including our ability to attract and retain enterprises and international organizations as customers for our products and our ability to maintain reliable service levels for our customers;
- our anticipated investments in sales and marketing, research and development and additional systems and processes to support our growth;
- our ability to compete effectively in an intensely competitive market, including our ability to adapt and respond effectively to rising costs, rapidly changing technology and evolving customer needs, requirements, and preferences;
- potential harm caused by compromises in security, data and infrastructure, including cybersecurity protections;
- our ability to comply with modified or new industry standards, laws and regulations applying to our business, including the General Data Protection Regulation ("GDPR"), the California Consumer Privacy Act of 2018 ("CCPA"), Brazil's General Data Protection Law (Lei Geral de Proteção de Dados Pessoais) (Law No. 13,709/2018), and other privacy or cybersecurity regulations that may be implemented in the future, and Signature-based Handling of Asserted Information Using toKENs ("SHAKEN") and Secure Telephone Identity Revisited ("STIR") standards (together, "SHAKEN/STIR") and other robocalling prevention and anti-spam standards and increased costs associated with such compliance;
- our ability to manage changes in network service provider fees that we pay in connection with the delivery of communications on our platform;
- investments and resources and costs required to prevent, detect and remediate potential cybersecurity threats, incidents and breaches of ours or our customers' systems or information;
- our ability to optimize our network service provider coverage and connectivity;
- our ability to work closely with email inbox service providers to maintain deliverability rates;
- our ability to pass on our savings associated with our platform optimization efforts to our customers;
- the impact and expected results from changes in our relationships with our larger customers;
- our ability to form and expand partnerships with technology partners and consulting partners;
- anticipated technology trends, such as the use of and demand for cloud communications;

- our ability to successfully enter into new markets and manage our international expansion;
- the sufficiency of our cash and cash equivalents to meet our liquidity needs;
- our ability to maintain, protect and enhance our intellectual property;
- our ability to successfully defend litigation brought against us;
- our ability to service the interest on our 3.625% senior notes due 2029 (“2029 Notes”), our 3.875% notes due 2031 (“2031 Notes,” and together with the 2029 Notes, the “Notes”), and repay such Notes;
- our customers’ and other platform users’ violation of our policies or other misuse of our platform;
- our expectations about the impact of climate change, natural disasters, public health pandemics and epidemics and other natural catastrophic events and man-made problems such as data security breaches, war or terrorism; and
- our ability to successfully integrate and realize the benefits of our past or future strategic acquisitions or investments.

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, results of operations and prospects. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties and other factors described below in Part II, Item 1A, “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.

**Summary of Risk Factors and Uncertainties Associated with Our Business**

Our business is subject to numerous risks and uncertainties outside of our control. One, or a combination, of these risks and uncertainties could materially affect any of those matters as to which we have made forward-looking statements and cause our actual results or an actual event or occurrence to differ materially from those results or an event or occurrence described in a forward-looking statement. Some of the principal risks associated with our business include the following:

- *the impact of macroeconomic uncertainties and the global COVID-19 pandemic;*
- *fluctuations in our quarterly results and our ability to meet securities analysts’ and investors’ expectations;*
- *the impact of actions that we are taking to restructure our business in alignment with our strategic priorities;*
- *our ability to effectively manage our rapid growth;*
- *the loss of our senior management and other key employees;*
- *our ability to hire, retain and motivate qualified employees;*
- *our ability to maintain and grow our relationships with existing customers and have them increase their usage of our platform;*
- *our ability to maintain and enhance our brand and increase market awareness of our company and products;*

- *new and unproven markets for our products and platform;*
- *any breaches of our networks or systems, or those of AWS or our service providers;*
- *limitations on the use and adoption of our solutions due to privacy laws, data collection and transfer restrictions and related domestic or foreign regulations;*
- *our ability to manage changes in network service provider fees that we pay in connection with the delivery of communications on our platform;*
- *our ability to attract new customers in a cost-effective manner;*
- *our ability to develop enhancements to our products, increase gross margins and introduce new products that achieve market acceptance;*
- *our ability to compete effectively in the markets in which we participate;*
- *our history of losses and uncertainty about our future profitability;*
- *our ability to increase adoption of our products by enterprises;*
- *our ability to expand our relationships with existing technology partner customers and add new technology partner customers;*
- *significant risks associated with expansion of our international operations;*
- *compliance with applicable laws and regulations;*
- *telecommunications-related regulations and future legislative or regulatory actions;*
- *our ability to obtain or retain geographical, mobile, regional, local or toll-free numbers and to effectively process requests to port such numbers in a timely manner due to industry regulations;*
- *our ability to adapt and respond effectively to rapidly changing technology, evolving industry standards, changing regulations, and changing customer needs, requirements or preferences;*
- *our ability to provide monthly uptime service level commitments of a minimum of 99.95% under our agreements with customers;*
- *defects or errors in our products;*
- *any loss or decline in revenue from our largest customers;*
- *litigation by third parties for alleged infringement of their proprietary rights;*
- *exposure to substantial liability for intellectual property infringement and other losses from indemnity provisions in various agreements;*
- *our ability to successfully utilize or to integrate acquired businesses and technologies successfully or to achieve the expected benefits of such acquisitions, partnerships and investments;*
- *our use of open source software;*
- *our reliance on SaaS technologies from third parties;*
- *potentially adverse tax consequences on our global operations and structure;*
- *fraudulent usage of or activity relating to our products;*
- *unfavorable conditions in our industry or the global economy;*
- *requirement of additional capital to support our business and its availability on acceptable terms, if at all;*
- *exposure to foreign currency exchange rate fluctuations;*
- *our ability to use our net operating losses and certain other tax attributes to offset future taxable income and taxes;*
- *our failure to maintain an effective system of disclosure controls and internal control over financial reporting;*
- *the risks of pandemics, epidemics, earthquakes, fire, floods and other natural catastrophic events and of interruption by man-made problems such as power disruptions, computer viruses, data security breaches, war or terrorism;*
- *volatility of the trading price of our Class A common stock;*
- *potential decline in the market price of our Class A common stock due to substantial future sales of shares;*
- *requirement of a significant amount of cash to service our future debt; and*
- *our ability to raise the funds necessary for the repayment of the 2029 Notes and 2031 Notes for cash.*

**PART I - FINANCIAL INFORMATION**

**Item 1.** ***Financial Statements***

**TWILIO INC.**
**Condensed Consolidated Balance Sheets**
**(Unaudited)**

| | As of September 30, 2022 | As of December 31, 2021 |
|---|---|---|
| | (In thousands) | |
| ASSETS | | |
| Current assets: | | |
| Cash and cash equivalents | $ 632,794 | $ 1,479,452 |
| Short-term marketable securities | 3,575,751 | 3,878,430 |
| Accounts receivable, net | 487,750 | 388,215 |
| Prepaid expenses and other current assets | 265,977 | 186,131 |
| Total current assets | 4,962,272 | 5,932,228 |
| Property and equipment, net | 263,862 | 255,316 |
| Operating right-of-use assets | 127,567 | 234,584 |
| Equity method investment | 732,490 | — |
| Intangible assets, net | 901,155 | 1,050,012 |
| Goodwill | 5,284,616 | 5,263,166 |
| Other long-term assets | 340,694 | 263,292 |
| Total assets | $ 12,612,656 | $ 12,998,598 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current liabilities: | | |
| Accounts payable | $ 103,234 | $ 93,333 |
| Accrued expenses and other current liabilities | 572,876 | 417,503 |
| Deferred revenue and customer deposits | 135,610 | 140,389 |
| Operating lease liability, current | 52,453 | 52,325 |
| Total current liabilities | 864,173 | 703,550 |
| Operating lease liability, noncurrent | 176,336 | 211,253 |
| Finance lease liability, noncurrent | 24,842 | 25,132 |
| Long-term debt, net | 986,985 | 985,907 |
| Other long-term liabilities | 29,432 | 41,290 |
| Total liabilities | 2,081,768 | 1,967,132 |
| Commitments and contingencies (Note 13) | | |
| Stockholders' equity: | | |
| Preferred stock | — | — |
| Class A and Class B common stock | 184 | 180 |
| Additional paid-in capital | 13,842,301 | 13,169,118 |
| Accumulated other comprehensive loss | (165,183) | (18,141) |
| Accumulated deficit | (3,146,414) | (2,119,691) |
| Total stockholders’ equity | 10,530,888 | 11,031,466 |
| Total liabilities and stockholders’ equity | $ 12,612,656 | $ 12,998,598 |

See accompanying notes to condensed consolidated financial statements.

**TWILIO INC.**
**Condensed Consolidated Statements of Operations**
**(Unaudited)**

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2022 | 2021 |
| | (In thousands, except share and per share amounts) | | | |
| Revenue | $ 983,030 | $ 740,176 | $ 2,801,747 | $ 1,999,095 |
| Cost of revenue | 520,955 | 375,561 | 1,469,312 | 1,004,929 |
| Gross profit | 462,075 | 364,615 | 1,332,435 | 994,166 |
| Operating expenses: | | | | |
| Research and development | 284,735 | 209,890 | 804,987 | 565,970 |
| Sales and marketing | 328,833 | 264,548 | 951,697 | 713,196 |
| General and administrative | 135,331 | 122,522 | 392,319 | 346,958 |
| Restructuring costs | 72,451 | — | 72,451 | — |
| Impairment of long-lived assets | 97,722 | — | 97,722 | — |
| Total operating expenses | 919,072 | 596,960 | 2,319,176 | 1,626,124 |
| Loss from operations | (456,997) | (232,345) | (986,741) | (631,958) |
| Other expenses, net: | | | | |
| Share of losses from equity method investment | (13,376) | — | (13,376) | — |
| Other, net | (8,374) | (6,613) | (23,290) | (39,219) |
| Total other expenses, net | (21,750) | (6,613) | (36,666) | (39,219) |
| Loss before (provision for) benefit from income taxes | (478,747) | (238,958) | (1,023,407) | (671,177) |
| (Provision for) benefit from income taxes | (3,580) | 14,849 | (3,316) | 12,673 |
| Net loss attributable to common stockholders | $ (482,327) | $ (224,109) | $ (1,026,723) | $ (658,504) |
| Net loss per share attributable to common stockholders, basic and diluted | $ (2.63) | $ (1.26) | $ (5.63) | $ (3.82) |
| Weighted-average shares used in computing net loss per share attributable to common stockholders, basic and diluted | 183,692,564 | 177,231,285 | 182,319,735 | 172,605,371 |

See accompanying notes to condensed consolidated financial statements.

**TWILIO INC.**
**Condensed Consolidated Statements of Comprehensive Loss**
**(Unaudited)**

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | **2022** | **2021** | **2022** | **2021** |
| | (In thousands) | | | |
| Net loss | $ (482,327) | $ (224,109) | $ (1,026,723) | $ (658,504) |
| Other comprehensive loss: | | | | |
| Unrealized loss on marketable securities | (22,151) | (982) | (103,999) | (6,137) |
| Foreign currency translation | (2,192) | 31 | (4,646) | (245) |
| Net change in market value of effective foreign currency forward exchange contracts | (19,196) | (161) | (34,154) | (3,069) |
| Share of other comprehensive loss from equity method investment | (4,243) | — | (4,243) | — |
| Total other comprehensive loss | (47,782) | (1,112) | (147,042) | (9,451) |
| Comprehensive loss attributable to common stockholders | $ (530,109) | $ (225,221) | $ (1,173,765) | $ (667,955) |

See accompanying notes to condensed consolidated financial statements.

**TWILIO, INC.**
**Condensed Consolidated Statements of Stockholders' Equity**
**(Unaudited)**

| | Common Stock Class A | | Common Stock Class B | | Additional Paid-In Capital | Accumulated Other Comprehensive (Loss) Income | Accumulated Deficit | Total Stockholders' Equity |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Shares | Amount | | | | |
| | (In thousands, except share amounts) | | | | | | | |
| **Balance as of December 31, 2021** | **170,625,994** | **$ 168** | **9,842,105** | **$ 12** | **$ 13,169,118** | **$ (18,141)** | **$ (2,119,691)** | **$ 11,031,466** |
| Net loss | — | — | — | — | — | — | (221,627) | (221,627) |
| Exercises of vested stock options | 180,643 | — | 193,889 | — | 11,727 | — | — | 11,727 |
| Vesting of restricted stock units | 877,089 | 1 | — | — | (1) | — | — | — |
| Value of equity awards withheld for tax liability | (5,804) | — | — | — | (1,065) | — | — | (1,065) |
| Conversion of shares of Class B common stock into shares of Class A common stock | 215,389 | — | (215,389) | — | — | — | — | — |
| Shares of Class A common stock donated to charity | 22,102 | — | — | — | 4,232 | — | — | 4,232 |
| Shares returned from escrow | (152,239) | — | — | — | (387) | — | — | (387) |
| Unrealized loss on marketable securities | — | — | — | — | — | (62,826) | — | (62,826) |
| Foreign currency translation | — | — | — | — | — | (165) | — | (165) |
| Net change in market value of effective foreign currency forward exchange contracts | — | — | — | — | — | (3,852) | — | (3,852) |
| Stock-based compensation | — | — | — | — | 159,930 | — | — | 159,930 |
| **Balance as of March 31, 2022** | **171,763,174** | **$ 169** | **9,820,605** | **$ 12** | **$ 13,343,554** | **$ (84,984)** | **$ (2,341,318)** | **$ 10,917,433** |
| Net loss | — | — | — | — | — | — | (322,769) | (322,769) |
| Exercises of vested stock options | 98,111 | — | 77,732 | — | 5,649 | — | — | 5,649 |
| Vesting of restricted stock units | 1,049,640 | 1 | — | — | (1) | — | — | — |
| Value of equity awards withheld for tax liability | (38) | — | — | — | (4) | — | — | (4) |
| Conversion of shares of Class B common stock into shares of Class A common stock | 80,732 | — | (80,732) | — | — | — | — | — |
| Shares issued under ESPP | 258,221 | 1 | — | — | 24,317 | — | — | 24,318 |
| Shares of Class A common stock donated to charity | 22,102 | — | — | — | 2,373 | — | — | 2,373 |
| Unrealized loss on marketable securities | — | — | — | — | — | (19,022) | — | (19,022) |
| Foreign currency translation | — | — | — | — | — | (2,289) | — | (2,289) |
| Net change in market value of effective foreign currency forward exchange contracts | — | — | — | — | — | (11,106) | — | (11,106) |
| Stock-based compensation | — | — | — | — | 247,412 | — | — | 247,412 |
| **Balance as of June 30, 2022** | **173,271,942** | **$ 171** | **9,817,605** | **$ 12** | **$ 13,623,300** | **$ (117,401)** | **$ (2,664,087)** | **$ 10,841,995** |

**TWILIO, INC.**
**Condensed Consolidated Statements of Stockholders' Equity**
**(Unaudited)**

| | Common Stock Class A | | Common Stock Class B | | Additional Paid-In Capital | Accumulated Other Comprehensive (Loss) Income | Accumulated Deficit | Total Stockholders' Equity |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Shares | Amount | | | | |
| | (In thousands, except share amounts) | | | | | | | |
| **Balance as of June 30, 2022** | **173,271,942** | **$ 171** | **9,817,605** | **$ 12** | **$ 13,623,300** | **$ (117,401)** | **$ (2,664,087)** | **$ 10,841,995** |
| Net loss | — | — | — | — | — | — | (482,327) | (482,327) |
| Exercises of vested stock options | 38,368 | — | 35,187 | — | 2,056 | — | — | 2,056 |
| Vesting of restricted stock units | 1,115,248 | 1 | — | — | (1) | — | — | — |
| Value of equity awards withheld for tax liability | (125) | — | — | — | (11) | — | — | (11) |
| Conversion of shares of Class B common stock into shares of Class A common stock | 35,187 | — | (35,187) | — | — | — | — | — |
| Shares of Class A common stock donated to charity | 22,102 | — | — | — | 1,911 | — | — | 1,911 |
| Unrealized loss on marketable securities | — | — | — | — | — | (22,151) | — | (22,151) |
| Foreign currency translation | — | — | — | — | — | (2,192) | — | (2,192) |
| Net change in market value of effective foreign currency forward exchange contracts | — | — | — | — | — | (19,196) | — | (19,196) |
| Share of other comprehensive loss from equity method investment | — | — | — | — | — | (4,243) | — | (4,243) |
| Stock-based compensation | — | — | — | — | 199,772 | — | — | 199,772 |
| Stock-based compensation - restructuring | — | — | — | — | 15,274 | — | — | 15,274 |
| **Balance as of September 30, 2022** | **174,482,722** | **$ 172** | **9,817,605** | **$ 12** | **$ 13,842,301** | **$ (165,183)** | **$ (3,146,414)** | **$ 10,530,888** |

See accompanying notes to condensed consolidated financial statements.

**TWILIO, INC.**
**Condensed Consolidated Statements of Stockholders' Equity**
**(Unaudited)**

| | Common Stock Class A | | Common Stock Class B | | Additional Paid-In Capital | Accumulated Other Comprehensive (Loss) Income | Accumulated Deficit | Total Stockholders' Equity |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Shares | Amount | | | | |
| | (In thousands, except share amounts) | | | | | | | |
| **Balance as of December 31, 2020** | **153,496,222** | **$ 151** | **10,551,302** | **$ 13** | **$ 9,613,246** | **$ 9,046** | **$ (1,169,791)** | **$ 8,452,665** |
| Net loss | — | — | — | — | — | — | (206,542) | (206,542) |
| Exercises of vested stock options | 248,008 | — | 211,371 | — | 11,564 | — | — | 11,564 |
| Vesting of restricted stock units | 913,966 | 1 | — | — | (1) | — | — | — |
| Value of equity awards withheld for tax liability | (6,989) | — | — | — | (2,774) | — | — | (2,774) |
| Conversion of shares of Class B common stock into shares of Class A common stock | 419,371 | — | (419,371) | — | — | — | — | — |
| Equity component from partial settlement of 2023 convertible senior notes | 1,158,381 | 2 | — | — | 80,047 | — | — | 80,049 |
| Shares of Class A common stock donated to charity | 22,102 | — | — | — | 9,405 | — | — | 9,405 |
| Issuance of common stock in connection with a follow-on public offering, net of underwriter discounts | 4,312,500 | 4 | — | — | 1,766,396 | — | — | 1,766,400 |
| Costs related to the follow-on public offering | — | — | — | — | (727) | — | — | (727) |
| Issuance of restricted stock awards | 24,697 | — | — | — | — | — | — | — |
| Unrealized loss on marketable securities | — | — | — | — | — | (4,176) | — | (4,176) |
| Foreign currency translation | — | — | — | — | — | (210) | — | (210) |
| Stock-based compensation | — | — | — | — | 141,542 | — | — | 141,542 |
| **Balance as of March 31, 2021** | **160,588,258** | **$ 158** | **10,343,302** | **$ 13** | **$ 11,618,698** | **$ 4,660** | **$ (1,376,333)** | **$ 10,247,196** |
| Net loss | — | — | — | — | — | — | (227,853) | (227,853) |
| Exercises of vested stock options | 294,430 | — | 63,164 | — | 20,351 | — | — | 20,351 |
| Vesting of restricted stock units | 839,472 | 1 | — | — | (1) | — | — | — |
| Value of equity awards withheld for tax liability | (5,498) | — | — | — | (1,882) | — | — | (1,882) |
| Conversion of shares of Class B common stock into shares of Class A common stock | 188,044 | 1 | (188,044) | (1) | — | — | — | — |
| Equity component from partial settlement of 2023 convertible senior notes | 3,688,584 | 4 | — | — | 255,590 | — | — | 255,594 |
| Settlement of capped call, net of related costs | — | — | — | — | 225,233 | — | — | 225,233 |
| Shares issued under ESPP | 100,107 | — | — | — | 23,699 | — | — | 23,699 |
| Donated common stock | 22,102 | — | — | — | 6,789 | — | — | 6,789 |
| Costs related to the follow-on public offering | — | — | — | — | (50) | — | — | (50) |
| Unrealized loss on marketable securities | — | — | — | — | — | (979) | — | (979) |
| Foreign currency translation | — | — | — | — | — | (66) | — | (66) |
| Net change in market value of effective foreign currency forward exchange contracts | — | — | — | — | — | (2,908) | — | (2,908) |
| Stock-based compensation | — | — | — | — | 148,988 | — | — | 148,988 |
| **Balance as of June 30, 2021** | **165,715,499** | **$ 164** | **10,218,422** | **$ 12** | **$ 12,297,415** | **$ 707** | **$ (1,604,186)** | **$ 10,694,112** |

**TWILIO, INC.**
**Condensed Consolidated Statements of Stockholders' Equity**
**(Unaudited)**

| | Common Stock Class A | | Common Stock Class B | | Additional Paid-In Capital | Accumulated Other Comprehensive Income (Loss) | Accumulated Deficit | Total Stockholders' Equity |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Shares | Amount | | | | |
| | (In thousands, except share amounts) | | | | | | | |
| **Balance as of June 30, 2021** | **165,715,499** | **$ 164** | **10,218,422** | **$ 12** | **$ 12,297,415** | **$ 707** | **$ (1,604,186)** | **$ 10,694,112** |
| Net loss | — | — | — | — | — | — | (224,109) | (224,109) |
| Exercises of vested stock options | 222,066 | — | 83,484 | — | 15,993 | — | — | 15,993 |
| Vesting of restricted stock units | 834,148 | 1 | — | — | (1) | — | — | — |
| Value of equity awards withheld for tax liability | (5,530) | — | — | — | (1,896) | — | — | (1,896) |
| Conversion of shares of Class B common stock into shares of Class A common stock | 388,725 | — | (388,725) | — | — | — | — | — |
| Donated common stock | 22,102 | — | — | — | 8,389 | — | — | 8,389 |
| Cost adjustments related to the follow-on public offering | — | — | — | — | 90 | — | — | 90 |
| Shares issued in acquisition | 1,116,390 | 1 | — | — | 419,036 | — | — | 419,037 |
| Value of equity awards assumed in acquisition | — | — | — | — | 1,511 | — | — | 1,511 |
| Shares issued in acquisition subject to future vesting | 59,533 | — | — | — | — | — | — | — |
| Unrealized loss on marketable securities | — | — | — | — | — | (982) | — | (982) |
| Foreign currency translation | — | — | — | — | — | 31 | — | 31 |
| Net change in market value of effective foreign currency forward exchange contracts | — | — | — | — | — | (161) | — | (161) |
| Stock-based compensation | — | — | — | — | 169,734 | — | — | 169,734 |
| **Balance as of September 30, 2021** | **168,352,933** | **$ 166** | **9,913,181** | **$ 12** | **$ 12,910,271** | **$ (405)** | **$ (1,828,295)** | **$ 11,081,749** |

See accompanying notes to condensed consolidated financial statements.

**TWILIO INC.**
**Condensed Consolidated Statements of Cash Flows**
**(Unaudited)**

| | Nine Months Ended September 30, | |
|---|---|---|
| | **2022** | **2021** |
| CASH FLOWS FROM OPERATING ACTIVITIES: | (In thousands) | |
| Net loss | $ (1,026,723) | $ (658,504) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation and amortization | 207,880 | 189,669 |
| Non-cash reduction to the right-of-use asset | 38,669 | 36,249 |
| Net amortization of investment premium and discount | 27,900 | 24,880 |
| Impairment of long-lived assets | 100,681 | 4,936 |
| Stock-based compensation including restructuring | 606,260 | 445,366 |
| Amortization of deferred commissions | 41,322 | 20,798 |
| Allowance for credit losses | 21,786 | 11,371 |
| Value of shares of Class A common stock donated to charity | 8,516 | 24,583 |
| Share of losses from equity method investment | 13,376 | — |
| Loss on extinguishment of debt | — | 28,965 |
| Other adjustments | 207 | (6,422) |
| Changes in operating assets and liabilities: | | |
| Accounts receivable | (121,353) | (81,186) |
| Prepaid expenses and other current assets | (81,071) | (59,929) |
| Other long-term assets | (111,662) | (66,501) |
| Accounts payable | 11,585 | (8,665) |
| Accrued expenses and restructuring costs | 122,408 | 84,730 |
| Deferred revenue and customer deposits | (6,206) | 27,004 |
| Operating lease liabilities | (42,158) | (36,274) |
| Other long-term liabilities | (7,330) | (1,019) |
| Net cash used in operating activities | (195,913) | (19,949) |
| CASH FLOWS FROM INVESTING ACTIVITIES: | | |
| Acquisitions, net of cash acquired and other related payments | (32,853) | (490,880) |
| Purchases of marketable securities and other investments | (1,650,759) | (3,225,799) |
| Proceeds from sales and maturities of marketable securities | 1,065,998 | 1,334,444 |
| Capitalized software development costs | (35,905) | (35,926) |
| Purchases of long-lived and intangible assets | (28,634) | (33,575) |
| Net cash used in investing activities | (682,153) | (2,451,736) |
| CASH FLOWS FROM FINANCING ACTIVITIES: | | |
| Proceeds from public offerings, net of underwriters' discounts | — | 1,766,400 |
| Payments of costs related to public offerings | (35) | (464) |
| Proceeds from issuance of senior notes due 2029 and 2031, net of issuance costs | — | 984,749 |
| Proceeds from settlements of capped call, net of settlement costs | — | 228,412 |
| Principal payments on debt and finance leases | (9,383) | (4,852) |
| Value of equity awards withheld for tax liabilities | (1,080) | (6,552) |
| Proceeds from exercises of stock options and shares of Class A common stock issued under ESPP | 43,750 | 71,607 |
| Net cash provided by financing activities | 33,252 | 3,039,300 |
| Effect of exchange rate changes on cash, cash equivalents and restricted cash | 146 | (157) |
| NET (DECREASE) INCREASE IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH | (844,668) | 567,458 |
| CASH, CASH EQUIVALENTS AND RESTRICTED CASH—Beginning of period | 1,481,831 | 933,885 |
| CASH, CASH EQUIVALENTS AND RESTRICTED CASH —End of period | $ 637,163 | $ 1,501,343 |
| Cash paid for income taxes, net | $ 5,481 | $ 4,439 |
| Cash paid for interest | $ 37,500 | $ 19,545 |
| NON-CASH INVESTING AND FINANCING ACTIVITIES: | | |
| Value of common stock issued to settle convertible senior notes due 2023 | $ — | $ 1,704,969 |
| | | |
| RECONCILIATION OF CASH, CASH EQUIVALENTS AND RESTRICTED CASH TO THE CONDENSED CONSOLIDATED BALANCE SHEETS | | |
| Cash and cash equivalents | $ 632,794 | $ 1,497,498 |
| Restricted cash in other current assets | 4,357 | 2,733 |
| Restricted cash in other long-term assets | 12 | 1,112 |
| Total cash, cash equivalents and restricted cash | $ 637,163 | $ 1,501,343 |

See accompanying notes to condensed consolidated financial statements.

**TWILIO INC.**
**Notes to Condensed Consolidated Financial Statements**
**(Unaudited)**

**1. Organization and Description of Business**

Twilio Inc. (the "Company") was incorporated in the state of Delaware on March 13, 2008. Today's leading companies trust Twilio's Customer Engagement Platform (CEP) to build direct, personalized relationships with their customers everywhere in the world. Twilio enables companies to use communications and data to add intelligence and security to every step of their customers' journey, from sales to marketing to growth, customer service and many more engagement use cases in a flexible, programmatic way.

The Company's headquarters are located in San Francisco, California, and the Company has subsidiaries across North America, South America, Europe, Asia and Australia.

**2. Summary of Significant Accounting Policies**

***(a) Basis of Presentation***

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America ("U.S. GAAP") and applicable rules and regulations of the Securities and Exchange Commission ("SEC") regarding interim financial reporting. Certain information and note disclosures normally included in the financial statements prepared in accordance with U.S. GAAP have been condensed or omitted pursuant to such rules and regulations. Therefore, these condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and notes included in the Company's Annual Report on Form 10-K filed with the SEC on February 22, 2022 ("Annual Report").

The condensed consolidated balance sheet as of December 31, 2021, included herein, was derived from the audited financial statements as of that date, but may not include all disclosures including certain notes required by U.S. GAAP on an annual reporting basis.

In the opinion of management, the accompanying condensed consolidated financial statements reflect all normal recurring adjustments necessary to present fairly the financial position, results of operations, comprehensive loss, stockholders' equity and cash flows for the interim periods, but are not necessarily indicative of the results of operations to be anticipated for the full year 2022 or any future period.

***(b) Principles of Consolidation***

The condensed consolidated financial statements include the Company and its wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated.

***(c) Use of Estimates***

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. These estimates are used for, but not limited to, revenue allowances and sales credit reserves; recoverability of long-lived and intangible assets; capitalization and useful life of the Company's capitalized internal-use software development costs; fair value of acquired intangible assets and goodwill; accruals and contingencies. Estimates are based on historical experience and on various assumptions that the Company believes are reasonable under current circumstances. However, future events are subject to change and best estimates and judgments may require further adjustments, therefore, actual results could differ materially from those estimates. Management periodically evaluates such estimates and they are adjusted prospectively based upon such periodic evaluation.

***(d) Remaining Performance Obligations***

Revenue allocated to remaining performance obligations for contracts with durations of more than one year was $122.1 million as of September 30, 2022, of which 71% is expected to be recognized over the next 12 months and 95% is expected to be recognized over the next 24 months.

### *(e) Deferred Revenue and Customer Deposits*

As of September 30, 2022 and December 31, 2021, the Company recorded $135.6 million and $141.5 million as its deferred revenue and customer deposits, respectively, that are included in deferred revenue and customer deposits and other long-term liabilities in the accompanying condensed consolidated balance sheets. During the three months ended September 30, 2022 and 2021, the Company recognized $17.5 million and $13.9 million of revenue, respectively, that was included in the deferred revenue and customer deposits balance as of the end of the previous year. During the nine months ended September 30, 2022 and 2021, the Company recognized $112.2 million and $58.2 million of revenue, respectively, that was included in the deferred revenue and customer deposits balance as of the end of the previous year.

### *(f) Deferred Sales Commissions*

Total net capitalized commission costs as of September 30, 2022 and December 31, 2021, were $223.9 million and $193.4 million, respectively, and are included in prepaid expenses and other current assets and other long-term assets in the accompanying condensed consolidated balance sheets.

### *(g) Concentration of Credit Risk*

Financial instruments that potentially expose the Company to a concentration of credit risk consist primarily of cash, cash equivalents, restricted cash, marketable securities and accounts receivable. The Company maintains cash, restricted cash, cash equivalents and marketable securities with financial institutions that management believes are financially sound and have minimal credit risk exposure although the balances will exceed insured limits.

The Company sells its services to a wide variety of customers. If the financial condition or results of operations of any significant customer deteriorates substantially, operating results could be adversely affected. To reduce credit risk, management performs credit evaluations of the financial condition of significant customers. The Company does not require collateral from its credit customers and maintains reserves for estimated credit losses on customer accounts when considered necessary. Actual credit losses may differ from the Company’s estimates. During the three and nine months ended September 30, 2022 and 2021, no customer organization accounted for more than 10% of the Company’s total revenue.

As of September 30, 2022 and December 31, 2021, no customer organization represented more than 10% of the Company’s gross accounts receivable.

### *(h) Changes to Significant Accounting Policies*

*Restructuring Costs*

The Company records a charge for restructuring when management commits to a restructuring plan, the restructuring plan identifies all significant actions, the period of time to complete the restructuring plan indicates that significant changes to the plan are not likely and employees who are impacted have been notified of the pending involuntary termination. Restructuring charges are accrued in the period in which it is probable that the employees are entitled to the restructuring benefits and the amounts can be reasonably estimated.

*Equity Method Investments*

Equity investment holdings in which the Company does not have a controlling financial interest but can exercise significant influence over an investee are accounted for under the equity method. Equity method investments are originally recorded at cost and are subsequently increased or reduced to reflect the Company’s proportionate share of net earnings or losses of the investee as they occur. The Company records the investee losses up to the carrying amount of the investment plus any advances and loans made to the investee and any financial guarantees made on behalf of the investee. Investments are also increased by contributions made to and distributions from the investee. All costs directly associated with the acquisition of the investment are included in the carrying amount of the investment. Profits or losses related to intra-entity sales are eliminated until realized by the Company or the investee.

The Company determines the difference between its purchase price and its proportionate share of the net assets of the investee, which results in an excess basis in the investment. This excess basis is allocated to the identifiable assets and liabilities of the investee utilizing purchase accounting principles and is used to calculate the amortization of basis differences every reporting period. Basis differences are generally amortized over the lives of the assets and liabilities that gave rise to the basis differences.

The Company records its share in earnings and losses of its equity method investee along with adjustments for amortization of basis differences, investee capital transactions and other comprehensive income or loss in its consolidated statements of operations and comprehensive loss on a three-month lag.

Equity method goodwill is not amortized or tested for impairment. Instead, the Company evaluates its equity method investments for impairment whenever events or changes in circumstance indicate that the carrying amounts of such investments may be in excess of their fair value. When such indicators exist, the other-than-temporary impairment model is utilized, which considers the severity and duration of a decline in fair value below book value and the Company’s ability and intent to hold the investment for a sufficient period of time to allow for recovery. If a decline in the value of an equity method investment is determined to be other than temporary, a loss is recorded in the current period.

There have been no other changes to the Company’s significant accounting policies as described in its Annual Report.

***(i) Recently Adopted Accounting Guidance***

In October 2021, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2021-08, “Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers,” which requires that an entity recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with ASC 606, "Revenue from Contracts with Customers." At the acquisition date, an acquirer should account for the related revenue contracts as if it had originated the contracts. Generally, this should result in an acquirer recognizing and measuring the acquired contract assets and contract liabilities consistent with how they were recognized and measured in the acquiree's financial statements, assuming the acquirer is able to assess and rely on how the acquiree applied ASC 606. The Company adopted ASU 2021-08 in the first quarter of 2022 with no material impact to the Company's condensed consolidated financial statements.

***(j) Recently Issued Accounting Guidance, Not yet Adopted***

In June 2022, the FASB issued ASU No. 2022-03, "Fair Value Measurements (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions," which clarifies and amends the guidance of measuring the fair value of equity securities subject to contractual restrictions that prohibit the sale of the equity securities. The guidance will be effective for fiscal years beginning after December 15, 2023 and interim periods within those fiscal years. The Company is evaluating the impact of the adoption of this guidance on its consolidated financial statements.

## 3. Fair Value Measurements

*Financial Assets*

The following tables provide the financial assets measured at fair value on a recurring basis:

| | Amortized Cost or Carrying Value | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value Hierarchy as of September 30, 2022 | | | Aggregate Fair Value |
|---|---|---|---|---|---|---|---|
| | | | | Level 1 | Level 2 | Level 3 | |
| **Financial Assets:** | | | | (In thousands) | | | |
| Cash and cash equivalents: | | | | | | | |
| Money market funds | $ 39,117 | $ — | $ — | $ 39,117 | $ — | $ — | $ 39,117 |
| Reverse repurchase agreements | 200,000 | — | — | — | 200,000 | — | 200,000 |
| Commercial paper | 5,205 | — | — | — | 5,205 | — | 5,205 |
| Total included in cash and cash equivalents | 244,322 | — | — | 39,117 | 205,205 | — | 244,322 |
| Marketable securities: | | | | | | | |
| U.S. Treasury securities | 519,609 | — | (15,009) | 504,600 | — | — | 504,600 |
| Non-U.S. government securities | 150,297 | — | (7,041) | 143,256 | — | — | 143,256 |
| Corporate debt securities and commercial paper | 3,028,685 | 13 | (100,803) | 7,000 | 2,920,895 | — | 2,927,895 |
| Total marketable securities | 3,698,591 | 13 | (122,853) | 654,856 | 2,920,895 | — | 3,575,751 |
| Total financial assets | $ 3,942,913 | $ 13 | $ (122,853) | $ 693,973 | $ 3,126,100 | $ — | $ 3,820,073 |

| | Amortized Cost or Carrying Value | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value Hierarchy as of December 31, 2021 | | | Aggregate Fair Value |
|---|---|---|---|---|---|---|---|
| | | | | Level 1 | Level 2 | Level 3 | |
| **Financial Assets:** | | | | (In thousands) | | | |
| Cash and cash equivalents: | | | | | | | |
| Money market funds | $ 786,548 | $ — | $ — | $ 786,548 | $ — | $ — | $ 786,548 |
| Commercial paper | 46,076 | — | — | — | 46,076 | — | 46,076 |
| Total included in cash and cash equivalents | 832,624 | — | — | 786,548 | 46,076 | — | 832,624 |
| Marketable securities: | | | | | | | |
| U.S. Treasury securities | 375,305 | 6 | (2,561) | 372,750 | — | — | 372,750 |
| Non-U.S. government securities | 221,641 | — | (1,355) | 220,286 | — | — | 220,286 |
| Corporate debt securities and commercial paper | 3,300,326 | 960 | (15,892) | 31,000 | 3,254,394 | — | 3,285,394 |
| Total marketable securities | 3,897,272 | 966 | (19,808) | 624,036 | 3,254,394 | — | 3,878,430 |
| Total financial assets | $ 4,729,896 | $ 966 | $ (19,808) | $ 1,410,584 | $ 3,300,470 | $ — | $ 4,711,054 |

The Company's primary objective when investing excess cash is preservation of capital, hence the Company's marketable securities primarily consist of U.S. Treasury Securities, non-U.S government securities, high credit quality corporate debt securities, reverse repurchase agreements and commercial paper. Because the Company views its marketable securities as available to support current operations, it has classified all available for sale securities as short-term. As of September 30, 2022 and December 31, 2021, for fixed income securities that were in unrealized loss positions, the Company has determined that (i) it does not have the intent to sell any of these investments, and (ii) it is not more likely than not that it will be required to sell any of these investments before recovery of the entire amortized cost basis. In addition, as of September 30, 2022 and December 31, 2021, the Company anticipates that it will recover the entire amortized cost basis of such fixed income securities before maturity.

Interest earned on marketable securities was $16.3 million and $47.5 million in the three and nine months ended September 30, 2022, respectively, and $16.2 million and $39.5 million in the three and nine months ended September 30, 2021, respectively. The interest is recorded as other expenses, net, in the accompanying condensed consolidated statements of operations.

The following table summarizes the contractual maturities of marketable securities:

| | As of September 30, 2022 | | As of December 31, 2021 | |
|---|---|---|---|---|
| | Amortized Cost | Aggregate Fair Value | Amortized Cost | Aggregate Fair Value |
| **Financial Assets:** | (In thousands) | | | |
| Less than one year | $ 1,992,157 | $ 1,952,475 | $ 1,084,751 | $ 1,085,006 |
| One to three years | 1,706,434 | 1,623,276 | 2,812,521 | 2,793,424 |
| Total | $ 3,698,591 | $ 3,575,751 | $ 3,897,272 | $ 3,878,430 |

*Strategic Investments*

As of September 30, 2022 and December 31, 2021, the Company held strategic investments with a carrying value of $74.3 million and $68.3 million, respectively, recorded as other long-term assets in the accompanying condensed consolidated balance sheets. The carrying value of these securities is determined under the measurement alternative on a non-recurring basis and adjusted for observable changes in fair value. There were no impairments or other adjustments recorded in the three and nine months ended September 30, 2022 and 2021, related to these securities.

*Financial Liabilities*

The Company’s financial liabilities that are measured at fair value on a recurring basis consist of foreign currency derivative liabilities and are classified as Level 2 financial instruments in the fair value hierarchy. As of September 30, 2022, the aggregate fair value of these liabilities and the associated unrealized losses were $33.9 million. As of December 31, 2021, these balances were not significant.

The Company’s financial liabilities that are not measured at fair value on a recurring basis are its Senior Notes due 2029 (“2029 Notes”) and its Senior Notes due 2031 (“2031 Notes”). As of September 30, 2022 the fair value of the 2029 Notes and 2031 Notes were $407.1 million and $394.4 million, respectively. As of December 31, 2021, the fair value of the 2029 Notes and 2031 Notes were $510.2 million and $512.8 million, respectively.

## 4. Property and Equipment

Property and equipment consisted of the following:

| | As of September 30, 2022 | As of December 31, 2021 |
|---|---|---|
| | (In thousands) | |
| Capitalized internal-use software developments costs | $ 248,158 | $ 198,589 |
| Data center equipment [1] | 99,755 | 77,946 |
| Leasehold improvements | 89,234 | 85,297 |
| Office equipment | 67,808 | 58,636 |
| Furniture and fixtures | 15,030 | 15,360 |
| Software | 10,925 | 10,506 |
| Total property and equipment | 530,910 | 446,334 |
| Less: accumulated depreciation and amortization [1] | (267,048) | (191,018) |
| Total property and equipment, net | $ 263,862 | $ 255,316 |

[1] Data center equipment contains $72.4 million and $63.0 million in assets held under finance leases as of September 30, 2022, and December 31, 2021, respectively. Accumulated depreciation and amortization contains $37.4 million and $26.8 million of accumulated depreciation for assets held under finance leases as of September 30, 2022, and December 31, 2021, respectively.

Depreciation and amortization expense was $18.4 million and $14.5 million in the three months ended September 30, 2022 and 2021, respectively, and $52.5 million and $43.2 million in the nine months ended September 30, 2022 and 2021, respectively.

The Company capitalized $19.3 million and $18.0 million in internal-use software development costs in the three months ended September 30, 2022 and 2021, respectively, and $51.2 million and $49.5 million in the nine months ended September 30, 2022 and 2021, respectively.

**5. Impairment**

During the second quarter of 2022, the Company announced its decision to become a remote-first company whereby employees would have the flexibility to work remotely on a permanent basis. As part of the new operating strategy, in the third quarter of 2022, the Company permanently closed several of its office locations which triggered a reassessment of long-lived asset groupings and a test for impairment. The Company determined that the carrying amounts of the impacted ROU assets and the associated leasehold improvements and property and equipment exceeded their respective fair values. The Company engaged a third-party expert to assist with the valuation analysis and selection of assumptions. In the three and nine months ended September 30, 2022, the Company recorded a $97.7 million impairment expense in the accompanying condensed consolidated statements of operations.

**6. Restructuring Activities**

During the third quarter of 2022, the compensation and talent management committee of the Company's board of directors approved a restructuring plan that was designed to reduce operating costs, improve operating margins and shift the Company's selling capacity to accelerate software sales (the "Restructuring Plan"). The Restructuring Plan eliminated approximately 11% of the Company's workforce. The Company estimated the aggregate restructuring costs associated with the Restructuring Plan to be approximately $70.0 million to $90.0 million, of which approximately $55.0 million to $70.0 million is expected to be paid in cash.

In the three months ended September 30, 2022, the Company recorded restructuring charges of $72.5 million, which consisted of $57.2 million related to employee transition, notice period, severance payments, employee benefits and facilitation costs; and $15.3 million related to vesting of stock-based awards of the impacted employees. The Company expects to incur additional restructuring charges until the execution of this Restructuring Plan is substantially completed by the end of the fourth quarter of 2022. Since potential position eliminations in every country are subject to local law and consultation requirements, in certain countries this process may extend beyond the fourth quarter of 2022. The charges that the Company expects to incur throughout the completion of its Restructuring Plan are subject to a number of assumptions, including local law requirements in various jurisdictions, and the actual remaining expenses may differ materially from the original estimates.

The following table summarizes the Company's restructuring liability that is included in accrued expenses and other current liabilities in the accompanying condensed consolidated balance sheet:

| | Workforce Reduction Costs | Facilitation Costs | Total |
|---|---|---|---|
| | | (In thousands) | |
| Balance as of June 30, 2022 | $ — | $ — | $ — |
| Restructuring charges | 55,855 | 1,322 | 57,177 |
| Cash payments | (4,016) | — | (4,016) |
| Balance as of September 30, 2022 | $ 51,839 | $ 1,322 | $ 53,161 |

The $15.3 million vesting of the stock-based awards is recorded in the additional-paid-in capital in the accompanying condensed consolidated statement of shareholders equity.

**7. Derivatives and Hedging**

As of September 30, 2022, the Company had outstanding foreign currency forward contracts designated as cash flow hedges with a total sell notional value of $370.3 million. The notional value represents the amount that will be sold upon maturity of the forward contract. As of September 30, 2022, these contracts had maturities of up to 9 months.

Gains and losses associated with these foreign currency forward contracts were as follows:

| | Condensed Consolidated Statement of Operations and Statement of Comprehensive Loss | Three Months Ended September 30, 2022 | Three Months Ended September 30, 2021 | Nine Months Ended September 30, 2022 | Nine Months Ended September 30, 2021 |
|---|---|---|---|---|---|
| | | (In thousands) | | | |
| Losses recognized in OCI | Net change in market value of effective foreign currency forward exchange contracts | $ 19,196 | $ 161 | $ 34,154 | $ 3,069 |
| Losses recognized in income due to instruments maturing | Cost of revenue | $ 16,357 | $ 2,464 | $ 25,520 | $ 2,931 |

The Company is subject to master netting agreements with certain counterparties of the foreign exchange contracts, under which it is permitted to net settle transactions of the same currency with a single net amount payable by one party to the other. It is the Company's policy to present the derivatives at gross in its condensed consolidated balance sheets. The Company's foreign currency forward contracts are not subject to any credit contingent features or collateral requirements. The Company manages its exposure to counterparty risk by entering into contracts with a diversified group of major financial institutions and by actively monitoring its outstanding positions. As of September 30, 2022, the Company did not have any offsetting arrangements.

**8. Equity Method Investment**

In 2022, the Company acquired 44.55% equity interests in Syniverse Corporation ("Syniverse") for $750.0 million in cash. The Company determined that it does not have a controlling financial interest in Syniverse but does exercise significant influence and therefore, the investment was accounted for under the equity method. The Company estimated that on the investment closing date there was a preliminary excess investment basis of $530.7 million related to its proportionate share of the identifiable intangible assets and $41.3 million related to the associated deferred tax liability. The equity method goodwill was estimated at $623.8 million.

The preliminary estimated fair value of the intangible assets was determined by the Company. The Company engaged a third-party expert to assist with the valuation analysis. While the Company used its best estimates and assumptions as part of this valuation process to determine the fair values of the investee's assets and liabilities, these estimates are inherently uncertain and subject to refinement. The authoritative guidance allows a measurement period of up to one year from the date of investment to make adjustments to these preliminary allocations.

The following table presents the preliminary estimated basis differences attributable to the identifiable assets and their respective useful lives:

| | Total | Estimated life |
|---|---|---|
| | (In thousands) | (In years) |
| Developed technology | $ 62,767 | 6 |
| Customer relationships | 439,152 | 9 |
| Trademarks | 28,822 | Indefinite |
| Total basis difference attributable to the identifiable intangible assets | $ 530,741 | |

The Company has elected to report its portion of equity method investee's results of operations and other comprehensive income on a 90-day lag. Accordingly, in the three and nine months ended September 30, 2022, the Company recorded $13.4 million in its accompanying condensed consolidated statements of operations. The adjustment consisted of the Company's proportionate share of the investee's net operating results and the amortization of the basis difference for the period from the transaction closing date of May 13, 2022, through June 30, 2022. The Company also recorded $4.2 million of its proportionate share of the investee's other comprehensive loss in the accompanying condensed consolidated statement of other comprehensive loss for the same period.

In conjunction with this investment, the Company and Syniverse entered into a wholesale agreement, pursuant to which Syniverse will process, route and deliver application-to-person messages originating and/or terminating between the Company's customers and mobile network operators. The value of the transactions that occurred between the Company and Syniverse were $32.1 million for the three months ended September 30, 2022, and $54.1 million for the period from the investment closing date on May 13, 2022, through September 30, 2022. These transactions were recorded as cost of revenue in the accompanying condensed consolidated statements of operations.

## 9. Goodwill and Intangible Assets

***Goodwill***

The goodwill balance as of September 30, 2022 and December 31, 2021 was as follows:

| | Total |
|---|---|
| | (In thousands) |
| Balance as of December 31, 2021 | $ 5,263,166 |
| Goodwill additions and adjustments | 21,450 |
| Balance as of September 30, 2022 | $ 5,284,616 |

***Intangible assets***

Intangible assets consisted of the following:

| | As of September 30, 2022 | | |
|---|---|---|---|
| | Gross | Accumulated Amortization | Net |
| Amortizable intangible assets: | | (In thousands) | |
| Developed technology | $ 795,836 | $ (308,175) | $ 487,661 |
| Customer relationships | 538,607 | (185,310) | 353,297 |
| Supplier relationships | 57,019 | (17,225) | 39,794 |
| Trade names | 30,393 | (18,587) | 11,806 |
| Order backlog | 10,000 | (10,000) | — |
| Patent | 4,028 | (654) | 3,374 |
| Total amortizable intangible assets | 1,435,883 | (539,951) | 895,932 |
| Non-amortizable intangible assets: | | | |
| Telecommunication licenses | 4,920 | — | 4,920 |
| Trademarks and other | 303 | — | 303 |
| Total | $ 1,441,106 | $ (539,951) | $ 901,155 |

| | As of December 31, 2021 | | |
|---|---|---|---|
| | Gross | Accumulated Amortization | Net |
| Amortizable intangible assets: | | (In thousands) | |
| Developed technology | $ 794,831 | $ (222,765) | $ 572,066 |
| Customer relationships | 538,264 | (128,035) | 410,229 |
| Supplier relationships | 51,671 | (9,491) | 42,180 |
| Trade names | 30,669 | (13,874) | 16,795 |
| Order backlog | 10,000 | (10,000) | — |
| Patent | 4,035 | (508) | 3,527 |
| Total amortizable intangible assets | 1,429,470 | (384,673) | 1,044,797 |
| Non-amortizable intangible assets: | | | |
| Telecommunication licenses | 4,920 | — | 4,920 |
| Trademarks and other | 295 | — | 295 |
| Total | $ 1,434,685 | $ (384,673) | $ 1,050,012 |

Amortization expense was $51.7 million and $55.7 million for the three months ended September 30, 2022 and 2021, respectively, and $155.4 million and $146.3 million for the nine months ended September 30, 2022 and 2021, respectively.

Total estimated future amortization expense is as follows:

| | As of September 30, 2022 |
|---|---|
| Year Ended December 31, | (In thousands) |
| 2022 (remaining three months) | $ 50,866 |
| 2023 | 202,792 |
| 2024 | 197,357 |
| 2025 | 193,783 |
| 2026 | 120,288 |
| Thereafter | 130,846 |
| Total | $ 895,932 |

## 10. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following:

| | As of September 30, 2022 | As of December 31, 2021 |
|---|---|---|
| | (In thousands) | |
| Accrued payroll and related | $ 76,415 | $ 78,780 |
| Accrued bonus and commission | 32,388 | 64,665 |
| Accrued cost of revenue | 176,946 | 118,004 |
| Sales and other taxes payable | 86,019 | 61,975 |
| ESPP contributions | 12,170 | 10,284 |
| Derivative liability | 33,860 | 220 |
| Finance lease liability | 12,141 | 12,370 |
| Restructuring liability | 53,161 | — |
| Employee sabbatical benefit accrual | 29,222 | — |
| Accrued other expense | 60,554 | 71,205 |
| Total accrued expenses and other current liabilities | $ 572,876 | $ 417,503 |

## 11. Long-Term Debt

Long-term debt, net, consisted of the following:

| | As of September 30, 2022 | As of December 31, 2021 |
|---|---|---|
| | (In thousands) | |
| **2029 Senior Notes** | | |
| Principal | $ 500,000 | $ 500,000 |
| Unamortized discount | (5,179) | (5,701) |
| Unamortized issuance costs | (1,172) | (1,286) |
| Net carrying amount | 493,649 | 493,013 |
| **2031 Senior Notes** | | |
| Principal | 500,000 | 500,000 |
| Unamortized discount | (5,434) | (5,832) |
| Unamortized issuance costs | (1,230) | (1,274) |
| Net carrying amount | 493,336 | 492,894 |
| Total long-term debt, net | $ 986,985 | $ 985,907 |

As of September 30, 2022, the Company was in compliance with all of its financial covenants under the Indenture.

## 12. Revenue by Geographic Area

Revenue by geographic area is based on the IP address or the mailing address at the time of registration. The following table sets forth revenue by geographic area:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2022 | 2021 |
| Revenue by geographic area: | (In thousands) | | | |
| United States | $ 650,531 | $ 497,993 | $ 1,837,325 | $ 1,372,436 |
| International | 332,499 | 242,183 | 964,422 | 626,659 |
| Total | $ 983,030 | $ 740,176 | $ 2,801,747 | $ 1,999,095 |
| Percentage of revenue by geographic area: | | | | |
| United States | 66 % | 67 % | 66 % | 69 % |
| International | 34 % | 33 % | 34 % | 31 % |

As of September 30, 2022 and December 31, 2021, long-lived assets outside of the United States were $56.0 million and $41.0 million, respectively.

## 13. Commitments and Contingencies

### *(a) Lease and Other Commitments*

The Company has entered into various non-cancelable operating lease agreements for its facilities. In the nine months ended September 30, 2022, the Company did not enter into any significant new lease agreements.

The Company has non-cancelable contractual commitments with its cloud infrastructure provider, network service providers and other vendors. In the three and nine months ended September 30, 2022, the Company entered into several such agreements with terms up to four years for a total purchase commitment of $127.1 million and $181.5 million, respectively.

***(b) Legal Matters***

The City and County of San Francisco ("San Francisco") has assessed the Company for additional Telephone Users Tax ("TUT") and Access Line Tax ("ALT") on certain of the Company's services for the years 2009 through 2018. The assessments totaled $38.8 million, including interest and penalties. The Company paid the assessments under protest in the third quarter of 2020.

On May 27, 2021, the Company filed a lawsuit against San Francisco in San Francisco Superior Court challenging the assessments. The Company raised numerous defenses to the assessments including that its services are not telecommunications services, application of the taxes to the Company's services violates the Internet Tax Freedom Act and San Francisco does not have jurisdiction to impose tax on services provided outside of San Francisco. The Company is seeking refunds of the taxes paid, waivers of interest and penalties, cost of suit and reasonable attorneys' fees, and other legal and equitable relief as the court deems appropriate. A trial date has been set for March 6, 2023.

The Company believes it has strong arguments against the assessments, but litigation is uncertain and there is no assurance that it will prevail in court. Should the Company lose on one or more of its arguments, it could incur additional losses associated with taxes, interest, and penalties that together, in aggregate, could be material. The Company regularly assesses the likelihood of adverse outcomes resulting from tax disputes such as this and examines all open years to determine the necessity and adequacy of any tax reserves. The Company's tax reserves are further discussed in Note 13(d) of these condensed consolidated financial statements.

In addition to the litigation discussed above, from time to time, the Company may be subject to legal actions and claims in the ordinary course of business. The Company has received, and may in the future continue to receive, claims from third parties asserting, among other things, infringement of their intellectual property rights. Future litigation may be necessary to defend the Company, its partners and its customers by determining the scope, enforceability and validity of third-party proprietary rights, or to establish our proprietary rights. The results of any current or future litigation cannot be predicted with certainty, and regardless of the outcome, litigation can have an adverse impact on the Company because of defense and settlement costs, diversion of management resources and other factors.

Legal fees and other costs related to litigation and other legal proceedings are expensed as incurred and are included in general and administrative expenses in the accompanying condensed consolidated statements of operations.

***(c) Indemnification Agreements***

The Company has signed indemnification agreements with all of its board members and executive officers. The agreements indemnify the board members and executive officers from claims and expenses on actions brought against the individuals separately or jointly with the Company for certain indemnifiable events. Indemnifiable events generally mean any event or occurrence related to the fact that the board member or the executive officer was or is acting in his or her capacity as a board member or an executive officer for the Company or was or is acting or representing the interests of the Company.

In the ordinary course of business and in connection with our financing and business combinations transactions, the Company enters into contractual arrangements under which it agrees to provide indemnification of varying scope and terms to business partners, customers and other parties with respect to certain matters, including, but not limited to, losses arising out of the breach of such agreements, intellectual property infringement claims made by third parties and other liabilities relating to or arising from the Company's various products, or its acts or omissions. In these circumstances, payment may be conditional on the other party making a claim pursuant to the procedures specified in the particular contract. Further, the Company's obligations under these agreements may be limited in terms of time and/or amount, and in some instances, the Company may have recourse against third parties for certain payments. The terms of such obligations may vary.

As of September 30, 2022 and December 31, 2021, no amounts were accrued related to any outstanding indemnification agreements.

***(d) Other Taxes***

The Company conducts operations in many tax jurisdictions within and outside the United States. In many of these jurisdictions, non-income-based taxes, such as sales, use, telecommunications and other local taxes are assessed on the Company's operations. The Company carries reserves for certain of its non-income-based tax exposures in certain jurisdictions when it is both probable that a liability was incurred and the amount of the exposure could be reasonably estimated. These reserves are based on estimates which include several key assumptions including, but not limited to, the taxability of the Company's services, the jurisdictions in which its management believes it had nexus and the sourcing of revenues to those jurisdictions.

The Company continues to remain in discussions with certain jurisdictions regarding its prior sales and other taxes that it may owe. In the event any of these jurisdictions disagree with management's assumptions and analysis, the assessment of the Company's tax exposure could differ materially from management's current estimates. For example, as described in Note 13(b), the Company is currently involved in legal proceedings with the City and County of San Francisco challenging their assessment of the Company's estimated tax liability for a specific period. The $38.8 million assessment of taxes, including interest and penalties, that the Company paid as required in 2020, net of the $11.5 million reserve the Company had accrued for the same period, was recorded as a deposit in other assets in the accompanying condensed consolidated balance sheets.

As of September 30, 2022, the liabilities recorded for the non-income-based taxes were $27.7 million for domestic jurisdictions and $21.6 million for jurisdictions outside of the United States. As of December 31, 2021, these liabilities were $25.4 million and $17.7 million, respectively.

**14. Stockholders' Equity**

***Preferred Stock***

As of September 30, 2022, and December 31, 2021, the Company had authorized 100,000,000 shares of preferred stock, par value $0.001, of which no shares were issued and outstanding.

***Common Stock***

As of September 30, 2022, and December 31, 2021, the Company had authorized 1,000,000,000 shares of Class A common stock and 100,000,000 shares of Class B common stock, each par value of $0.001 per share. As of September 30, 2022, 174,482,722 shares of Class A common stock and 9,817,605 shares of Class B common stock were issued and outstanding. As of December 31, 2021, 170,625,994 shares of Class A common stock and 9,842,105 shares of Class B common stock were issued and outstanding.

The Company had reserved shares of common stock for issuance as follows:

| | As of September 30, 2022 | As of December 31, 2021 |
|---|---|---|
| Stock options issued and outstanding | 2,488,072 | 3,351,313 |
| Unvested restricted stock units issued and outstanding | 14,970,869 | 6,475,700 |
| Class A common stock reserved for Twilio.org | 552,551 | 618,857 |
| Stock-based awards available for grant under 2016 Plan | 20,483,275 | 24,650,104 |
| Stock-based awards available for grant under ESPP | 7,924,609 | 6,382,830 |
| Total | 46,419,376 | 41,478,804 |

## 15. Stock-Based Compensation

The Company's 2016 Stock Option and Incentive Plan (the "2016 Plan") provides for granting stock options, restricted stock units ("RSU"), restricted stock awards ("RSA"), stock appreciation rights, unrestricted stock awards, performance share awards, dividend equivalent rights and cash-based awards to its employees, directors and consultants. Certain of the Company's outstanding equity awards were granted under equity incentive plans that are no longer active but continue to govern the outstanding equity awards granted thereunder.

The Company also offers an Employee Stock Purchase Plan ("ESPP") to eligible employees. The ESPP provides for separate six-month offering periods beginning in May and November of each year.

In March 2022, the Company granted 919,289 shares of performance-based restricted stock unit awards to its executive employees with a grant date fair value per share of $157.44 and an aggregate grant date fair value of $144.7 million. Each award consists of three tranches, with each vesting over a separate service period if its respective performance targets, as defined in the grant agreements, are achieved. The first tranche will vest if the revenue growth targets are achieved with respect to fiscal year 2022. The second and third tranches will vest if both (a) revenue growth targets and (b) profitability targets are achieved with respect to each of fiscal years 2023 and 2024. If performance targets are not achieved, the related tranche will be forfeited. Vesting of these performance-based restricted stock unit awards will range up to 100% above the target based on levels of performance and will be recorded in stock-based compensation expense in the fiscal year during which each tranche vests. The Company estimated the fair value of these awards based on the closing price of its Class A common stock on the date of grant.

As of September 30, 2022, total unrecognized compensation cost related to all outstanding equity awards excluding the awards impacted by the Restructuring Plan described in Note 6 was as follows:

| | Unrecognized Compensation Cost (In thousands) | Weighted-average remaining period (In years) |
|---|---|---|
| Unvested stock options | $ 62,340 | 2.1 |
| Unvested restricted stock units and awards | 2,000,933 | 3.1 |
| ESPP | 1,469 | 0.1 |
| Class A shares in escrow subject to future vesting | 13,298 | 1.8 |
| Total | $ 2,078,040 | |

### *Stock-Based Compensation Expense*

The Company recorded total stock-based compensation expense as follows:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2022 | 2021 |
| | (In thousands) | | | |
| Cost of revenue | $ 6,114 | $ 3,720 | $ 14,631 | $ 9,461 |
| Research and development | 90,787 | 69,242 | 279,680 | 185,072 |
| Sales and marketing | 58,747 | 53,843 | 184,825 | 143,419 |
| General and administrative | 37,973 | 37,238 | 111,850 | 107,414 |
| Restructuring costs | 15,274 | — | 15,274 | — |
| Total | $ 208,895 | $ 164,043 | $ 606,260 | $ 445,366 |

**16. Net Loss Per Share Attributable to Common Stockholders**

Basic and diluted net loss per common share is presented in conformity with the two-class method required for participating securities and is described in detail in the Company's Annual Report.

The following table sets forth the calculation of basic and diluted net loss per share attributable to common stockholders during the periods presented:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2022 | 2021 |
| Net loss attributable to common stockholders (in thousands) | $ (482,327) | $ (224,109) | $ (1,026,723) | $ (6 |
| Weighted-average shares used to compute net loss per share attributable to common stockholders, basic and diluted | 183,692,564 | 177,231,285 | 182,319,735 | 172,6 |
| Net loss per share attributable to common stockholders, basic and diluted | $ (2.63) | $ (1.26) | $ (5.63) | $ |

The following outstanding shares of common stock equivalents were excluded from the calculation of the diluted net loss per share attributable to common stockholders because their effect would have been anti-dilutive:

| | As of September 30, | |
|---|---|---|
| | 2022 | 2021 |
| Stock options issued and outstanding | 2,488,072 | 4,510,986 |
| Unvested restricted stock units issued and outstanding | 14,970,869 | 6,467,518 |
| Class A common stock reserved for Twilio.org | 552,551 | 640,959 |
| Class A common stock committed under ESPP | 191,558 | 107,815 |
| Class A common stock in escrow | 31,503 | 75,612 |
| Class A common stock in escrow and restricted stock awards subject to future vesting | 56,237 | 342,784 |
| Total | 18,290,790 | 12,145,674 |

**17. Income Taxes**

The Company computes its provision for income taxes for interim periods by applying an estimated annual effective tax rate to anticipated annual pretax income or loss. The estimated annual effective tax rate is applied to the Company's year to date income or loss, and is adjusted for discrete items recorded in the period. The primary difference between the Company's effective tax rate and the federal statutory rate is the full valuation allowance the Company has established on its federal, state and foreign net operating losses and credits. The Company recorded an income tax provision of $3.6 million and $3.3 million for the three and nine months ended September 30, 2022, respectively, and an income tax benefit of $14.8 million and $12.7 million for the three and nine months ended September 30, 2021.

The provision for income taxes recorded in the three and nine months ended September 30, 2022 consists primarily of income taxes and withholding taxes in foreign jurisdictions in which the Company conducts business, partially offset by an income tax benefit from the reversal of U.S. deferred tax liabilities related to the acquired intangibles from business combinations. The benefit for income taxes recorded in the three and nine months ended September 30, 2021 consists primarily of an income tax benefit from the reversal of U.S. valuation allowance related to acquired intangibles from business combinations, partially offset with income taxes and withholding taxes in foreign jurisdictions in which the Company conducts business.

The Company is subject to taxation in the U.S. and various other state and foreign jurisdictions. Because the Company has net operating loss carryforwards for U.S. federal and state jurisdictions, the statute of limitations is open for all tax years.

A provision enacted as part of the 2017 Tax Cuts & Jobs Act requires companies to capitalize research and experimental expenditures for tax purposes in tax years beginning after December 31, 2021. The Company is currently assessing the impact of the provision, however a material impact to tax expense and cash taxes is not expected due to available net operating losses and tax credits.

The Inflation Reduction Act and CHIPS and Science Act were signed into law in August 2022. The Inflation Reduction Act introduced new provisions, including a 15 percent corporate alternative minimum tax for certain large corporations that have at least an average of $1 billion adjusted financial statement income over a consecutive three-tax-year period. The corporate minimum tax will be effective for tax years beginning after December 31, 2022. A material impact to tax expense and cash taxes is not expected.

## 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 our condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q. In addition to historical financial information, the following discussion contains forward-looking statements that are based upon current plans, expectations and beliefs that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under Part II, Item 1A, "Risk Factors" in this Quarterly Report on Form 10-Q.*

### Overview

Today's leading companies trust Twilio's Customer Engagement Platform (CEP) to build direct, personalized relationships with their customers everywhere in the world. Twilio enables companies to use communications and data to add intelligence and security to every step of the customer journey, from sales to marketing to growth, customer service and many more engagement use cases in a flexible, programmatic way. For more information about Twilio refer to Part I, Item 1, "Business," of our Annual Report on Form 10-K filed with the SEC on February 22, 2022 ("Annual Report").

We have achieved significant growth in recent periods. In the three months ended September 30, 2022 and 2021, our revenue was $983.0 million and $740.2 million, respectively, and our net loss was $482.3 million and $224.1 million, respectively. In the three months ended September 30, 2022 and 2021, our 10 largest Active Customer Accounts generated an aggregate of 13% and 11% of our total revenue, respectively.

### Key Business Metrics

| | Three Months Ended September 30, | |
|---|---|---|
| | 2022 | 2021 |
| Number of Active Customer Accounts (as of end date of period) [1] | 280,000 | 250,000 |
| Total Revenue (in thousands) [2] | $ 983,030 | $ 740,176 |
| *Total Revenue Growth Rate* [2] | 33 % | 65 % |
| Dollar-Based Net Expansion Rate [3] | 122 % | 131 % |

[1] Excludes customer accounts from Zipwhip.

[2] Includes revenue from Zipwhip, acquired July 14, 2021, and other smaller acquisitions made after July 1, 2021.

[3] Excludes the contributions from Zipwhip, acquired July 14, 2021, and other smaller acquisitions made after July 1, 2021.

***Number of Active Customer Accounts.*** We believe that the number of Active Customer Accounts is an important indicator of the growth of our business, the market acceptance of our platform and future revenue trends. We define an "Active Customer Account" at the end of any period as an individual account, as identified by a unique account identifier, for which we have recognized at least $5 of revenue in the last month of the period. We believe that use of our platform by customers at or above the $5 per month threshold is a stronger indicator of potential future engagement than trial usage of our platform or usage at levels below $5 per month. In the three months ended September 30, 2022 and 2021, revenue from Active Customer Accounts represented over 99% of total revenue in each period. A single organization may constitute multiple unique Active Customer Accounts if it has multiple account identifiers, each of which is treated as a separate Active Customer Account.

***Dollar-Based Net Expansion Rate.*** Our ability to drive growth and generate incremental revenue depends, in part, on our ability to maintain and grow our relationships with existing Active Customer Accounts and to increase their use of the platform. An important way in which we have historically tracked performance in this area is by measuring the Dollar-Based Net Expansion Rate for Active Customer Accounts. Our Dollar-Based Net Expansion Rate increases when such Active Customer Accounts increase their usage of a product, extend their usage of a product to new applications or adopt a new

product. Our Dollar-Based Net Expansion Rate decreases when such Active Customer Accounts cease or reduce their usage of a product or when we lower usage prices on a product. As our customers grow their businesses and extend the use of our platform, they sometimes create multiple customer accounts with us for operational or other reasons. As such, when we identify a significant customer organization (defined as a single customer organization generating more than 1% of revenue in a quarterly reporting period) that has created a new Active Customer Account, this new Active Customer Account is tied to, and revenue from this new Active Customer Account is included with, the original Active Customer Account for the purposes of calculating this metric. We believe that measuring Dollar-Based Net Expansion Rate provides a more meaningful indication of the performance of our efforts to increase revenue from existing customers.

Our Dollar-Based Net Expansion Rate compares the revenue from all Active Customer Accounts in a quarter to the same quarter in the prior year. To calculate the Dollar-Based Net Expansion Rate, we first identify the cohort of Active Customer Accounts that were Active Customer Accounts in the same quarter of the prior year. The Dollar-Based Net Expansion Rate is the quotient obtained by dividing the revenue generated from that cohort in a quarter, by the revenue generated from that same cohort in the corresponding quarter in the prior year. When we calculate Dollar-Based Net Expansion Rate for periods longer than one quarter, we use the average of the applicable quarterly Dollar-Based Net Expansion Rates for each of the quarters in such period. Revenue from acquisitions does not impact the Dollar-Based Net Expansion Rate calculation until the quarter following the one-year anniversary of the applicable acquisition, unless the acquisition closing date is the first day of a quarter.

**Key Components of Statements of Operations**

***Revenue.*** We derive our revenue primarily from usage-based fees earned primarily from customers using our communications products within our Channel APIs. These usage-based products include offerings such as Programmable Messaging, Programmable Voice and others. Some examples of the usage-based fees that we charge include fees related to the number of text messages sent or received using our Programmable Messaging products, minutes of call duration activity for our Programmable Voice products and the number of authentications for our Verify product. In the three months ended September 30, 2022 and 2021, we generated 73% and 72% of our revenue, respectively, from usage-based fees. We also earn monthly flat fees from certain fee-based products, such as our Email API and our software products, such as our cloud contact center platform Twilio Flex and our customer data platform Twilio Segment.

When customers first begin using our platform, they typically pay upfront via credit card in monthly prepaid amounts and draw down their balances as they purchase or use our products. Our larger customers often enter into contracts for at least 12 months, that contain minimum revenue commitments, which may contain more favorable pricing. Customers on such contracts typically are invoiced monthly in arrears for products used.

Amounts that have been charged via credit card or invoiced are recorded in revenue, deferred revenue or customer deposits, depending on whether the revenue recognition criteria have been met. Our deferred revenue and customer deposits liability balance is not a meaningful indicator of our future revenue at any point in time because the number of contracts with our invoiced customers that contain terms requiring any form of prepayment is not significant.

We define U.S. revenue as revenue from customers with IP addresses or mailing addresses at the time of registration in the United States, and we define international revenue as revenue from customers with IP addresses or mailing addresses at the time of registration outside of the United States.

***Cost of Revenue and Gross Margin.*** Cost of revenue consists primarily of fees paid to network service providers. Cost of revenue also includes cloud infrastructure fees, direct costs of personnel, such as salaries and stock-based compensation for our customer support employees, and non-personnel costs, such as depreciation and amortization expense related to data centers and hosting equipment, amortization of capitalized internal-use software development costs and acquired intangibles. Our arrangements with network service providers require us to pay fees based on the volume of phone calls initiated or text messages sent, as well as the number of telephone numbers acquired by us to service our customers. Our arrangements with our cloud infrastructure provider require us to pay fees based on our server capacity consumption.

Our gross margin has been and will continue to be affected by a number of factors, including the timing and extent of our investments in our operations; our product mix; our ability to manage our network service provider and cloud infrastructure-related fees, including A2P SMS fees; the mix of U.S. revenue compared to international revenue; changes in foreign exchange rates; the timing of amortization of capitalized software development costs and acquired intangibles; and the extent to which we periodically choose to increase prices to our customers.

***Operating Expenses.*** The most significant components of operating expenses are personnel costs, which consist of salaries, benefits, sales commissions and bonuses and stock-based compensation. We also incur other non-personnel costs related to our general overhead expenses. We expect that our operating costs will increase in absolute dollars as we invest in our infrastructure to grow our business.

*Research and Development.* Research and development expenses consist primarily of personnel costs, outsourced engineering services, cloud infrastructure fees for staging and development, amortization of capitalized internal-use software development costs, depreciation and an allocation of our general overhead expenses. We capitalize the portion of our software development costs that meets the criteria for capitalization.

We are focusing our research and development investment in the highest impact product areas. We are investing strategically in alignment with our vision for the leading Customer Engagement Platform.

*Sales and Marketing.* Sales and marketing expenses consist primarily of personnel costs, including commissions for our sales employees. Sales and marketing expenses also include expenditures related to advertising, marketing, our brand awareness activities and developer evangelism, costs related to our SIGNAL customer and developer conferences, credit card processing fees, professional services fees, depreciation, amortization of acquired intangibles and an allocation of our general overhead expenses.

We focus our sales and marketing efforts on generating awareness of our company, platform and products, creating sales leads and establishing and promoting our brand, both domestically and internationally. We plan to continue investing in sales and marketing by supplementing our self-service model with an enterprise sales approach, expanding our sales channels, driving our go-to-market strategies, building our brand awareness and sponsoring additional marketing events.

*General and Administrative.* General and administrative expenses consist primarily of personnel costs for our accounting, finance, legal, human resources and administrative support personnel. General and administrative expenses also include costs related to business acquisitions, legal and other professional services fees, certain taxes, depreciation and amortization, charitable contributions and an allocation of our general overhead expenses. We expect that we will incur costs associated with supporting the growth of our business and to meet the increased compliance requirements associated with our international expansion. We may also incur higher than usual losses related to deterioration of quality of certain financial assets caused by the macroeconomic conditions and uncertainty in the COVID-19 environment.

*Restructuring Costs.* Restructuring costs consist primarily of personnel costs, such as employee severance payments and certain facilitation costs, associated with our restructuring plan that is described in Note 6 to our consolidated condensed financial statements included elsewhere in this Quarterly Report on Form 10-Q. Restructuring costs also include stock-based compensation expense related to vesting of stock-based awards of the impacted employees.

*Impairment of Long-Lived Assets.* Impairment of long-lived assets consists primarily of impairment charges allocated to the carrying amount of certain ROU assets and the associated leasehold improvement and property and equipment when the carrying amounts exceed their respective fair values. The impairment changes are described in Note 5 to our consolidated condensed financial statements included elsewhere in this Quarterly Report on Form 10-Q.

***Provision for Income Taxes.*** Our income tax provision or benefit for interim periods is determined using an estimate of our annual effective tax rate, adjusted for discrete items occurring in the quarter. The primary difference between our effective tax rate and the federal statutory rate relates to the full valuation allowance we established on the federal, state and certain foreign net operating losses and credits.

**Non-GAAP Financial Measures:**

We use the following non-GAAP financial information, collectively, to evaluate our ongoing operations and for internal planning and forecasting purposes. We believe that non-GAAP financial information, when taken collectively, may be helpful to investors because it provides consistency and comparability with past financial performance, facilitates period-to-period comparisons of results of operations and assists in comparisons with other companies, many of which use similar non-GAAP financial information to supplement their GAAP results. Non-GAAP financial information is presented for supplemental informational purposes only, should not be considered a substitute for financial information presented in accordance with generally accepted accounting principles and may be different from similarly-titled non-GAAP measures used by other companies. Whenever we use a non-GAAP financial measure, a reconciliation is provided to the most closely applicable financial measure stated in accordance with generally accepted accounting principles. Investors are encouraged to review the related GAAP financial measures and the reconciliation of these non-GAAP financial measures to their most directly comparable GAAP financial measures.

**Non-GAAP Gross Profit and Non-GAAP Gross Margin.** For the periods presented, we define non-GAAP gross profit and non-GAAP gross margin as GAAP gross profit and GAAP gross margin, respectively, adjusted to exclude, as applicable, certain expenses as presented in the table below:

| | Three Months Ended September 30, | |
|---|---|---|
| | **2022** | **2021** |
| **Reconciliation:** | (In thousands) | |
| Gross profit | $ 462,075 | $ 364,615 |
| GAAP gross margin | 47 % | 49 % |
| Non-GAAP adjustments: | | |
| Share-based compensation | 6,114 | 3,720 |
| Amortization of acquired intangibles | 30,729 | 31,558 |
| Taxes related to stock-based compensation | 215 | — |
| Non-GAAP gross profit | $ 499,133 | $ 399,893 |
| Non-GAAP gross margin | 51 % | 54 % |

**Non-GAAP Operating Expenses**. For the periods presented, we define non-GAAP operating expenses (including categories of operating expenses) as GAAP operating expenses (and categories of operating expenses) adjusted to exclude, as applicable, certain expenses as presented in the table below:

| | Three Months Ended September 30, | |
|---|---|---|
| | **2022** | **2021** |
| **Reconciliation:** | (In thousands) | |
| Operating expenses | $ 919,072 | $ 596,960 |
| Non-GAAP adjustments: | | |
| Share-based compensation | (187,507) | (160,323) |
| Amortization of acquired intangibles | (20,920) | (24,203) |
| Acquisition related expenses | (121) | (1,620) |
| Taxes related to stock-based compensation | (4,210) | (10,734) |
| Charitable contribution | (1,911) | (8,389) |
| Restructuring costs | (72,451) | — |
| Impairment of long-lived assets | (97,722) | — |
| Non-GAAP operating expenses | $ 534,230 | $ 391,691 |

**Non-GAAP (Loss) Income from Operations and Non-GAAP Operating Margin**. For the periods presented, we define non-GAAP (loss) income from operations and non-GAAP operating margin as GAAP loss from operations and GAAP operating margin, respectively, adjusted to exclude, as applicable, certain expenses as presented in the table below:

| | Three Months Ended September 30, | |
|---|---|---|
| | 2022 | 2021 |
| **Reconciliation:** | (In thousands) | |
| Loss from operations | $ (456,997) | $ (232,345) |
| Operating margin | (46)% | (31)% |
| Non-GAAP adjustments: | | |
| Share-based compensation | 193,621 | 164,043 |
| Amortization of acquired intangibles | 51,649 | 55,761 |
| Acquisition related expenses | 121 | 1,620 |
| Taxes related to stock-based compensation | 4,425 | 10,734 |
| Charitable contribution | 1,911 | 8,389 |
| Restructuring costs | 72,451 | — |
| Impairment of long-lived assets | 97,722 | — |
| Non-GAAP (loss) income from operations | $ (35,097) | $ 8,202 |
| Non-GAAP operating margin | (4)% | 1 % |

## Results of Operations

Our results of operations may be significantly affected by many factors, such as changes in global economic conditions and customer demand and spending, inflation, labor market constraints, uncertainty regarding the impacts of fluctuations in foreign exchange rates, world events, existing and new domestic and foreign laws and regulations, as well as those factors outlined in Part II, Item 1A, “Risk Factors.”

Our revenue is primarily derived from usage-based fees we charge for certain of our products, which can lead to variability and at times create significant differences between forecasts and actual results. In addition, our product mix and mix of international and domestic customers may significantly impact our gross margin. Because usage trends by geographic region and by customer are inherently difficult to estimate, our actual results could differ significantly from our estimates, particularly if market and industry specific conditions continue to shift.

In September 2022, we announced our decision to commit to a Restructuring Plan that was designed to reduce operating costs, improve operating margins and shift our selling capacity to accelerate software sales. The Restructuring Plan includes elimination of approximately 11% of our workforce. We recorded an aggregate restructuring charge of $72.5 million in the third quarter of 2022 and expect to record additional charges of approximately $10.0 million to $15.0 million until all activities under our Restructuring Plan are completed. Refer to Note 6 of our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q for further details on this event.

In May 2022, we announced our decision to become a remote-first company, whereby employees would have the flexibility to work remotely on a permanent basis. As part of our new operating strategy, in the third quarter, we permanently closed several of our office locations which resulted in an impairment of several long-lived assets, including our operating leases, leasehold improvement and property and equipment. We recorded a total impairment charge of $97.7 million in the third quarter of 2022 and expect to record an estimated additional charge of approximately $5.0 million to $10.0 million in the first quarter of 2023.

In May 2022, we acquired a 44.55% equity interest in Syniverse Corporation (“Syniverse”) for $750.0 million in cash. In the three months ended September 30, 2022, we recorded $13.4 million of our proportionate share of Syniverse’s net loss and the amortization of the excess investment basis, as well as $4.2 million of our proportionate share of Syniverse’s other comprehensive loss into our unaudited condensed consolidated statements of operations and comprehensive loss, respectively, included elsewhere in this Quarterly report on Form 10-Q. For further description of this transaction, refer to Notes 2 and 8 to our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q

In July 2022, we adopted a new sabbatical program for our tenured employees, whereby every three years employees may apply for a paid sabbatical leave of four consecutive weeks. Employees who had already accumulated more than three years of tenure with us as of the program's effective date on July 1, 2022, became immediately eligible for their sabbatical leaves. As of September 30, 2022, we recorded a $29.2 million liability related to the adoption and subsequent activity under this program. In the quarters subsequent to the adoption, we do not expect the impact from this program to be significant to our results of operations.

We continue to execute against our two primary priorities of accelerating software sales and delivering non-GAAP operating profit starting in 2023. To this end, our hiring efforts are focused on areas that we believe will unlock significant value and present strong opportunities for continued growth, such as Twilio Segment, Twilio Engage and Twilio Flex, and we have frozen the vast majority of new hires and backfills outside of these areas. We are also shifting more of our selling capacity to software, while looking to leverage more of our self-service capability for customers that don't need direct account coverage.

We continue to see strong demand for our portfolio of products that make up our customer engagement platform and overall our business has remained resilient. However, we have seen a more pronounced impact to our business from macro-economics factors than we have in prior quarters. We generate a portion of our revenue from certain sectors of the economy that have experienced recent softness due to macro-economic headwinds, including cryptocurrencies, consumer on-demand, retail, e-commerce, and social media, we are starting to see some instances of delays in purchasing decisions and longer sales cycles.

The following tables set forth our results of operations for the periods presented and as a percentage of our total revenue for those periods. We have included Zipwhip in our results of operations prospectively after its closing date of July 14, 2021, and all other acquisitions from the respective closing dates of each acquisition. The period-to-period comparison of our historical results are not indicative of the results that may be expected in the future.

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2022 | 2021 |
| **Condensed Consolidated Statements of Operations Data:** | (In thousands, except share and per share amounts) | | | |
| Revenue | $ 983,030 | $ 740,176 | $ 2,801,747 | $ 1,999 |
| Cost of revenue [1] [2] | 520,955 | 375,561 | 1,469,312 | 1,004 |
| Gross profit | 462,075 | 364,615 | 1,332,435 | 994 |
| Operating expenses: | | | | |
| Research and development [1] [2] | 284,735 | 209,890 | 804,987 | 565 |
| Sales and marketing [1] [2] | 328,833 | 264,548 | 951,697 | 713 |
| General and administrative [1] [2] | 135,331 | 122,522 | 392,319 | 346 |
| Restructuring costs [1] | 72,451 | — | 72,451 | |
| Impairment of long-lived assets | 97,722 | — | 97,722 | |
| Total operating expenses | 919,072 | 596,960 | 2,319,176 | 1,626 |
| Loss from operations | (456,997) | (232,345) | (986,741) | (631 |
| Other expenses, net: | | | | |
| Share of losses from equity method investment | (13,376) | — | (13,376) | |
| Other, net | (8,374) | (6,613) | (23,290) | (39 |
| Total other expenses, net | (21,750) | (6,613) | (36,666) | (39 |
| Loss before (provision for) benefit from income taxes | (478,747) | (238,958) | (1,023,407) | (671 |
| (Provision for) benefit from income taxes | (3,580) | 14,849 | (3,316) | 12 |
| Net loss attributable to common stockholders | $ (482,327) | $ (224,109) | $ (1,026,723) | $ (658 |
| Net loss per share attributable to common stockholders, basic and diluted | $ (2.63) | $ (1.26) | $ (5.63) | $ ( |
| Weighted-average shares used in computing net loss per share attributable to common stockholders, basic and diluted | 183,692,564 | 177,231,285 | 182,319,735 | 172,605 |

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

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2022 | 2021 |
| | (In thousands) | | | |
| Cost of revenue | $ 6,114 | $ 3,720 | $ 14,631 | $ 9,461 |
| Research and development | 90,787 | 69,242 | 279,680 | 185,072 |
| Sales and marketing | 58,747 | 53,843 | 184,825 | 143,419 |
| General and administrative | 37,973 | 37,238 | 111,850 | 107,414 |
| Restructuring costs | 15,274 | — | 15,274 | — |
| Total | $ 208,895 | $ 164,043 | $ 606,260 | $ 445,366 |

(2) Includes amortization of acquired intangibles as follows:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2022 | 2021 |
| | (In thousands) | | | |
| Cost of revenue | $ 30,729 | $ 31,558 | $ 92,601 | $ 84,104 |
| Research and development | 420 | 462 | 1,260 | 840 |
| Sales and marketing | 20,500 | 23,741 | 61,412 | 61,197 |
| General and administrative | — | — | 7 | 125 |
| Total | $ 51,649 | $ 55,761 | $ 155,280 | $ 146,266 |

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2022 | 2021 | 2022 | 2021 |
| **Consolidated Statements of Operations, as a percentage of revenue: **** | | | | |
| Revenue | 100 % | 100 % | 100 % | 10 |
| Cost of revenue | 53 | 51 | 52 | 5 |
| Gross profit | 47 | 49 | 48 | 5 |
| Operating expenses: | | | | |
| Research and development | 29 | 28 | 29 | 2 |
| Sales and marketing | 33 | 36 | 34 | 3 |
| General and administrative | 14 | 17 | 14 | 1 |
| Restructuring costs | 7 | — | 3 | — |
| Impairment of long-lived assets | 10 | — | 3 | — |
| Total operating expenses | 93 | 81 | 83 | 8 |
| Loss from operations | (46) | (31) | (35) | (3 |
| Other expenses, net | | | | |
| Share of losses from equity method investment | (1) | — | * | — |
| Other, net | (1) | (1) | (1) | ( |
| Total other expenses, net | (2) | (1) | (1) | ( |
| Loss before (provision for) benefit from income taxes | (49) | (32) | (37) | (3 |
| (Provision for) benefit from income taxes | * | 2 | * | |
| Net loss attributable to common stockholders | (49 %) | (30 %) | (37 %) | (3 |

* Less than 0.5% of revenue.
** Columns may not add up to 100% due to rounding.

## Comparison of the Three Months Ended September 30, 2022 and 2021

***Revenue***

| | Three Months Ended September 30, | | Change | |
|---|---|---|---|---|
| | 2022 | 2021 | | |
| | (Dollars in thousands) | | | |
| Total Revenue | $ 983,030 | $ 740,176 | $ 242,854 | 33 % |

In the three months ended September 30, 2022, total revenue increased by $242.9 million, or 33%, compared to the same period last year. This increase was primarily attributable to an increase in the usage of our products, particularly our Programmable Messaging, Programmable Voice, Email, Segment and Flex; the adoption of additional products by our existing customers; and revenue contributions from our acquisition of Zipwhip and other businesses. The change in usage from our existing customers was reflected in our Dollar-Based Net Expansion Rate of 122% for the three months ended September 30, 2022. The increase in usage was also attributable to a 12% increase in the number of Active Customer Accounts, from over 250,000 as of September 30, 2021, to over 280,000 as of September 30, 2022.

In the three months ended September 30, 2022, U.S. revenue and international revenue represented $650.5 million or 66%, and $332.5 million, or 34%, respectively, of total revenue. In the three months ended September 30, 2021, U.S. revenue and international revenue represented $498.0 million, or 67%, and $242.2 million, or 33%, respectively, of total revenue. The increase in international revenue was attributable to the growth in usage of our products, particularly our Programmable Messaging products, by our existing international customers; an 11% increase in the number of international Active Customer Accounts driven in part by our focus on expanding our sales to customers outside of the United States; and revenue contribution from our recent acquisitions.

***Cost of Revenue and Gross Margin***

| | Three Months Ended September 30, | | Change | |
|---|---|---|---|---|
| | 2022 | 2021 | | |
| | (Dollars in thousands) | | | |
| Cost of revenue | $ 520,955 | $ 375,561 | $ 145,394 | 39 % |
| Gross margin | 47 % | 49 % | | |

In the three months ended September 30, 2022, cost of revenue increased by $145.4 million, or 39%, compared to the same period last year. The increase in cost of revenue was primarily attributable to a $111.8 million increase in network service providers' costs, which included the additional A2P fees imposed by certain carriers, and a $9.6 million increase in cloud infrastructure fees, all to support the growth in usage of our products.

In the three months ended September 30, 2022, the gross margin percentage declined compared to the same period last year. This decline was primarily driven by continued strong growth of our lower margin international messaging business. These declines were partially offset by certain operational improvements.

***Operating Expenses***

| | Three Months Ended September 30, | | | |
|---|---|---|---|---|
| | 2022 | 2021 | Change | |
| | (Dollars in thousands) | | | |
| Research and development | $ 284,735 | $ 209,890 | $ 74,845 | 36 % |
| Sales and marketing | 328,833 | 264,548 | 64,285 | 24 % |
| General and administrative | 135,331 | 122,522 | 12,809 | 10 % |
| Restructuring costs | 72,451 | — | 72,451 | 100 % |
| Impairment of long-lived assets | 97,722 | — | 97,722 | 100 % |
| Total operating expenses | $ 919,072 | $ 596,960 | $ 322,112 | 54 % |

In the three months ended September 30, 2022, research and development expenses increased by $74.8 million, or 36%, compared to the same period last year. The increase was primarily attributable to a $70.1 million increase in personnel costs, largely as a result of a 32% average increase in our research and development headcount, excluding the impact of our Restructuring Plan, as we continued to focus on enhancing our Twilio Segment and Flex products and strengthening our platform infrastructure.

In the three months ended September 30, 2022, sales and marketing expenses increased by $64.3 million, or 24%, compared to the same period last year. The increase was primarily attributable to a $58.5 million increase in personnel costs, largely as a result of a 27% average increase in sales and marketing headcount, excluding the impact of our Restructuring Plan, as we continued to expand our sales efforts globally.

In the three months ended September 30, 2022, general and administrative expenses increased by $12.8 million, or 10%, compared to the same period last year. The increase was primarily attributable to a $7.0 million increase in personnel costs, largely as a result of a 17% average increase in general and administrative headcount, excluding the impact of our Restructuring Plan, to support the growth of our business globally. The increase was also attributable to a $9.3 million increase in our bad debt expense and a $1.6 million increase in software subscription expense driven by the increased headcount. These increases were partially offset by a $6.5 million decrease in charitable contribution expense that we made through Twilio.org.

In the three months ended September 30, 2022, we incurred $72.5 million in restructuring costs as a result of our Restructuring Plan approved by the compensation and talent management committee of our board of directors during the third quarter of 2022. For further detail refer to Note 6 to our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q.

In the three months ended September 30, 2022, we incurred $97.7 million in impairment charges related to our operating lease assets and other long-lived assets. The impairment charges were triggered by our remote-first operating strategy as a result of which we permanently closed several office locations during the third quarter of 2022. For further detail refer to Note 5 to our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q.

## Comparison of the Nine Months Ended September 30, 2022 and 2021

### *Revenue*

| | Nine Months Ended September 30, | | | |
|---|---|---|---|---|
| | 2022 | 2021 | Change | |
| | (Dollars in thousands) | | | |
| Total Revenue | $ 2,801,747 | $ 1,999,095 | $ 802,652 | 40% |

In the nine months ended September 30, 2022, total revenue increased by $802.7 million, or 40%, compared to the same period last year. This increase was primarily attributable to an increase in the usage of our products, particularly our Programmable Messaging, Programmable Voice, Email, Segment and Flex; the adoption of additional products by our existing customers; the additional A2P fees imposed by certain carriers; and revenue contributions from our acquisition of Zipwhip and other businesses. The change in usage from our existing customers was reflected in our Dollar-Based Net Expansion Rate of 124% for the nine months ended September 30, 2022. The increase in usage was also attributable to a 12% increase in the number of Active Customer Accounts, from over 250,000 as of September 30, 2021, to over 280,000 as of September 30, 2022.

In the nine months ended September 30, 2022, U.S. revenue and international revenue represented $1.8 billion or 66%, and $964.4 million, or 34%, respectively, of total revenue. In the nine months ended September 30, 2021, U.S. revenue and international revenue represented $1.4 billion, or 69%, and $626.7 million, or 31%, respectively, of total revenue. The increase in international revenue was attributable to the growth in usage of our products, particularly our Programmable Messaging products, by our existing international customers; a 11% increase in the number of international Active Customer Accounts driven in part by our focus on expanding our sales to customers outside of the United States; and revenue contribution from our recent acquisitions.

### *Cost of Revenue and Gross Margin*

| | Nine Months Ended September 30, | | | |
|---|---|---|---|---|
| | 2022 | 2021 | Change | |
| | (Dollars in thousands) | | | |
| Cost of revenue | $ 1,469,312 | $ 1,004,929 | $ 464,383 | 46 % |
| Gross margin | 48 % | 50 % | | |

In the nine months ended September 30, 2022, cost of revenue increased by $464.4 million, or 46%, compared to the same period last year. The increase in cost of revenue was primarily attributable to a $377.3 million increase in network service providers' costs, which included the additional A2P fees imposed by certain carriers, a $27.2 million increase in cloud infrastructure fees, all to support the growth in usage of our products, and an $8.5 million increase in amortization expense related to our acquired intangible assets.

In the nine months ended September 30, 2022, the gross margin percentage declined compared to the same period last year. This decline was primarily driven by continued strong growth of our lower margin international messaging business and the additional A2P fees imposed by certain carriers, which we pass to our customers at cost, and an increase in amortization expense related to our acquired intangible assets. These declines were partially offset by certain operational improvements.

***Operating Expenses***

| | Nine Months Ended September 30, 2022 | 2021 | Change | |
|---|---|---|---|---|
| | (Dollars in thousands) | | | |
| Research and development | $ 804,987 | $ 565,970 | $ 239,017 | 42 % |
| Sales and marketing | 951,697 | 713,196 | 238,501 | 33 % |
| General and administrative | 392,319 | 346,958 | 45,361 | 13 % |
| Restructuring costs | 72,451 | — | 72,451 | 100 % |
| Impairment of long-lived assets | 97,722 | — | 97,722 | 100 % |
| Total operating expenses | $ 2,319,176 | $ 1,626,124 | $ 693,052 | 43 % |

In the nine months ended September 30, 2022, research and development expenses increased by $239.0 million, or 42%, compared to the same period last year. The increase was primarily attributable to a $223.9 million increase in personnel costs, largely as a result of a 42% average increase in our research and development headcount, excluding the impact of our Restructuring Plan, as we continued to focus on enhancing our Twilio Segment and Flex products and strengthening our platform infrastructure.

In the nine months ended September 30, 2022, sales and marketing expenses increased by $238.5 million, or 33%, compared to the same period last year. The increase was primarily attributable to a $196.0 million increase in personnel costs, largely as a result of a 41% average increase in sales and marketing headcount, excluding the impact of our Restructuring Plan, as we continued to expand our sales efforts globally, and a $14.2 million increase in advertising expenses.

In the nine months ended September 30, 2022, general and administrative expenses increased by $45.4 million, or 13%, compared to the same period last year. The increase was primarily attributable to a $38.9 million increase in personnel costs, as a result of a 33% average increase in general and administrative headcount, excluding the impact of our Restructuring Plan. Additionally, the increase was attributable to a $10.7 million increase in bad debt expense and a $6.4 million increase in professional services fees. The increase was partially offset by a $16.1 million decrease in charitable contributions that we made through Twilio.org.

In the nine months ended September 30, 2022, we incurred $72.5 million and $97.7 million of restructuring costs and impairment of long-lived assets, respectively. For further detail refer to the analysis provided in the Comparison of the Three Months Ended September 30, 2022 and 2021.

## Liquidity and Capital Resources

Our principal sources of liquidity have been (i) the net proceeds of $979.0 million, $1.4 billion and $1.8 billion, net of underwriting discounts and offering expenses paid by us, from our public equity offerings in June 2019, August 2020 and February 2021, respectively; (ii) the aggregate net proceeds of approximately $984.7 million, after deducting purchaser discounts and debt issuance costs paid by us, from the issuance of our 2029 Notes and 2031 Notes in March 2021; (iii) the net proceeds of $228.4 million, after deducting transaction costs paid by us, from settlement of our capped call arrangements in June 2021; and (iv) the payments received from customers using our products.

Our primary uses of cash include operating costs, such as personnel-related costs, network service provider costs, cloud infrastructure costs, facility-related spending, as well as acquisitions and investments. Our principal contractual and other commitments consist of obligations under our 2029 Notes and 2031 Notes, our operating leases for office space and contractual commitments to our cloud infrastructure and network service providers. Refer to Note 11 and Note 13(a) to our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q for detailed discussions of our obligations and commitments related to debt and other purchase obligations.

We may, from time to time, consider acquisitions of, or investments in, complementary businesses, products, services, capital infrastructure or technologies which might affect our liquidity requirements, cause us to secure additional financing or issue additional equity or debt securities. There can be no assurance that additional credit lines or financing instruments will be available in amounts or on terms acceptable to us, if at all.

We believe that our cash, cash equivalents and marketable securities balances, as well as the cash flows generated by our operations, will be sufficient to satisfy our anticipated cash needs for working capital and capital expenditures for the next 12 months and beyond. However, our belief may prove to be incorrect, and we could utilize our available financial resources sooner than we currently expect. Our future capital requirements and the adequacy of available funds will depend on many factors, including those set forth in Part II, Item 1A, "Risk Factors." We may be required to seek additional equity or debt financing in order to meet these future capital requirements. In the event that additional financing is required from outside sources, we may not be able to raise it on terms acceptable to us, or at all. If we are unable to raise additional capital when desired, our business, results of operations and financial condition would be adversely affected. Additionally, cash from operations could also be affected by various risks and uncertainties in connection with the impact of an economic downturn or recession, the COVID-19 pandemic, significant market volatility in the global economy, timing and ability to collect payments from our customers and other risks detailed in Part II, Item 1A, "Risk Factors."

***Cash Flows***

The following table summarizes our cash flows:

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2022 | 2021 |
| | (In thousands) | |
| Cash used in operating activities | $ (195,913) | $ (19,949) |
| Cash used in investing activities | (682,153) | (2,451,736) |
| Cash provided by financing activities | 33,252 | 3,039,300 |
| Effect of exchange rate changes on cash, cash equivalents and restricted cash | 146 | (157) |
| Net (decrease) increase in cash, cash equivalents and restricted cash | $ (844,668) | $ 567,458 |

*Cash Flows from Operating Activities*

In the nine months ended September 30, 2022, cash used in operating activities consisted primarily of our net loss of $1.0 billion adjusted for non-cash items, including $606.3 million of stock-based compensation expense reflecting the impact of our Restructuring Plan, $207.9 million of depreciation and amortization expense, $100.7 million of impairment of operating lease assets and other long-lived assets, $38.7 million of non-cash reduction in our operating right-of-use asset, $41.3 million amortization of deferred commissions, $27.9 million of net amortization of investment premium and discount, and $235.8 million of cumulative changes in operating assets and liabilities. With respect to changes in operating assets and liabilities, accounts receivable and prepaid expenses increased $202.4 million primarily due to revenue growth, timing of cash receipts and pre-payments of our cloud infrastructure fees and certain operating expenses. Accounts payable and other current liabilities increased $134.0 million primarily due to increases in transaction volumes, the impacts from our Restructuring Plan and the new sabbatical employee benefit introduced by us effective in the current quarter. Operating lease liabilities decreased $42.2 million due to payments made against our operating lease obligations. Other long-term assets increased $111.7 million primarily due to an increase in the sales commissions balances related to the growth of our business. The impairment of operating lease assets and other long lived assets and the details of the Restructuring Plan are described further in Note 5 and Note 6, respectively, to our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q.

In the nine months ended September 30, 2021, cash used in operating activities consisted primarily of our net loss of $658.5 million adjusted for non-cash items, including $445.4 million of stock-based compensation expense, $189.7 million of depreciation and amortization expense, $24.9 million of net amortization of investment premium and discount; $24.6 million of donated common stock, $29.0 million loss on extinguishment of our convertible notes, $36.2 million of non-cash reduction to our operating right-of-use asset, $20.8 million amortization of deferred commissions, and $141.8 million of cumulative changes in operating assets and liabilities. With respect to changes in operating assets and liabilities, accounts receivable and prepaid expenses increased $141.1 million primarily due to the timing of cash receipts from certain of our larger customers, pre-payments of our cloud infrastructure fees and certain operating expenses. Accounts payable and other current liabilities increased $76.1 million primarily due to increases in transaction volumes. Operating lease liabilities decreased $36.3 million due to payments made against our operating lease obligations. Other long-term assets increased $66.5 million primarily due to an increase in the sales commissions balances related to the growth of our business.

*Cash Flows from Investing Activities*

In the nine months ended September 30, 2022, cash used in investing activities was $682.2 million primarily consisting of $584.8 million of purchases of marketable securities and other investments, net of maturities and sales; $32.9 million of net cash paid to acquire other businesses, $35.9 million related to capitalized software development costs and $28.6 million related to purchases of long-lived assets.

In the nine months ended September 30, 2021, cash used in investing activities was $2.5 billion primarily consisting of $1.9 billion of purchases of marketable securities and other investments, net of maturities and sales, $490.9 million of net cash paid to acquire other businesses, $35.9 million related to capitalized software development costs and $33.6 million related to purchases of long-lived assets.

*Cash Flows from Financing Activities*

In the nine months ended September 30, 2022, cash provided by financing activities was $33.3 million primarily consisting of $43.8 million in proceeds from stock options exercised by our employees and shares issued under our employee stock purchase plan, offset by $9.4 million in principal payments on debt and finance leases.

In the nine months ended September 30, 2021, cash provided by financing activities was $3.0 billion primarily consisting of $1.8 billion in net proceeds from our public equity offering, $984.7 million in net proceeds from the issuance of our 2029 Notes and 2031 Notes, $228.4 million in net proceeds from the settlement of the capped call transactions related to our convertible notes fully redeemed in the second quarter of 2021, and $71.6 million in proceeds from stock options exercised by our employees and shares issued under our employee stock purchase plan. This was offset by $4.9 million in principal payments made on finance leases and $6.6 million related to the value of equity awards withheld to settle tax liabilities.

## Critical Accounting Policies and Estimates

Our unaudited condensed consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States of America. The preparation of these unaudited condensed consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expenses and related disclosures. We evaluate our estimates and assumptions on an ongoing basis. Our estimates are based on historical experience and various other assumptions that we believe to be reasonable under the circumstances. Our actual results could differ from these estimates.

There have been no changes to our critical accounting policies as described in our Annual Report on Form 10-K filed with the SEC on February 22, 2022.

## Recent Accounting Pronouncements Not Yet Adopted

Refer to Note 2 to the unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q for a discussion of recent accounting pronouncements not yet adopted.

**Available Information**

Our filings are available to be viewed and downloaded free of charge through our investor relations website after we file them with the Securities and Exchange Commission ("SEC"). Our filings include our Annual Report on Form 10-K, as amended, Quarterly Reports on Form 10-Q, our Proxy Statement for our annual meeting of stockholders, Current Reports on Form 8-K and other filings with the SEC. Our investor relations website is located at http://investors.twilio.com. The SEC also maintains a website that contains periodic and current reports, proxy statements and other information about issuers, like us, that file electronically with the SEC. The address of that website is www.sec.gov.

We webcast our earnings calls and certain events we participate in or host with members of the investment community on our investor relations website. Additionally, we provide notifications of news or announcements regarding our financial performance, including SEC filings, investor events, press and earnings releases, and blogs as part of our investor relations website. Further corporate governance information, including our corporate governance guidelines and code of business conduct and ethics, is also available on our investor relations website under the heading "Governance." The contents of our websites are not intended to be incorporated by reference into this Quarterly Report on Form 10-Q or in any other report or document we file with the SEC, and any references to our websites are intended to be inactive textual references only.

**Item 3.*Quantitative and Qualitative Disclosures about Market Risk***

We are exposed to certain market risks in the ordinary course of our business, including sensitivities as follows:

***Interest Rate Risk***

We had cash, cash equivalents and restricted cash of $632.8 million and marketable securities of $3.6 billion as of September 30, 2022. Cash, cash equivalents and restricted cash consist of bank deposits, money market funds, reverse repurchase agreements and commercial paper. Marketable securities consist primarily of U.S. treasury securities, non-U.S. government securities and high credit quality corporate debt securities. The cash and cash equivalents and marketable securities are held for working capital purposes. Such interest-earning instruments carry a degree of interest rate risk. To date, fluctuations in interest income have not been significant. The primary objective of our investment activities is to preserve principal while maximizing income without significantly increasing risk. We do not enter into investments for trading or speculative purposes and have not used any derivative financial instruments to manage our interest rate risk exposure. In March 2021, we issued $1.0 billion aggregate principal amount of our 2029 Notes and 2031 Notes carrying fixed interest rates of 3.625% and 3.875%, respectively. Due to the short-term nature of our investments and fixed rate nature of our debt, we have not been exposed to, nor do we anticipate being exposed to, material risks due to changes in interest rates. A hypothetical 10% change in interest rates during any of the periods presented would not have had a material impact on our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q..

***Currency Exchange Risks***

The functional currency of most of our foreign subsidiaries is the U.S. dollar. The local currencies of our foreign subsidiaries are the Australian dollar, the Bermuda dollar, the Brazilian real, the British pound, the Canadian dollar, the Colombian peso, the Czech Republic koruna, the Euro, the Hong Kong dollar, the Indian rupee, the Japanese yen, the Mexican Peso, the Polish Zloty, the Serbian Dinar, the Singapore dollar and the Swedish krona.

Our subsidiaries remeasure monetary assets and liabilities at period-end exchange rates, while non-monetary items are remeasured at historical rates. Revenue and expense accounts are remeasured at the average exchange rate in effect during the month in which a transaction occurs. If there is a change in foreign currency exchange rates, the conversion of our foreign subsidiaries’ financial statements into U.S. dollars would result in a realized gain or loss which is recorded in our unaudited condensed consolidated statements of operations included elsewhere in this Quarterly Report on Form 10-Q..

We enter into foreign currency derivative hedging transactions to mitigate our exposure to market risks that may result from changes in foreign currency exchange rates. For further information, refer to Note 7 to our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q.

A hypothetical 10% change in foreign exchange rates during any of the periods presented would not have had a material impact on our unaudited condensed consolidated financial statements.

**Item 4. *Controls and Procedures***

**(a) Evaluation of Disclosure Controls and Procedures**

Our management, with the participation of our Chief Executive Officer and our Principal Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of the end of the period covered by this Quarterly Report on Form 10-Q.

Based on this evaluation, our Chief Executive Officer and our Principal Financial Officer concluded that, as of September 30, 2022, our disclosure controls and procedures were effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and our Principal Financial Officer, as appropriate, to allow timely decisions regarding required disclosures.

**(b) Changes in Internal Control**

There were no changes in our internal control over financial reporting in connection with the evaluation required by Rule 13a-15 (d) and 15d-15 (d) of the Exchange Act that occurred during the three months ended September 30, 2022, that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**(c) Inherent Limitations on Effectiveness of Controls**

Our management, including our Chief Executive Officer and our Principal Financial Officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the organization have been detected. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

## PART II - OTHER INFORMATION

### Item 1. *Legal Proceedings*

Refer to Note 13(b) of our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q for a description of our current material legal proceedings.

### Item 1A. *Risk Factors*

*A description of the risks and uncertainties associated with our business is set forth below. 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 Part I, Item 2, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our unaudited condensed consolidated financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q. The risks and uncertainties described below may not be the only ones we face. If any of the risks actually occur, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the market price of our Class A common stock could decline.*

### Risks Related to Our Business and Our Industry

***Macroeconomic uncertainties and the COVID-19 pandemic have in the past and may continue to adversely impact our business, results of operations and financial condition.***

Global economic and business activities continue to face widespread macroeconomic uncertainties, including labor shortages and supply chain disruptions, inflation and monetary supply shifts, as well as recession risks, which may continue for an extended period, and which could result in decreased business spending by our customers and prospective customers and business partners and third-party business partners, reduced demand for our solutions, lower renewal rates by our customers, longer or delayed sales cycles, including customers and prospective customers delaying contract signing or contract renewals, or reducing budgets or minimum commitments related to the product and services that we offer, all of which could have an adverse impact on our business operations and financial condition. Specifically, we often enter into annual or multi-year, minimum commitment arrangements with our customers. Certain industries may be more negatively impacted by adverse macroeconomic conditions, like retail, consumer packaged goods, direct-to-consumer and other industries dependent on consumer spending, and the concentration of our customer base within these industries could exacerbate the impacts of a global recession or market uncertainties on our business. Relatedly, given that a majority of our revenue is usage-based, our business may be more severely impacted by macroeconomic conditions than those that rely more primarily on SaaS subscription revenue. Additionally, we generate a portion of our revenue from small and medium-sized businesses, which may be affected by economic downturns and other adverse macroeconomic conditions to a greater extent than larger enterprises, as they typically have more limited financial resources and capital borrowing capacity. Furthermore, we generate a portion of our revenue from certain sectors of the economy that have experienced recent softness, including cryptocurrencies, consumer on-demand, social media, retail and e-commerce, and we have also seen some instances of longer sales cycles more generally. Additionally, if customers fail to pay us or reduce their spending with us, we may be adversely affected by an inability to collect amounts due, the cost of enforcing the terms of our contracts, including litigation, or a reduction in revenue.

Additionally, the global COVID-19 pandemic has disrupted, and may continue to disrupt, our day-to-day operations and the operations of our customers, partners and service providers. The continued uncertainty regarding the trajectory of the pandemic and its impact on the global economy may result in differing levels of demand for our products as the priorities, resources, financial conditions and economic outlook of our customers, partners and service providers change, which could adversely affect or increase the volatility of our financial results. Certain industries were initially more negatively impacted by COVID-19, while others were positively impacted. It has been and may continue to be more difficult for us to forecast usage levels and predict revenue trends for the more adversely impacted industries. Any prolonged contractions in industries historically impacted by COVID-19, along with any effects on supply chain or on other industries in which our customers, partners and service providers operate, could adversely impact our business, results of operations and financial condition. The continuing pandemic could also result in constrained supply or reduced customer demand and willingness to enter into or renew contracts with us, any of which could adversely impact our business, results of operations and overall financial performance in future periods. While we have developed and continue to develop plans to help mitigate the potential negative impact of the pandemic on our business, these efforts may not be effective, and a protracted economic downturn, including due to factors such as labor shortages, supply chain disruptions and inflation, may limit the effectiveness of our mitigation efforts.

To the extent that macroeconomic uncertainties and the COVID-19 pandemic continue to harm our business, results of operations and financial condition, many of the other risks described in this "Risk Factors" section will be exacerbated.

***Our quarterly results may fluctuate, and if we fail to meet securities analysts' and investors' expectations, then the trading price of our Class A common stock and the value of your investment could decline substantially.***

Our results of operations, including the levels of our revenue, cost of revenue, gross margin and operating expenses, have fluctuated from quarter to quarter in the past and may continue to vary significantly in the future. These fluctuations are a result of a variety of factors, many of which are outside of our control, and may be difficult to predict and may or may not fully reflect the underlying performance of our business. If our quarterly results of operations or forward-looking quarterly and annual financial guidance fall below the expectations of investors or securities analysts, then the trading price of our Class A common stock could decline substantially. Some of the important factors that may cause our results of operations to fluctuate from quarter to quarter include:

- our ability to retain and increase revenue from existing customers and attract new customers;
- fluctuations in the amount of revenue from our Active Customer Accounts;
- our ability to attract and retain enterprises and international organizations as customers;
- significant security breaches of, technical difficulties with, or interruptions to, the delivery and use of our products on our platform;
- the impact of COVID-19 and other global events and economic conditions on our customers, partners and service providers and the global economy in general;
- our ability to introduce new products and enhance existing products;
- competition and the actions of our competitors, including pricing changes and the introduction of new products, services and geographies;
- changes in laws, industry standards, regulations or regulatory enforcement in the United States or internationally, such as the invalidation of the EU-U.S. Privacy Shield by the Court of Justice of the European Union, the implementation and enforcement of new global privacy laws, such as the General Data Protection Regulation ("GDPR"), the California Consumer Privacy Act of 2018 ("CCPA") and Brazil's General Data Protection Law (Lei Geral de Proteção de Dados Pessoais) (Law No. 13,709/2018), and the adoption of SHAKEN/STIR and other robocalling prevention and anti-spam standards, all of which increase compliance costs;
- changes to the policies or practices of third-party platforms, such as the Apple App Store and the Google Play Store, including with respect to Apple's Identifier for Advertisers (IDFA), which helps advertisers assess the effectiveness of their advertising efforts, and with respect to transparency regarding data processing;
- the number of new employee hires during a particular period;
- changes in network service provider fees that we pay in connection with the delivery of communications on our platform;
- changes in cloud infrastructure fees that we pay in connection with the operation of our platform;
- changes in our pricing as a result of our optimization efforts or otherwise;
- reductions in pricing or maintaining current pricing despite inflationary pressure as a result of negotiations with our larger customers;
- the rate of expansion and productivity of our sales force, including our enterprise sales force, which has been a focus of our recent expansion efforts;
- changes in the size and complexity of our customer relationships;
- the length and complexity of the sales cycle for our services, especially for sales to larger enterprises, government and regulated organizations;

- change in the mix of products that our customers use during a particular period;
- change in the revenue mix of U.S. and international products;
- the amount and timing of operating costs and capital expenditures related to the operations and expansion of our business, including investments in our international expansion, additional systems and processes and research and development of new products and services;
- expenses in connection with mergers, acquisitions or other strategic transactions and the follow-on costs of integration;
- the timing of customer payments and any difficulty in collecting accounts receivable from customers;
- general economic conditions, including a downturn or recession, rising inflation and rising interest rates, that may adversely affect a prospective customer's ability or willingness to adopt our products, delay a prospective customer's adoption decision, reduce the revenue that we generate from the use of our products or affect customer retention;
- labor shortages, supply chain disruptions and rising inflation and our ability to control costs, including our operating expenses;
- our ability to attract and retain qualified employees and key personnel, including due to, but not limited to, the potential adverse effects related to our recent restructuring plan (the "Restructuring Plan") and the actual or perceived declining value of our equity awards;
- changes in foreign currency exchange rates and our ability to effectively hedge our foreign currency exposure;
- extraordinary expenses such as litigation or other dispute-related settlement payments;
- sales tax and other tax determinations by authorities in the jurisdictions in which we conduct business;
- the impact of new accounting pronouncements; and
- fluctuations in stock-based compensation expense.

The occurrence of one or more of the foregoing and other factors may cause our results of operations to vary significantly. As such, we believe that quarter-to-quarter comparisons of our results of operations may not be meaningful and should not be relied upon as an indication of future performance. In addition, a significant percentage of our operating expenses is fixed in nature and is based on forecasted revenue trends. Accordingly, in the event of a revenue shortfall, we may not be able to mitigate the negative impact on our income (loss) and margins in the short term. If we fail to meet or exceed the expectations of investors or securities analysts, then the trading price of our Class A common stock could fall substantially, and we could face costly lawsuits, including securities class action suits.

Additionally, public health epidemics or pandemics and geopolitical events such as the COVID-19 pandemic and the war in Ukraine, as well as certain large-scale events, such as major elections and sporting events, can significantly impact usage levels on our platform, which has, and could in the future, cause fluctuations in our results of operations. We expect that significantly increased usage of all communications platforms, including ours, during certain seasonal and one-time events could impact delivery and quality of our products during those events. We also tend to experience increased expenses in connection with the hosting of SIGNAL, which we plan to continue to host annually. Such annual and one-time events may cause fluctuations in our results of operations and may impact both our revenue and operating expenses.

***Actions that we are taking to restructure our business in alignment with our strategic priorities may not be as effective as anticipated.***

During the third quarter of fiscal year 2022, we commenced the Restructuring Plan designed to reduce operating costs, improve operating margins, and shift our selling capacity to accelerate software sales. We may encounter challenges in the execution of these efforts, and these challenges could impact our financial results.

Although we believe that the Restructuring Plan will reduce operating costs, improve operating margins and accelerate software sales, we cannot guarantee that the Restructuring Plan will achieve or sustain the targeted benefits, or that the benefits, even if achieved, will be adequate to meet our long-term profitability and operational expectations. As a result of these actions, we may incur additional costs in the short term including cash expenditures for employee transition, notice period and severance payments, employee benefits, and related facilitation costs as well as non-cash expenditures related to vesting of share-based awards that could have the effect of reducing our operating margins. Additional risks associated with the continuing impact of the Restructuring Plan include employee attrition beyond our intended reduction in force, which may also be further exacerbated by the actual or perceived declining value of our equity awards, and adverse effects on employee morale, diversion of management attention, adverse effects to our reputation as an employer, which could make it more difficult for us to hire new employees in the future, and potential failure or delays to meet operational and growth targets due to the loss of qualified employees. If we do not realize the expected benefits or synergies of our restructuring efforts, our business, results of operations and financial condition could be adversely affected.

***We have experienced rapid growth and expect our growth to continue, and if we fail to effectively manage our growth, then our business, results of operations and financial condition could be adversely affected.***

We have experienced substantial growth in our business since inception. For example, our headcount has grown from 7,381 employees on September 30, 2021 to 8,992 employees on September 30, 2022, prior to the impact of our Restructuring Plan. We have moved to a virtual on-boarding process since the imposition of COVID-19 restrictions on certain business activities. In addition, we have expanded our international operations. Our international headcount grew from 2,701 employees as of September 30, 2021 to 3,644 employees as of September 30, 2022, prior to the impact of our Restructuring Plan. We have also experienced significant growth in the number of customers, usage and amount of data that our platform and associated infrastructure support. This growth has placed and may continue to place significant demands on our corporate culture, operational infrastructure and management, particularly in light of virtual on-boarding.

We believe that our corporate culture has been a critical component of our success. We have invested substantial time and resources in building our team and nurturing our culture. In addition, the COVID-19 pandemic may have long-term effects on the nature of the office environment and remote working. Our employees have generally continued to work from home as we reopened our offices, and we have announced that Twilio is a remote-first company, under which most employees have a choice about where and how they work with certain constraints to ensure compliance with local law. We face uncertainty as to whether remote-first, and any adjustments we may make to this model, will meet the needs and expectations of our workforce or have an adverse effect on workforce engagement, productivity and retention. In addition, the Restructuring Plan and the actual or perceived declining value of our equity awards may have adverse consequences on our corporate culture which may result in attrition beyond our planned reduction in workforce, decrease employee morale or further impact our ability to retain highly skilled employees. Any failure to preserve the key aspects of our culture as we manage our anticipated growth and organizational changes could hurt our chance for future success, including our ability to recruit and retain employees, and effectively focus on and pursue our corporate objectives. In addition, our remote-first approach may impose additional risks to our business, including unauthorized access to or dissemination of sensitive, proprietary or confidential information. This, in turn, could adversely affect our business, results of operations and financial condition.

In addition, as we have rapidly grown, our organizational structure has become more complex. In order to manage these increasing complexities, we will need to continue to scale and adapt our operational, financial and management controls, as well as our reporting systems and procedures. The expansion of our systems and infrastructure will require us to commit substantial financial, operational and management resources before our revenue increases and without any assurances that our revenue will increase. Additionally, our focus on achieving our profitability goals may impact our revenue growth rate.

Finally, if this growth continues, it could strain our ability to maintain reliable service levels for our customers. If we fail to achieve the necessary level of efficiency in our organization as we grow, then our business, results of operations and financial condition could be adversely affected.

***We depend largely on the continued services of our senior management and other key employees, the loss or incapacitation of any of whom could adversely affect our business, results of operations and financial condition.***

Our future performance depends on the continued services and contributions of our senior management and other key employees to execute on our business plan, to develop our products and platform, to deliver our products to customers, to attract and retain customers and to identify and pursue opportunities. The loss of services of senior management or other key employees could significantly delay or prevent the achievement of our development and strategic objectives. In particular, we depend to a considerable degree on the vision, skills, experience and effort of our co-founder and Chief Executive Officer, Jeff Lawson. None of our executive officers or other senior management are bound by a written employment agreement and any of them may terminate employment with us at any time with no advance notice. We have experienced, and may continue to experience, high attrition among our senior management team and key employees. The replacement of any of our senior management or other key employees will involve significant time and costs, and such loss could significantly delay or prevent the achievement of our business objectives. The loss of the services of any of our senior management or other key employees for any reason could adversely affect our business, results of operations and financial condition.

***If we are unable to hire, retain and motivate qualified employees, our business will suffer.***

Our future success depends, in part, on our ability to continue to attract and retain highly skilled employees. We believe that there is, and will continue to be, intense competition for highly skilled management, technical, sales and other employees with experience in our industry. In addition, we have experienced and may continue to experience employee turnover as a result of the ongoing “great resignation” occurring throughout the U.S. economy. New employees require training, take time before they achieve full productivity, and may not become as productive as we expect, and we may be unable to hire or retain sufficient numbers of qualified individuals. Additionally, we have focused our hiring efforts on areas such as Segment, Engage and Flex, and we’ve frozen the vast majority of new hires and backfills outside of these core areas. In addition, our remote-first approach to work may not meet the expectations of our workforce. Further, labor is subject to external factors that are beyond our control, including our industry’s highly competitive market for skilled workers and leaders, cost inflation, the COVID-19 pandemic and workforce participation rates. We must provide competitive compensation packages and a high-quality work environment to hire, retain and motivate employees. Volatility in, or the actual or perceived lack of performance of, our stock price may affect our ability to attract, motivate and retain key employees. Furthermore, in September of 2022, we announced the Restructuring Plan, which may have an impact on our ability to hire, retain and motivate employees. If we are unable to retain and motivate our existing employees and attract qualified employees to fill key positions, we may be unable to manage our business effectively, including the development, marketing and sale of our products, which could adversely affect our business, results of operations and financial condition. To the extent we hire employees from competitors, we also may be subject to allegations that they have been improperly solicited or divulged proprietary or other confidential information. If we are unable to hire, retain and motivate our employees, our business, results of operations and financial condition could be adversely affected.

***Our business depends on customers increasing their use of our products, and a loss of customers or decline in their use of our products could adversely affect our business, results of operations and financial condition.***

Our ability to grow and generate incremental revenue depends, in part, on our ability to maintain and grow our relationships with existing customers (including any customers acquired in connection with our acquisitions) and to have them increase their usage of our platform. If our customers do not increase their use of our products, then our revenue may decline, and our results of operations may be harmed. Customers are charged based on the usage of our products. Most of our customers do not have long-term contractual financial commitments to us and, therefore, most of our customers may reduce or cease their use of our products at any time without penalty or termination charges. Customers may terminate or reduce their use of our products for any number of reasons, including if they are not satisfied with our products, the value proposition of our products or our ability to meet their needs and expectations, or due to their use of competitors’ products. For example, there have been instances in which technical reliability issues have caused service disruptions with one or more products in our cloud communications platform that have impacted our customers’ ability to use such products for up to several hours. These issues have caused us to incur certain costs associated with offering credits to our affected customers and have had an adverse impact on customer satisfaction. A loss of customers or reduced utilization of our products by customers resulting from service disruptions could adversely affect our business, results of operations and financial condition.

We cannot accurately predict customers' usage levels, and the loss of customers or reductions in their usage levels of our products may each have a negative impact on our business, results of operations and financial condition and may cause our Dollar-Based Net Expansion Rate to decline in the future if customers are not satisfied with our products, the value proposition of our products or our ability to meet their needs and expectations. If a significant number of customers cease using, or reduce their usage of our products, including due to cost-saving measures in the face of macroeconomic uncertainty, then we may be required to spend significantly more on sales and marketing than we currently plan to spend in order to maintain or increase revenue from customers. Such additional sales and marketing expenditures could adversely affect our business, results of operations and financial condition.

***If we are not able to maintain and enhance our brand and increase market awareness of our company and products, then our business, results of operations and financial condition may be adversely affected.***

We believe that maintaining and enhancing the "Twilio" brand identity and increasing market awareness of our company and products, particularly among developers, is critical to achieving widespread acceptance of our platform, to strengthen our relationships with our existing customers and to our ability to attract new customers. The successful promotion of our brand will depend largely on our continued marketing efforts, our ability to continue to offer high-quality products, and our ability to successfully differentiate our products and platform from competing products and services. Our brand promotion and thought leadership activities may not be successful or yield increased revenue. In addition, independent industry analysts often provide reviews of our products and competing products and services, which may significantly influence the perception of our products in the marketplace. If these reviews are negative or not as strong as reviews of our competitors' products and services, then our brand may be harmed.

From time to time, our customers have complained about our products, such as complaints about our pricing, the technical reliability of our products and platform, and our customer support. If we do not handle customer complaints effectively, then our brand and reputation may suffer, our customers may lose confidence in us and they may reduce or cease their use of our products. In addition, many of our customers post and discuss on social media about Internet-based products and services, including our products and platform. Our success depends, in part, on our ability to generate positive customer feedback and minimize negative feedback on social media channels where existing and potential customers seek and share information. If actions we take or changes we make to our products or platform upset these customers, then their online commentary could negatively affect our brand, reputation and customer trust. Complaints or negative publicity about us, our products or our platform could adversely impact our ability to attract and retain customers, and otherwise harm our business, results of operations and financial condition.

The promotion of our brand also requires us to make substantial expenditures, and we anticipate that these expenditures will increase as our market becomes more competitive and as we expand into new markets. To the extent that these activities increase revenue, this revenue still may not be enough to offset the increased expenses we incur, including, but not limited to, as a result of recent inflationary pressures.

***The market for our products and platform continues to evolve, and may decline or experience limited growth, and is dependent in part on developers continuing to adopt our platform and use our products.***

We were founded in 2008, and we have been developing and providing a cloud-based platform that enables developers and organizations to integrate voice, messaging, video and email communications capabilities into their software applications. This market continues to evolve and is subject to a number of risks and uncertainties. We believe that our revenue currently constitutes a significant portion of the total revenue in this market, and therefore, we believe that our future success will depend in large part on the growth, if any, and evolution of this market. If developers and organizations do not recognize the need for and benefits of our products and platform, they may decide to adopt alternative products and services to satisfy some portion of their business needs. In order to grow our business and extend our market position, we intend to focus on educating developers and other potential customers about the benefits of our products and platform, expanding the functionality of our products and bringing new technologies to market to increase market acceptance and use of our platform. Additionally, we will continue to prioritize accelerating software sales, which could have an impact on our results of operations. Our ability to expand the market that our products and platform address depends upon a number of factors, including the cost, performance and perceived value associated with such products and platform. The market for our products and platform could fail to grow significantly or there could be a reduction in demand for our products as a result of a lack of developer acceptance, technological challenges, competing products and services, decreases in spending by current and prospective customers, weakening economic conditions, including due to labor shortages, supply chain disruptions and inflationary pressures, and other causes. If our market does not experience significant growth or demand for our products decreases, then our business, results of operations and financial condition could be adversely affected.

***Breaches of our networks or systems, or those of AWS or our service providers, could degrade our ability to conduct our business, compromise the integrity of our products, platform and data, result in significant data losses and the theft of our intellectual property, damage our reputation, expose us to liability to third parties and require us to incur significant additional costs to maintain the security of our networks and data.***

We depend upon our IT systems to conduct virtually all of our business operations, ranging from our internal operations and research and development activities to our marketing and sales efforts and communications with our customers and business partners. We have in the past and may in the future be subject to a variety of evolving threats, including but not limited to social-engineering attacks (including through phishing attacks), malicious code (such as viruses and worms), malware (including as a result of advanced persistent threat intrusions), denial-of-service attacks (such as credential stuffing), personnel misconduct or error, ransomware attacks, supply-chain attacks, software bugs, server malfunctions, software or hardware failures, loss of data or other information technology assets, adware, telecommunications failures, earthquakes, fires, floods and other similar threats.

Individuals or entities may attempt to penetrate our network security, or that of our platform, and to cause harm to our business operations, including by misappropriating our proprietary information or that of our customers, employees and business partners or to cause interruptions of our products and platform. In particular, cyberattacks and other malicious internet-based activity continue to increase in frequency and in magnitude generally, and cloud-based companies have been targeted in the past. In addition to threats from traditional computer hackers, malicious code, software vulnerabilities, supply chain attacks and vulnerabilities through our third-party partners, employees theft or misuse, password spraying, phishing, smishing, vishing, credential stuffing and denial-of-service attacks, we also face threats from sophisticated organized crime, nation-state, and nation-state supported actors who engage in attacks (including advanced persistent threat intrusions) that add to the risk to our systems (including those hosted on AWS or other cloud services), internal networks, our customers' systems and the information that they store and process. Ransomware and cyber extortion attacks, including those perpetrated by organized criminal threat actors, nation-states, and nation-state-supported actors, are becoming increasingly prevalent and severe and can lead to significant interruptions in our operations, loss of data and income, reputational harm, and diversion of funds. Extortion payments may alleviate or reduce the negative impact of a ransomware attack, but we may be unwilling or unable to make such payments due to, for example, applicable laws or regulations prohibiting such payments. Because the techniques used by such individuals or entities to access, disrupt or sabotage devices, systems and networks change frequently and may not be recognized until launched against a target, we may be required to make further investments over time to protect data and infrastructure as cybersecurity threats develop, evolve and grow more complex over time. We may also be unable to anticipate these techniques, and we may not become aware in a timely manner of such a security breach, which could exacerbate any damage we experience. Additionally, we depend upon our employees and contractors to appropriately handle confidential and sensitive data, including customer data, and to deploy our IT resources in a safe and secure manner that does not expose our network systems to security breaches or the loss of data. We have been and expect to be subject to cybersecurity threats and incidents, including denial-of-service attacks, employee errors or individual attempts to gain unauthorized access to information systems. Any data security incidents, including internal malfeasance or inadvertent disclosures by our employees or a third party's fraudulent inducement of our employees to disclose information, unauthorized access or usage, virus or similar breach or disruption of us or our service providers, such as AWS, could result in loss of confidential information, damage to our

reputation, erosion of customer trust, loss of customers, litigation, regulatory investigations, fines, penalties and other liabilities. For example, in 2020, SolarWinds Inc., one of our third-party software service providers, was subject to a data security incident. We have completed our investigations of this incident and concluded that there was no adverse impact to us. Additionally, in June and August 2022, we became aware that threat actors had conducted a sophisticated social engineering campaign against some of our employees after having obtained employee names and cell phone numbers from unknown sources. The attack identified in August, which involved smishing text messages that purported to be from our IT department, resulted in the threat actors obtaining some of our employees' credentials and access to certain data of approximately 209 customers out of our total customer base of approximately 270,000 at that time. We notified and worked with our affected customers. We also took steps to remediate the incident, including enhancing our security training, improving our two factor authentication requirements, implementing additional layers of control within our VPN, reducing access to certain internal applications and tools, and increasing the refresh frequency for access to certain internal applications. Reports indicate that the threat actors also attacked other technology, telecommunication, and cryptocurrency companies.

Furthermore, we are required to comply with laws and regulations that require us to maintain the security of personal information and we may have contractual and other legal obligations to notify customers or other relevant stakeholders of security breaches. Such disclosures are costly, and the disclosures or the failure to comply with such requirements could lead to adverse consequences. If we (or a third party upon whom we rely) experience a security incident or are perceived to have experienced a security incident, we may experience adverse consequences. These consequences may include: government enforcement actions (for example, investigations, fines, penalties, audits, and inspections); additional reporting requirements and/or oversight; restrictions on processing data (including personal data); litigation (including class claims); indemnification obligations; negative publicity; reputational harm; monetary fund diversions; interruptions in our operations (including availability of data); financial loss and other similar harms. Security incidents and attendant consequences could lead to negative publicity, may cause our customers to lose confidence in the effectiveness of our security measures and require us to expend significant capital and other resources to respond to and/or mitigate the security breach. Accordingly, if our cybersecurity measures or those of AWS or our service providers, fail to protect against unauthorized access, attacks (which may include sophisticated cyberattacks), compromise or the mishandling of data by our employees and contractors, then our reputation, customer trust, business, results of operations and financial condition could be adversely affected.

While we maintain errors, omissions and cyber liability insurance policies covering certain security and privacy damages, we cannot be certain that our existing insurance coverage will continue to be available on acceptable terms or will be available, and in sufficient amounts, to cover the potentially significant losses that may result from a security incident or breach or that the insurer will not deny coverage as to any future claim.

***Our actual or perceived failure to comply with increasingly stringent laws, regulations and contractual obligations relating to privacy, data protection and data security could harm our reputation and subject us to significant fines and liability or loss of business.***

We and our customers are subject to numerous domestic (for example, CCPA in California) and foreign (for example, the GDPR in the EU) privacy, data protection and data security laws and regulations that restrict the collection, use, disclosure and processing of personal information, including financial and health data. These laws and regulations are evolving, are being tested in courts, may result in increasing regulatory and public scrutiny of our practices relating to personal information and may increase our exposure to regulatory enforcement action, sanctions and litigation.

The CCPA imposes obligations on businesses to which it applies. These obligations include, but are not limited to, providing specific disclosures in privacy notices and affording California residents certain rights related to their personal information. The CCPA allows for statutory fines for noncompliance. In addition, the California Privacy Rights Act of 2020 ("CPRA"), enforceable from January 1, 2023, will expand the CCPA. Similar laws have been enacted or been proposed at the state and federal levels. For example, Connecticut, Utah, Virginia and Colorado have each passed laws similar to but different from the CPRA that take effect in 2023. If we become subject to new privacy, data protection and data security laws, the risk of enforcement action against us could increase because we may become subject to additional obligations, and the number of individuals or entities that can initiate actions against us may increase (including individuals, via a private right of action, and state actors).

Outside the United States, an increasing number of laws, regulations, and industry standards apply to privacy, data protection and data security. For example, the GDPR and the United Kingdom's GDPR ("UK GDPR") impose strict requirements for processing the personal information of individuals located, respectively within the European Economic Area ("EEA") and the United Kingdom ("UK"). For example, under the GDPR, government regulators may impose temporary or definitive bans on data processing, as well as fines. Further, individuals may initiate litigation related to our processing of their personal information. As another example, the General Data Protection Law (Lei Geral de Proteção de Dados Pessoais, or "LGPD") (Law No. 13,709/2018) may apply to our operations. The LGPD broadly regulates processing of personal information of individuals in Brazil and imposes compliance obligations and penalties comparable to those of the GDPR.

Further, the interpretation and application of new domestic and foreign laws and regulations in many cases is uncertain, and our legal and regulatory obligations in such jurisdictions are subject to frequent and unexpected changes, including the potential for various regulatory or other governmental bodies to enact new or additional laws or regulations, to issue rulings that invalidate prior laws or regulations, or to increase penalties significantly.

Similarly, with our registration as an interconnected VoIP provider with the Federal Communications Commission ("FCC"), we also must comply with privacy laws associated with customer proprietary network information ("CPNI") rules in the U.S. If we fail to maintain compliance with these requirements, we could be subject to regulatory audits, civil and criminal penalties, fines and breach of contract claims, as well as reputational damage, which could impact the willingness of customers to do business with us.

In addition to our legal obligations, our contractual obligations relating to privacy, data protection and data security have become increasingly stringent due to changes in laws and regulations and the expansion of our offerings. Certain privacy, data protection and data security laws, such as the GDPR and the CCPA, require our customers to impose specific contractual restrictions on their service providers. In addition, we have begun to support customer workloads that involve the processing of protected health information and are required to sign business associate agreements ("BAAs") with customers that subject us to the requirements under the U.S. Health Insurance Portability and Accountability Act of 1996 and the U.S. Health Information Technology for Economic and Clinical Health Act as well as state laws that govern health information.

Our actual or perceived failure to comply with laws, regulations or contractual commitments regarding privacy, data protection and data security could lead to costly legal action, adverse publicity, significant liability, and decreased demand for our services, which could adversely affect our business, results of operations and financial condition.

As a cumulative example of these risks, because our primary data processing facilities are currently in the U.S., we have experienced hesitancy, reluctance, or refusal by European or multinational customers to continue to use our services due to the potential risk posed to such customers as a result of the Court of Justice July 2020 ruling in the "Schrems II" case, as well as related guidance from the European Data Protection Board. For example, absent appropriate safeguards or other circumstances, the GDPR and laws in Switzerland and the UK generally restrict the transfer of personal information to countries outside of the EEA, such as the United States, that the European Commission does not consider as providing an adequate level of privacy, data protection and data security. On March 25, 2022, the U.S. and EU announced an "agreement in principle" to replace the EU-U.S. Privacy Shield framework with a valid transfer mechanism, but this mechanism has not yet been established. If we cannot implement a valid mechanism for cross-border data transfers, we may face increased exposure to regulatory actions, substantial fines, and injunctions against processing or transferring personal information from Europe or elsewhere. The inability to import personal information to the United States could significantly and negatively impact our business operations; limit our ability to collaborate with parties that are subject to data privacy and security laws; or require us to increase our personal information processing capabilities in Europe and/or elsewhere at significant expense. We and our customers are at risk of enforcement actions taken by an EU data protection authority during such time Twilio continues to require data transfers from the EEA for the provision of our services. If we are unable to increase our data processing capabilities in Europe and other countries to limit or eliminate the need for data transfers out of the EEA quickly enough, and other valid solutions for personal information transfers to the United States or other countries are not available or are difficult to implement in the interim, we will likely face continuing reluctance from European and multinational customers to use our services and increased exposure to regulatory actions, substantial fines and injunctions against processing or transferring personal information from Europe.

***To deliver our products, we rely on network service providers and internet service providers for our network service and connectivity, and disruption or deterioration in the quality of these services or changes in network service provider fees that we pay in connection with the delivery of communications on our platform could adversely affect our business, results of operations and financial condition.***

We currently interconnect with fixed and mobile network service providers around the world to enable the use by our customers of our products over their networks. Although we are in the process of acquiring authorization in many countries for direct access to phone numbers and for the provision of voice and messaging services on the networks of fixed and mobile network service providers, we expect that we will continue to rely on network service providers for these services. Where we don't have direct access to phone numbers, our reliance on network service providers has reduced our operating flexibility, ability to make timely service changes and control quality of service. In addition, the fees that we are charged by network service providers may change daily or weekly and we can be subject to the imposition of additional fees, penalties, or other administrative or technical requirements, and even service interruption, due to regulatory, competitive, or other industry related changes over which we have little to no control. Despite this, we typically do not change our customers' pricing as rapidly and as a result, such fee increases could adversely affect our business and results of operations.

At times, network service providers have instituted additional fees due to regulatory, competitive or other industry related changes that increase our network costs. For example, in early 2020, a major U.S. mobile carrier introduced a new Application to Person ("A2P") SMS service offering that adds a new fee for A2P SMS messages delivered to its subscribers, and other U.S. mobile carriers have added or are in the process of adding similar fees. While we have historically responded to these types of fee increases through a combination of further negotiating efforts with our network service providers, absorbing the increased costs or changing our prices to customers, there is no guarantee that we will continue to be able to do so in the future without a material negative impact to our business. In the case of these new carriers A2P SMS fees, after a short phase-in period where we absorbed the fees, we began on May 1, 2021 to pass these fees directly through to our customers who are sending SMS messages to these carriers' subscribers. We expect that this will increase our revenue and cost of revenue, but will not impact the gross profit dollars received for sending these messages. However, mathematically this will have a negative impact on our gross margins. Additionally, our ability to respond to any new fees may be constrained if all network service providers in a particular market impose equivalent fee structures, if the magnitude of the fees is disproportionately large when compared to the underlying prices paid by our customers, or if the market conditions limit our ability to increase the price we charge our customers.

Furthermore, many of these network service providers do not have long-term committed contracts with us and may interrupt services or terminate their agreements with us without notice. If a significant portion of our network service providers stop providing us with access to their infrastructure, fail to provide these services to us on a cost-effective basis, cease operations, or otherwise terminate these services, the delay caused by qualifying and switching to other network service providers could be time consuming and costly and could adversely affect our business, results of operations and financial condition. Further, if problems occur with our network service providers, it may cause errors or poor-quality communications with our products, and we could encounter difficulty identifying the source of the problem. The occurrence of errors or poor-quality communications on our products, whether caused by our platform or a network service provider, may result in the loss of our existing customers or the delay of adoption of our products by potential customers and may adversely affect our business, results of operations and financial condition.

Further, we sometimes access network services through intermediaries who have direct access to network service providers. Although we are in the process of securing direct connections with network service providers in many countries, we expect that we will continue to rely on intermediaries for these services for some period of time. These intermediaries sometimes have offerings that directly compete with our products and may stop providing services to us on a cost-effective basis. If a significant portion of these intermediaries stop providing services or stop providing services on a cost-effective basis, our business could be adversely affected.

We also interconnect with internet service providers around the world to enable the use of our email products by our customers, and we expect that we will continue to rely on internet service providers for network connectivity going forward. Our reliance on internet service providers reduces our control over quality of service and exposes us to potential service outages and rate fluctuations. If a significant portion of our internet service providers stop providing us with access to their network infrastructure, fail to provide access on a cost-effective basis, cease operations, or otherwise terminate access, the delay caused by qualifying and switching to other internet service providers could be time consuming and costly and could adversely affect our business, results of operations, and financial condition.

***If we are unable to attract new customers in a cost-effective manner, then our business, results of operations and financial condition would be adversely affected.***

In order to grow our business, we must continue to attract new customers in a cost-effective manner. We use a variety of marketing channels to promote our products and platform, such as developer events and developer evangelism, as well as search engine marketing and optimization. We periodically adjust the mix of our other marketing programs such as regional customer events, email campaigns, billboard advertising and public relations initiatives. If the costs of the marketing channels we use increase dramatically, then we may choose to use alternative and less expensive channels, which may not be as effective as the channels we currently use. As we add to or change the mix of our marketing strategies, we may need to expand into more expensive channels than those we are currently in, which could adversely affect our business, results of operations and financial condition. We will incur marketing expenses before we are able to recognize any revenue that the marketing initiatives may generate, and these expenses may not result in increased revenue or brand awareness. We have made in the past, and may make in the future, significant expenditures and investments in new marketing campaigns, and we cannot guarantee that any such investments will lead to the cost-effective acquisition of additional customers. If we are unable to maintain effective marketing programs, then our ability to attract new customers could be adversely affected, our advertising and marketing expenses could increase substantially, and our results of operations may suffer.

***If we do not develop enhancements to our products and introduce new products that achieve market acceptance, our business, results of operations and financial condition could be adversely affected.***

Our ability to attract new customers, increase revenue from existing customers, and increase gross margins depends in part on our ability to enhance and improve our existing products, increase adoption and usage of our products, and introduce new products, particularly products with higher gross margins. The success of any enhancements or new products depends on several factors, including timely completion, adequate quality testing, actual performance quality, market-accepted pricing levels and overall market acceptance. Enhancements and new products that we develop may not be introduced in a timely or cost-effective manner, may contain errors or defects, may require reworking features and capabilities, may have interoperability difficulties with our platform or other products or may not achieve the broad market acceptance necessary to generate significant revenue or increase our gross margins. Furthermore, our ability to increase the usage of our products depends, in part, on the development of new use cases for our products, which is typically driven by our developer community and may be outside of our control. We also have invested, and may continue to invest, in the acquisition of complementary businesses, technologies, services, products and other assets that expand the products that we can offer our customers. We may make these investments without being certain that they will result in products or enhancements that will be accepted by existing or prospective customers. Our ability to generate usage of additional products by our customers may also require increasingly sophisticated and more costly sales efforts and result in a longer sales cycle. In addition, adoption of new products or enhancements may put additional strain on our customer support team, which could require us to make additional expenditures related to further hiring and training. If we are unable to successfully enhance our existing products to meet evolving customer requirements, increase adoption and usage of our products, develop and drive adoption of new products, and increase our gross margins, or if our efforts to increase the usage of our products are more expensive than we expect, then our business, results of operations and financial condition would be adversely affected.

***The market in which we participate is intensely competitive, and if we do not compete effectively, our business, results of operations and financial condition could be harmed.***

The market for cloud communications is rapidly evolving, significantly fragmented and highly competitive, with relatively low barriers to entry in some segments. The principal competitive factors in our market include completeness of offering, credibility with developers, global reach, ease of integration and programmability, product features, platform scalability, reliability, deliverability, security and performance, brand awareness and reputation, the strength of sales and marketing efforts, customer support, as well as the cost of deploying and using our products. Our competitors fall into four primary categories:

- legacy on-premises vendors;
- regional network service providers that offer limited developer functionality on top of their own physical infrastructure;
- smaller software companies that compete with portions of our product line; and
- software-as a-service (“SaaS”) companies and cloud platform vendors that offer prepackaged applications and platforms.

Some of our competitors and potential competitors are larger and have greater name recognition, longer operating histories, more established customer relationships, larger budgets, lower operating costs, and significantly greater resources than we do. In addition, they have the operating flexibility to bundle competing products and services at little or no perceived incremental cost, including offering them at a lower price as part of a larger sales transaction. As a result, our competitors may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards, customer requirements or changing economic conditions, like inflation or a downturn or a recession. In addition, some competitors may offer products or services that address one or a limited number of functions at lower prices, with greater depth than our products or in different geographies. Our current and potential competitors may develop and market new products and services with comparable functionality to our products, and this could lead to us having to decrease prices in order to remain competitive. Customers utilize our products in many ways and use varying levels of functionality that our products offer or are capable of supporting or enabling within their applications. Customers that use many of the features of our products or use our products to support or enable core functionality for their applications may have difficulty or find it impractical to replace our products with a competitor's products or services, while customers that use only limited functionality may be able to replace our products more easily with competitive offerings. Our customers also may choose to build some of the functionality our products provide or establish direct connectivity with network service providers, which may limit or eliminate their demand for our products.

With the introduction of new products and services and new market entrants, we expect competition to intensify in the future. In addition, some of our customers may choose to use our products and our competitors' products at the same time. Further, customers and consumers may choose to adopt other forms of electronic communications or alternative communication platforms.

Moreover, as we expand the scope of our products, we may face additional competition and, in some cases, may find our products in competition with those of our customers, which could cause them to replace our products with competitive offerings. If one or more of our competitors were to merge or partner with another of our competitors or our suppliers, the change in the competitive landscape could also adversely affect our ability to compete effectively. For example, certain of our competitors engaged in acquisition activity in 2021 and may continue to do so in the future. In addition, some of our competitors have lower list prices than us, which may be attractive to certain customers even if those products have different or lesser functionality. If we are unable to maintain our current pricing due to competitive pressures, including within an inflationary environment, our margins will be reduced and our business, results of operations and financial condition would be adversely affected. In addition, pricing pressures and increased competition generally could result in reduced revenue, reduced margins, increased losses or the failure of our products to achieve or maintain widespread market acceptance, any of which could harm our business, results of operations and financial condition.

***We have a history of losses and may not achieve or sustain profitability in the future.***

We have incurred net losses in each year since our inception, including net losses of $1.0 billion, $949.9 million and $491.0 million in the nine months ended September 30, 2022 and the years ended December 31, 2021 and 2020, respectively. We had an accumulated deficit of $3.1 billion as of September 30, 2022. We will need to generate and sustain increased revenue levels, and manage our operating expenses, in future periods to become profitable and, even if we do, we may not be able to maintain or increase our level of profitability. We expect to continue to expend substantial financial and other resources on, among other things:

- investments in our engineering team, improvements in security and data protection, the development of new products, features and functionality and enhancements to our platform;
- sales and marketing, including the continued expansion of our direct sales organization and marketing programs, especially for enterprises and for organizations outside of the United States, and expanding our programs directed at increasing our brand awareness among current and new developers;
- expansion of our operations and infrastructure, both domestically and internationally; and
- general administration, including legal, accounting and other expenses related to being a public company.

Our efforts to grow our business may be costlier than we expect, and we may not be able to increase our revenue enough to offset our increased operating expenses. We may incur significant losses in the future for a number of reasons, including the other risks described herein, and unforeseen expenses, difficulties, complications and delays and other unknown events. If we are unable to achieve and sustain profitability, the value of our business and Class A common stock may significantly decrease.

***If we are unable to increase adoption of our products by enterprises, our business, results of operations and financial condition may be adversely affected.***

Historically, we have relied on the adoption of our products by software developers through our self-service model for a majority of our revenue. Our ability to increase our customer base, especially among enterprises, and achieve broader market acceptance of our products will depend, in part, on our ability to effectively organize, focus and train our sales and marketing employees.

Our ability to convince enterprises to adopt our products will depend, in part, on our ability to attract and retain sales employees with experience selling to enterprises. We believe that there is significant competition for experienced sales professionals with the skills and technical knowledge that we require. Our ability to achieve significant revenue growth in the future will depend, in part, on our ability to recruit, train and retain a sufficient number of experienced sales professionals, particularly those with experience selling to enterprises. In addition, even if we are successful in hiring qualified sales employees, new hires require significant training and experience before they achieve full productivity, particularly for sales efforts targeted at enterprises and new territories. Our recent hires and planned hires may not become as productive as quickly as we expect, and we may be unable to hire or retain sufficient numbers of qualified individuals in the future in the markets where we do business. Because we do not have a long history of targeting our sales efforts at enterprises, we cannot predict whether, or to what extent, our sales will increase as we organize and train our sales force or how long it will take for sales employees to become productive.

As we seek to increase the adoption of our products by enterprises, including products like Flex, which is primarily aimed at complex contact center implementations at larger companies, and Segment and Engage, which are primarily aimed at complex customer data platform implementations at larger companies, we expect to incur higher costs and longer sales cycles. In the enterprise market segment, the decision to adopt our products may require the approval of multiple technical and business decision makers, including legal, security, compliance, procurement, operations and IT. In addition, while enterprise customers may quickly deploy our products on a limited basis, before they will commit to deploying our products at scale, they often require extensive education about our products and significant customer support time and engage in protracted pricing negotiations, which may not address changing inflationary pressure and reduced information technology budgets. In addition, sales cycles for enterprises are inherently more complex and less predictable than the sales through our self-service model, and some enterprise customers may not use our products enough to generate revenue that justifies the cost to obtain such customers. These complex and resource intensive sales efforts could place additional strain on our product and engineering resources. Further, enterprises, including some of our customers, may choose to develop their own solutions that do not include our products. They also may demand reductions in pricing as their usage of our products increases, notwithstanding increased costs incurred by us to provide such products, which could have an adverse impact on our gross margin. Additionally, economic recessions or slowdowns can result in our enterprise customers terminating their arrangements with us, longer sales cycles, and reduced or limited contract sizes as enterprise organizations focus on general cost reductions in the face of macroeconomic uncertainty. As a result of our limited experience selling and marketing to enterprises, our efforts to sell to these potential customers may not be successful. If we are unable to increase the revenue that we derive from enterprises, then our business, results of operations and financial condition may be adversely affected.

***If we are unable to expand our relationships with existing technology partner customers and add new technology partner customers, our business, results of operations and financial condition could be adversely affected.***

We believe that the continued growth of our business depends in part upon developing and expanding strategic relationships with technology partner customers. Technology partner customers embed our software products in their solutions, such as software applications for contact centers and sales force and marketing automation, and then sell such solutions to other businesses. When potential customers do not have the available developer resources to build their own applications, we refer them to either our technology partners who embed our products in the solutions that they sell to other businesses or our consulting partners who provide consulting and development services for organizations that have limited software development expertise to build our platform into their software applications.

As part of our growth strategy, we intend to expand our relationships with existing technology partner customers and add new technology partner customers. If we fail to expand our relationships with existing technology partner customers or establish relationships with new technology partner customers in a timely and cost-effective manner, or at all, including due to cost-saving measures of existing and prospective technology partners in the face of macroeconomic uncertainty, then our business, results of operations and financial condition could be adversely affected. Additionally, even if we are successful at building these relationships but there are problems or issues with integrating our products into the solutions of these customers, our reputation and ability to grow our business may be harmed.

***Our future success depends in part on our ability to drive the adoption of our products by international customers.***

In the nine months ended September 30, 2022, and the years ended December 31, 2021 and 2020, we derived 34%, 34% and 27% of our revenue, respectively, from customer accounts located outside the United States. The future success of our business will depend, in part, on our ability to expand our customer base worldwide. While we have been rapidly expanding our sales efforts internationally, our experience in selling our products outside of the United States is, and our ability to conduct business in local currencies in certain jurisdictions may be or is, limited. Furthermore, our developer-first business model may not be successful or have the same traction outside the United States. As a result, our investment in marketing our products to these potential customers may not be successful. If we are unable to increase the revenue that we derive from international customers, then our business, results of operations and financial condition may be adversely affected.

***We are continuing to expand our international operations, which exposes us to significant risks.***

We are continuing to expand our international operations to increase our revenue from customers outside of the United States as part of our growth strategy. Between September 30, 2021 and September 30, 2022, our international headcount grew from 2,701 employees to 3,644 employees. We expect to continue to hire employees outside of the United States to reach new customers and gain access to additional technical talent. Operating in international markets requires significant resources and management attention and will subject us to regulatory, economic and political risks in addition to those we already face in the United States. Because of our limited experience with international operations or with developing and managing sales in international markets, our international expansion efforts may not be successful.

In addition, we will face risks in doing business internationally that could adversely affect our business, including:

- inflation and actions taken by central banks to counter inflation;
- the difficulty of managing and staffing international operations and the increased operations, travel, infrastructure and legal compliance costs associated with servicing international customers and operating numerous international locations;
- our ability to effectively price our products in competitive international markets;
- new and different sources of competition or other changes to our current competitive landscape;
- understanding, reconciling, and implementing technical controls to address, different technical standards, data privacy and telecommunications regulations, registration and certification requirements outside the United States, which could prevent customers from deploying our products or limit their usage;
- our ability to comply with the GDPR and Brazil's General Data Protection Law (Lei Geral de Proteção de Dados Pessoais) (Law No. 13,709/2018), and laws, regulations and industry standards relating to data privacy, data protection, data localization and data security enacted in countries and other regions in which we operate or do business;
- potentially greater difficulty collecting accounts receivable and longer payment cycles;
- higher or more variable network service provider fees outside of the United States;
- the need to adapt and localize our products for specific countries;
- the need to offer customer support in various languages;
- difficulties in understanding and complying with local laws, regulations and customs in non-U.S. jurisdictions;
- compliance with export controls and economic sanctions regulations administered by the Department of Commerce's Bureau of Industry and Security and the Treasury Department’s Office of Foreign Assets Control;
- compliance with various anti-bribery and anti-corruption laws such as the Foreign Corrupt Practices Act and United Kingdom Bribery Act of 2010;
- changes in international trade policies, tariffs and other non-tariff barriers, such as quotas and local content rules;

- more limited protection for intellectual property rights in some countries;
- adverse tax consequences;
- fluctuations in currency exchange rates, which could increase the price of our products outside of the United States, increase the expenses of our international operations and expose us to foreign currency exchange rate risk;
- currency control regulations, which might restrict or prohibit our conversion of other currencies into U.S. dollars;
- restrictions on the transfer of funds;
- deterioration of political relations between the United States and other countries;
- the impact of natural disasters and public health epidemics or pandemics such as COVID-19 on employees, contingent workers, partners, travel and the global economy and the ability to operate freely and effectively in a region that may be fully or partially on lockdown; and
- political or social unrest, economic instability, conflict or war in a specific country or region in which we, our customers, partners or service providers operate, which could have an adverse impact on our operations in the region or otherwise have a material impact on regional or global economies, any or all of which could adversely affect our business.

Also, due to costs from our international expansion efforts and network service provider fees outside of the United States, which generally are higher than domestic rates, our gross margin for international customers is typically lower than our gross margin for domestic customers. As a result, our gross margin may be impacted and fluctuate as we expand our operations and customer base worldwide.

Our failure to manage any of these risks successfully could harm our international operations, and adversely affect our business, results of operations and financial condition.

***Certain of our products are subject to telecommunications-related regulations, and future legislative or regulatory actions could adversely affect our business, results of operations and financial condition.***

As a provider of communications products, we are subject to existing or potential FCC regulations relating to privacy, telecommunications, consumer protection and other requirements. In addition, the extension of telecommunications regulations to our non-interconnected VoIP services could result in additional federal and state regulatory obligations and taxes. We are also in discussions with certain jurisdictions regarding potential sales and other taxes for prior periods that we may owe. In the event any of these jurisdictions disagree with management’s assumptions and analysis, the assessment of our tax exposure could differ materially from management's current estimates, which may increase our costs of doing business and negatively affect the prices our customers pay for our services. If we do not comply with FCC rules and regulations, we could be subject to FCC enforcement actions, fines, loss of licenses and possibly restrictions on our ability to operate or offer certain of our products. Any enforcement action by the FCC, which may be a public process, would hurt our reputation in the industry, could erode customer trust, possibly impair our ability to sell our VoIP products to customers and could adversely affect our business, results of operations and financial condition.

Certain of our products are subject to a number of FCC regulations and laws that are administered by the FCC. Among others, we must comply (in whole or in part) with:

- the Communications Act of 1934, as amended, which regulates communications services and the provision of such services;
- the Telephone Consumer Protection Act, which limits the use of automatic dialing systems for calls and texts, artificial or prerecorded voice messages and fax machines;
- the Communications Assistance for Law Enforcement Act, which requires covered entities to assist law enforcement in undertaking electronic surveillance;
- requirements to safeguard the privacy of certain customer information;

- payment of annual FCC regulatory fees and contributions to FCC-administered funds based on our interstate and international revenues; and
- rules pertaining to access to our services by people with disabilities and contributions to the Telecommunications Relay Services fund.

In addition, Congress and the FCC are attempting to mitigate the scourge of robocalls by requiring participation in a technical standard called SHAKEN/STIR, which allows voice carriers to authenticate caller ID, prohibiting malicious spoofing.

Similarly, in May 2021, the Biden Administration issued an Executive Order requiring federal agencies to implement additional information technology security measures, including, among other things, requiring agencies to adopt multifactor authentication and encryption for data at rest and in transit to the maximum extent consistent with Federal records laws and other applicable laws. The National Institute of Standards and Technology issued a Secure Software Development Framework (SSDF) on September 30, 2021 and Software Supply Chain Security Guidance (incorporating the SSDF), on February 4, 2022, and on March 7, 2022, the Office of Management and Budget directed federal agencies to incorporate both documents into their software lifecycle and acquisitions practices. The Executive Order also may lead to the development of additional secure software development practices and/or criteria for a consumer software labeling program, the criteria which will reflect a baseline level of secure practices, for software that is developed and sold to the U.S. federal government. Software developers will be required to provide visibility into their software and make security data publicly available. Due to this Executive Order, federal agencies may require us to modify our cybersecurity practices and policies, thereby increasing our compliance costs. If we are unable to meet the requirements of the Executive Order, our ability to work with the U.S. government may be impaired and may result in a loss of revenue.

If we do not comply with any current or future rules or regulations that apply to our business, we could be subject to substantial fines and penalties, and we may have to restructure our offerings, exit certain markets or raise the price of our products. In addition, any uncertainty regarding whether particular regulations apply to our business, and how they apply, could increase our costs or limit our ability to grow.

As we continue to expand internationally, we have become subject to telecommunications laws and regulations in the foreign countries where we offer our products. Internationally, we currently offer our products across 180 countries.

Our international operations are subject to country-specific governmental regulation and related actions that have increased and will continue to increase our compliance costs or impact our products and platform or prevent us from offering or providing our products in certain countries. Moreover, the regulation of communications platform-as-a-service (“CPaaS”) companies like us is continuing to evolve internationally and many existing regulations may not fully contemplate the CPaaS business model or how they fit into the communications regulatory framework. As a result, interpretation and enforcement of regulations often involve significant uncertainties. In many countries, including those in the European Union, a number of our products or services are subject to licensing and communications regulatory requirements which increases the level of scrutiny and enforcement by regulators. Future legislative, regulatory or judicial actions impacting CPaaS services could also increase the cost and complexity of compliance and expose us to liability. For example, in some countries, some or all of the services we offer are not considered regulated telecommunications services, while in other countries they are subject to telecommunications regulations, including but not limited to payment into universal service funds, licensing fees, provision of emergency services, provision of information to support emergency services and number portability. Specifically, the Australian Communications and Media Authority in 2019 issued a formal finding against several companies, including our Company, for failure to upload data into a centralized database for emergency services and, in the future, regulatory authorities in other jurisdictions in which we operate may also determine that we are a telecommunications company subject to similar regulations. Failure to comply with these regulations could result in our Company being issued remedial directions to undertake independent audits and implement effective systems, processes and practices to ensure compliance, significant fines or being prohibited from providing telecommunications services in a jurisdiction.

Moreover, certain of our products may be used by customers located in countries where voice and other forms of IP communications may be illegal or require special licensing or in countries on a U.S. embargo list. Even where our products are reportedly illegal or become illegal or where users are located in an embargoed country, users in those countries may be able to continue to use our products in those countries notwithstanding the illegality or embargo. We may be subject to penalties or governmental action if consumers continue to use our products in countries where it is illegal to do so or if we use a local partner to provide services in a country and the local partner does not comply with applicable governmental regulations. Any such penalties or governmental action may be costly and may harm our business and damage our brand and reputation. We may be required to incur additional expenses to meet applicable international regulatory requirements or be required to raise the prices of services, or restructure or discontinue those services if required by law or if we cannot or will not meet those requirements. Any of the foregoing could adversely affect our business, results of operations and financial condition.

***If we are unable to obtain or retain geographical, mobile, regional, local or toll-free numbers, or to effectively process requests to port such numbers in a timely manner due to industry regulations, our business and results of operations may be adversely affected.***

Our future success depends in part on our ability to obtain allocations of geographical, mobile, regional, local and toll-free direct inward dialing numbers or phone numbers as well as short codes and alphanumeric sender IDs (collectively “Numbering Resources”) in the United States and foreign countries at a reasonable cost and without overly burdensome restrictions. Our ability to obtain allocations of, assign and retain Numbering Resources depends on factors outside of our control, such as applicable regulations, the practices of authorities that administer national numbering plans or of network service providers from whom we can provision Numbering Resources, such as offering these Numbering Resources with conditional minimum volume call level requirements, the cost of these Numbering Resources and the level of overall competitive demand for new Numbering Resources.

In addition, in order to obtain allocations of, assign and retain Numbering Resources in the EU or certain other regions, we are often required to be licensed by local telecommunications regulatory authorities, some of which have been increasingly monitoring and regulating the categories of Numbering Resources that are eligible for provisioning to our customers. We have obtained licenses, and are in the process of obtaining licenses in various countries in which we do business, but in some countries, the regulatory regime around provisioning of Numbering Resources is unclear, subject to change over time, and sometimes may conflict from jurisdiction to jurisdiction. Furthermore, these regulations and governments’ approach to their enforcement, as well as our products and services, are still evolving and we may be unable to maintain compliance with applicable regulations, or enforce compliance by our customers, on a timely basis or without significant cost. Also, compliance with these types of regulation may require changes in products or business practices that result in reduced revenue. Due to our or our customers' assignment and/or use of Numbering Resources in certain countries in a manner that violates applicable rules and regulations, we have been subjected to government inquiries and audits, and may in the future be subject to significant penalties or further governmental action, and in extreme cases, may be precluded from doing business in that particular country. We have also been forced to reclaim Numbering Resources from our customers as a result of certain events of non-compliance. These reclamations result in loss of customers, loss of revenue, reputational harm, erosion of customer trust, and may also result in breach of contract claims, all of which could have an adverse effect on our business, results of operations and financial condition.

Due to their limited availability, there are certain popular area code prefixes that we generally cannot obtain. Our inability to acquire or retain Numbering Resources for our operations may make our voice and messaging products less attractive to potential customers in the affected local geographic areas. In addition, future growth in our customer base, together with growth in the customer bases of other providers of cloud communications, has increased, which increases our dependence on needing sufficiently large quantities of Numbering Resources. It may become increasingly difficult to source larger quantities of Numbering Resources as we scale and we may need to pay higher costs for Numbering Resources, and Numbering Resources may become subject to more stringent regulation or conditions of usage such as the registration and on-going compliance requirements discussed above.

Additionally, in some geographies, we support number portability, which allows our customers to transfer their existing phone numbers to us and thereby retain their existing phone numbers when subscribing to our voice and messaging products. Transferring existing numbers is a manual process that can take up to 15 business days or longer to complete. Any delay that we experience in transferring these numbers typically results from the fact that we depend on network service providers to transfer these numbers, a process that we do not control, and these network service providers may refuse or substantially delay the transfer of these numbers to us. Number portability is considered an important feature by many potential customers, and if we fail to reduce any related delays, then we may experience increased difficulty in acquiring new customers.

Any of the foregoing factors could adversely affect our business, results of operations and financial condition.

***If we fail to adapt and respond effectively to rapidly changing technology, evolving industry standards, changing regulations, and changing customer needs, requirements or preferences, our products may become less competitive.***

The market for communications in general, and cloud communications in particular, is subject to rapid technological change, evolving industry standards, changing regulations, as well as changing customer needs, requirements and preferences. The success of our business will depend, in part, on our ability to adapt and respond effectively to these changes on a timely basis. If we are unable to develop new products that satisfy our customers and provide enhancements and new features for our existing products that keep pace with rapid technological and industry change, including but not limited to SHAKEN/STIR and applicable industry standards, our business, results of operations and financial condition could be adversely affected. If new technologies emerge that are able to deliver competitive products and services at lower prices, more efficiently, more conveniently or more securely, such technologies could adversely impact our ability to compete effectively.

Our platform must integrate with a variety of network, hardware, mobile and software platforms and technologies, and we need to continuously modify and enhance our products and platform to adapt to changes and innovation in these technologies. For example, Apple, Google and other cell-phone operating system providers or inbox service providers have developed and, may in the future develop, new applications or functions intended to filter spam and unwanted phone calls, messages or emails. Third party platforms may also implement changes to their privacy policies or practices that may impact us or our customers. In addition, our network service providers may adopt new filtering technologies in an effort to combat spam or robocalling. Such technologies may inadvertently filter desired messages or calls to or from our customers. If cell-phone operating system providers, network service providers, our customers or their end users adopt new software platforms or infrastructure, we may be required to develop new versions of our products to work with those new platforms or infrastructure. This development effort may require significant resources, which would adversely affect our business, results of operations and financial condition. Any failure of our products and platform to operate effectively with evolving or new platforms and technologies could reduce the demand for our products. If we are unable to respond to these changes in a cost-effective manner, our products may become less marketable and less competitive or obsolete, and our business, results of operations and financial condition could be adversely affected.

***We substantially rely upon Amazon Web Services to operate our platform, and any disruption of or interference with our use of Amazon Web Services would adversely affect our business, results of operations and financial condition.***

We outsource a substantial majority of our cloud infrastructure to Amazon Web Services ("AWS"), which hosts our products and platform. Our customers need to be able to access our platform at any time, without interruption or degradation of performance. AWS runs its own platform that we access, and we are, therefore, vulnerable to service interruptions at AWS. We have experienced, and expect that in the future we may experience interruptions, delays and outages in service and availability due to a variety of factors, including infrastructure changes, human or software errors, website hosting disruptions and capacity constraints. Capacity constraints could be due to a number of potential causes, including technical failures, natural disasters, public health epidemics or pandemics such as COVID-19, fraud or security attacks. In addition, if our security, or that of AWS, is compromised, or our products or platform are unavailable or our users are unable to use our products within a reasonable amount of time or at all, then our business, results of operations and financial condition could be adversely affected. In some instances, we may not be able to identify the cause or causes of these performance problems within a period of time acceptable to our customers. It may become increasingly difficult to maintain and improve our platform performance, especially during peak usage times, as our products become more complex and the usage of our products increases. To the extent that we do not effectively address capacity constraints, either through AWS or alternative providers of cloud infrastructure, our business, results of operations and financial condition may be adversely affected. In addition, any changes in service levels from AWS may adversely affect our ability to meet our customers' requirements, result in negative publicity which could harm our reputation and brand and may adversely affect the usage of our platform.

The substantial majority of the services we use from AWS are for cloud-based server capacity and, to a lesser extent, storage and other optimization offerings. AWS enables us to order and reserve server capacity in varying amounts and sizes distributed across multiple regions. We access AWS infrastructure through standard IP connectivity. AWS provides us with computing and storage capacity pursuant to an agreement that continues until terminated by either party. AWS may terminate the agreement for cause upon notice and upon our failure to cure a breach within 30 days from the date of such notification and may, in some cases, suspend the agreement immediately for cause upon notice. Although we expect that we could receive similar services from other third parties, if any of our arrangements with AWS are terminated, we could experience interruptions on our platform and in our ability to make our products available to customers, as well as delays and additional expenses in arranging alternative cloud infrastructure services.

Any of the above circumstances or events may harm our reputation, erode customer trust, cause customers to stop using our products, impair our ability to increase revenue from existing customers, impair our ability to grow our customer base, subject us to financial penalties and liabilities under our service level agreements and otherwise harm our business, results of operations and financial condition.

***We typically provide monthly uptime service level commitments of a minimum of 99.95% under our agreements with customers. If we fail to meet these contractual commitments, then our business, results of operations and financial condition could be adversely affected.***

Our agreements with customers typically provide for service level commitments. If we suffer extended periods of downtime for our products or platform and we are unable to meet these commitments, then we are contractually obligated to provide a service credit, which is typically 10% of the customer's amounts due for the month in question. For example, there have been instances in which technical reliability issues have caused service disruptions with one or more products in our cloud communications platform that have impacted our customers' ability to use such products for up to several hours. These issues have caused us to incur certain costs associated with offering credits to our affected customers and have had an adverse impact on customer satisfaction. In addition, the performance and availability of AWS or other service providers that provide our cloud infrastructures is outside of our control and, therefore, we are not in full control of whether we meet our service level commitments. A loss of customers or reduced utilization of our products by customers resulting from unscheduled downtime or service disruptions could adversely affect our business, results of operations and financial condition.

***Defects or errors in our products could diminish demand for our products, harm our business and results of operations and subject us to liability.***

Our customers use our products for important aspects of their businesses, and any errors, defects or disruptions to our products and any other performance problems with our products could damage our customers' businesses and, in turn, hurt our brand and reputation and erode customer trust. We provide regular updates to our products, which have in the past contained, and may in the future contain, undetected errors, failures, vulnerabilities and bugs when first introduced or released. Real or perceived errors, failures or bugs in our products could result in negative publicity, loss of or delay in market acceptance of our platform, loss of competitive position, lower customer retention or claims by customers for losses sustained by them. In such an event, we may be required, or may choose, for customer relations or other reasons, to expend additional resources to help correct the problem. In addition, we may not carry insurance sufficient to compensate us for any losses that may result from claims arising from defects or disruptions in our products. As a result, our reputation and our brand could be harmed, and our business, results of operations and financial condition may be adversely affected.

***We currently generate significant revenue from our largest customers, and the loss or decline in revenue from any of these customers could harm our business, results of operations and financial condition.***

In the nine months ended September 30, 2022 and the years ended December 31, 2021 and 2020, our 10 largest Active Customer Accounts generated an aggregate of 12%, 11% and 14% of our revenue, respectively. In the event that any of our large customers do not continue to use our products, use fewer of our products, or use our products in a more limited capacity, or not at all, our business, results of operations and financial condition could be adversely affected. Additionally, the usage of our products by customers that do not have long-term contracts with us may change between periods. Those with no long-term contract with us may reduce or fully terminate their usage of our products at any time without notice, penalty or termination charges, which may adversely impact our results of operations.

***If we are unable to develop and maintain successful relationships with consulting partners, our business, results of operations and financial condition could be adversely affected.***

We believe that continued growth of our business depends in part upon identifying, developing and maintaining strategic relationships with consulting partners. As part of our growth strategy, we intend to further develop partnerships and specific solution areas with consulting partners. If we fail to establish these relationships in a timely and cost-effective manner, or at all, then our business, results of operations and financial condition could be adversely affected. Additionally, even if we are successful at developing these relationships but there are problems or issues with the integrations or enterprises are not willing to purchase through consulting partners, our reputation and ability to grow our business may be adversely affected.

***Any failure to offer high-quality customer support may adversely affect our relationships with our customers and prospective customers, and adversely affect our business, results of operations and financial condition.***

Many of our customers depend on our customer support team to assist them in deploying our products effectively to help them to resolve post-deployment issues quickly and to provide ongoing support. If we do not devote sufficient resources or are otherwise unsuccessful in assisting our customers effectively, it could adversely affect our ability to retain existing customers and could prevent prospective customers from adopting our products. We may be unable to respond quickly enough to accommodate short-term increases in demand for customer support. We also may be unable to modify the nature, scope and delivery of our customer support to compete with changes in the support services provided by our competitors. Increased demand for customer support, without corresponding revenue, could increase costs and adversely affect our business, results of operations and financial condition. Our sales are highly dependent on our business reputation and on positive recommendations from developers. Any failure to maintain high-quality customer support, or a market perception that we do not maintain high-quality customer support, could erode customer trust and adversely affect our reputation, business, results of operations and financial condition.

***Failure to set optimal prices for our products could adversely impact our business, results of operations and financial condition.***

For certain of our products, we primarily charge our customers based on their use of such products ("usage-based pricing"). One of the challenges to our usage-based pricing is that the fees that we pay to network service providers over whose networks we transmit communications can vary daily or weekly and are affected by volume and other factors that may be outside of our control and difficult to predict. This can result in us incurring increased costs that we may be unable or unwilling to pass through to our customers, which could adversely impact our business, results of operations and financial condition.

We expect that we may need to change our pricing from time to time. In the past, we have sometimes reduced our prices either for individual customers in connection with long-term agreements or for a particular product. Further, as competitors introduce new products or services that compete with ours or reduce their prices, we may be unable to attract new customers or retain existing customers based on our historical pricing. As we expand internationally, we also must determine the appropriate price to enable us to compete effectively internationally. Moreover, enterprises, which are a primary focus for our direct sales efforts, may demand substantial price concessions. In addition, if the mix of products sold changes, including for a shift to IP-based products, then we may need to, or choose to, revise our pricing. As a result, in the future we may be required or choose to reduce our prices or change our pricing model, which could adversely affect our business, results of operations and financial condition.

***We have been sued and may, in the future, be sued by third parties for alleged infringement of their proprietary rights, which could adversely affect our business, results of operations and financial condition.***

There is considerable patent and other intellectual property development activity in our industry. We may also introduce or acquire new products or technologies, including in areas where we historically have not participated, which could increase our exposure to third party intellectual property claims. Our future success depends, in part, on not infringing the intellectual property rights of others and we may be unaware of the intellectual property rights of others that may cover some or all of our technology. Our competitors or other third parties have claimed and may, in the future, claim that our products or platform and underlying technology are infringing upon their intellectual property rights, and we may be found to be infringing upon such rights. For example, Telesign Corporation (“Telesign”) sued us in 2015 and 2016 alleging that we infringed four U.S. patents. The patent infringement allegations in the lawsuits related to our two-factor authentication use case, *Authy*, and an API tool to find information about a phone number. On October 19, 2018, a United States District Court in the Northern District of California entered judgment in our favor on all asserted claims, which was affirmed on appeal. We intend to vigorously defend ourselves against such lawsuits. During the course of these lawsuits, there may be announcements of the results of hearings and motions and other interim developments related to the litigation. If securities analysts or investors regard these announcements as negative, the trading price of our Class A common stock may decline.

Any claims or litigation could cause us to incur significant expenses and, if successfully asserted against us, could require that we pay substantial damages or ongoing royalty payments, prevent us from offering our products, or require that we comply with other unfavorable terms. We may also be obligated to indemnify our customers or business partners in connection with any such litigation and to obtain licenses or modify our products or platform, which could further exhaust our resources. Litigation is inherently uncertain and even if we were to prevail in the event of claims or litigation against us, any claim or litigation regarding intellectual property could be costly and time-consuming and divert the attention of our management and other employees from our business. Patent infringement, trademark infringement, trade secret misappropriation and other

intellectual property claims and proceedings brought against us, whether successful or not, could harm our brand, business, results of operations and financial condition.

***Indemnity provisions in various agreements potentially expose us to substantial liability for data breach, intellectual property infringement and other losses.***

Our agreements with customers and other third parties typically include indemnification or other provisions under which we agree to indemnify or otherwise be liable to them for losses suffered or incurred as a result of claims of intellectual property infringement, loss or exposure of confidential or sensitive data, damages caused by us to property or persons or other liabilities relating to or arising from our products or platform or other acts or omissions. The term of these contractual provisions often survives termination or expiration of the applicable agreement. Large indemnity payments or damage claims from contractual breach could harm our business, results of operations and financial condition. Although typically we contractually limit our liability with respect to such obligations, we may still incur substantial liability related to them. Any dispute with a customer with respect to such obligations could have adverse effects on our relationship with that customer and other current and prospective customers, demand for our products and adversely affect our business, results of operations and financial condition.

***We could incur substantial costs in protecting or defending our intellectual property rights, and any failure to protect our intellectual property could adversely affect our business, results of operations and financial condition.***

Our success depends, in part, on our ability to protect our brand and the proprietary methods and technologies that we develop under patent and other intellectual property laws in the U.S. and in non-U.S. jurisdictions so that we can prevent others from using our inventions and proprietary information. As of December 31, 2021, in the United States, we had been issued 197 patents, which expire between 2029 and 2040. As of such date, we also had 36 issued patents in non-U.S. jurisdictions, all of which are related to U.S. patents and patent applications. We have also filed various applications for protection of certain aspects of our intellectual property in the United States and internationally. There can be no assurance that additional patents will be issued or that any patents that have been issued or that may be issued in the future will provide significant protection for our intellectual property. As of December 31, 2021, we had 50 registered trademarks in the United States and 416 registered trademarks in non-U.S. jurisdictions. If we fail to protect our intellectual property rights adequately, our competitors might gain access to our technology and our business, results of operations and financial condition may be adversely affected.

There can be no assurance that the particular forms of intellectual property protection that we seek, including business decisions about when to file patent applications and trademark applications, will be adequate to protect our business. We could be required to spend significant resources to monitor and protect our intellectual property rights. Litigation has in the past, and may be necessary in the future, to enforce our intellectual property rights, determine the validity and scope of our proprietary rights or those of others, or defend against claims of infringement or invalidity. Such litigation could be costly, time-consuming and distracting to management, result in a diversion of significant resources, the narrowing or invalidation of portions of our intellectual property and have an adverse effect on our business, results of operations and financial condition. Our efforts to enforce our intellectual property rights may be met with defenses, counterclaims and countersuits attacking the validity and enforceability of our intellectual property rights or alleging that we infringe the counterclaimant's own intellectual property. Any of our patents, copyrights, trademarks or other intellectual property rights could be challenged by others or invalidated through administrative process or litigation.

We also rely, in part, on confidentiality agreements with our business partners, employees, consultants, advisors, customers and others in our efforts to protect our proprietary technology, processes and methods. These agreements may not effectively prevent disclosure of our confidential information, and it may be possible for unauthorized parties to copy our software or other proprietary technology or information, or to develop similar software independently without our having an adequate remedy for unauthorized use or disclosure of our confidential information. In addition, others may independently discover our trade secrets and proprietary information, and in these cases, we would not be able to assert any trade secret rights against those parties. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

In addition, the laws of some countries do not protect intellectual property and other proprietary rights to the same extent as the laws of the United States. To the extent we expand our international activities, whether through acquisitions, international product development, regulatory compliance of local data sovereignty, or improving our services (e.g. reducing latency or ensuring redundancy) our exposure to unauthorized copying, transfer and use of our proprietary technology or information may increase.

We cannot be certain that our means of protecting our intellectual property and proprietary rights will be adequate or that our competitors will not independently develop similar technology. If we fail to meaningfully protect our intellectual property and proprietary rights, our business, results of operations and financial condition could be adversely affected.

***We may acquire or invest in companies, which may divert our management's attention and result in debt or dilution to our stockholders. We may be unable to integrate acquired businesses and technologies successfully or achieve the expected benefits of such acquisitions or investments.***

We actively evaluate and consider potential strategic transactions, including acquisitions of, or investments in, businesses, technologies, services, products and other assets in the future. For example, in November 2020, we acquired Segment for a total purchase price of $3.0 billion, of which approximately $2.5 billion represented the value of our Class A common stock issued at closing. The estimated transaction value of $3.2 billion, as previously announced, included certain shares of Class A common stock and assumed equity awards that are subject to future vesting. Accordingly, at closing, our stockholders incurred substantial dilution. Any future acquisitions or strategic transactions may result in additional dilution or require us to take on debt in order to finance any such transactions. For further risks related to our acquisitions, please see below under "Risks Related to our Acquisitions." We also may enter into relationships with other businesses to expand our products and platform, which could involve preferred or exclusive licenses, additional channels of distribution, discount pricing or investments in other companies, such as our recent minority investment of $750.0 million in Syniverse Corporation that closed in May 2022.

Any acquisition, investment or business relationship may result in unforeseen operating difficulties and expenditures. In particular, we may encounter difficulties or delays in assimilating or integrating the businesses, technologies, products, employees or operations of the acquired companies, particularly if the key employees of the acquired company choose not to work for us, their products or services are not easily adapted to work with our platform, or we have difficulty retaining the customers of any acquired business due to changes in ownership, management or otherwise. In addition, we may discover liabilities or deficiencies associated with the assets or companies we acquire or ineffective or inadequate controls, procedures or policies at an acquired business that were not identified in advance, any of which could result in significant unanticipated costs. Acquisitions also may disrupt our business, divert our resources or require significant management attention that would otherwise be available for development of our existing business. Moreover, the anticipated benefits of any acquisition, investment or business relationship may not be realized or we may be exposed to unknown risks or liabilities.

Negotiating these transactions can be time consuming, difficult and expensive, and our ability to complete these transactions may often be subject to approvals that are beyond our control. Consequently, these transactions, even if announced, may not be completed. For one or more of those transactions, we may:

- issue additional equity securities that would dilute our existing stockholders;
- use cash that we may need in the future to operate our business;
- incur large charges or substantial liabilities;
- incur debt on terms unfavorable to us or that we are unable to repay;
- encounter difficulties retaining key employees of the acquired company or integrating diverse software codes or business cultures;
- invest in securities that are illiquid or decline in value;
- encounter difficulties retaining the acquired company's customers; or
- become subject to adverse tax consequences, substantial depreciation, or deferred compensation charges.

The occurrence of any of these foregoing could adversely affect our business, results of operations and financial condition.

***United States federal legislation and international laws impose certain obligations on the senders of commercial emails, which could minimize the effectiveness of our platform, and establish financial penalties for non-compliance, which could increase the costs of our business.***

The Federal Controlling the Assault of Non-Solicited Pornography and Marketing Act of 2003, or the CAN-SPAM Act, establishes certain requirements for commercial email messages and transactional email messages and specifies penalties for the transmission of email messages that are intended to deceive the recipient as to source or content. Among other things, the CAN-SPAM Act, obligates the sender of commercial emails to provide recipients with the ability to "opt-out" of receiving future commercial emails from the sender. In addition, some states have passed laws regulating commercial email practices that are significantly more restrictive and difficult to comply with than the CAN-SPAM Act. For example, Utah and Michigan prohibit the sending of email messages that advertise products or services that minors are prohibited by law from purchasing or that contain content harmful to minors to email addresses listed on specified child protection registries. Some portions of these state laws may not be preempted by the CAN-SPAM Act. In addition, certain non-U.S. jurisdictions in which we operate have enacted laws regulating the sending of email that are more restrictive than U.S. laws. For example, some foreign laws prohibit sending broad categories of email unless the recipient has provided the sender advance consent (or "opted-in") to receipt of such email. If we were found to be in violation of the CAN-SPAM Act, applicable state laws governing email not preempted by the CAN-SPAM Act or foreign laws regulating the distribution of email, whether as a result of violations by our customers or our own acts or omissions, we could be required to pay large penalties, which would adversely affect our financial condition, significantly harm our business, injure our reputation and erode customer trust. The terms of any injunctions, judgments, consent decrees or settlement agreements entered into in connection with enforcement actions or investigations against our company in connection with any of the foregoing laws may also require us to change one or more aspects of the way we operate our business, which could impair our ability to attract and retain customers or could increase our operating costs.

***Our customers' and other users' violation of our policies or other misuse of our platform to transmit unauthorized, offensive or illegal messages, spam, phishing scams, and website links to harmful applications or for other fraudulent or illegal activity could damage our reputation, and we may face a risk of litigation and liability for illegal activities on our platform and unauthorized, inaccurate, or fraudulent information distributed via our platform.***

The actual or perceived improper sending of text messages or voice calls may subject us to potential risks, including liabilities or claims relating to consumer protection laws and regulatory enforcement, including fines. For example, the Telephone Consumer Protection Act of 1991 ("TCPA") restricts telemarketing and the use of automatic SMS text messages without explicit customer consent. TCPA violations can result in significant financial penalties, as businesses can incur penalties or criminal fines imposed by the FCC or be fined up to $1,500 per violation through private litigation or state attorneys general or other state actor enforcement. Class action suits are the most common method for private enforcement. This has resulted in civil claims against our company and requests for information through third-party subpoenas. The scope and interpretation of the laws that are or may be applicable to the delivery of text messages or voice calls are continuously evolving and developing. If we do not comply with these laws or regulations or if we become liable under these laws or regulations due to the failure of our customers to comply with these laws by obtaining proper consent, we could face direct liability.

Moreover, certain customers may use our platform to transmit unauthorized, offensive or illegal messages, calls, spam, phishing scams, and website links to harmful applications, reproduce and distribute copyrighted material or the trademarks of others without permission, and report inaccurate or fraudulent data or information. These issues also arise with respect to a portion of those users who use our platform on a free trial basis or upon initial use. These actions are in violation of our policies, in particular, our Acceptable Use Policy. However, our efforts to defeat spamming attacks, illegal robocalls and other fraudulent activity will not prevent all such attacks and activity. Such use of our platform could damage our reputation and we could face claims for damages, regulatory enforcement, copyright or trademark infringement, defamation, negligence, or fraud. Furthermore, enacting more stringent controls on our customers' use of our platform to combat such violations of our Acceptable Use Policy could increase friction for our legitimate customers and decrease their use of our platform.

Moreover, our customers' and other users' promotion of their products and services through our platform might not comply with federal, state, and foreign laws or of contractual requirements imposed by carriers, such as the CTIA Shortcode Agreement, The Campaign Registry, and associated policies. We rely on contractual representations made to us by our customers that their use of our platform will comply with our policies and applicable law, including, without limitation, our email and messaging policies. Although we retain the right to verify that customers and other users are abiding by certain contractual terms, our Acceptable Use Policy and our email and messaging policies and, in certain circumstances, to review their email, messages and distribution lists, our customers and other users are ultimately responsible for compliance with our policies, and we do not systematically audit our customers or other users to confirm compliance with our policies. We cannot predict whether our role in facilitating our customers' or other users' activities will result in violations of carrier policies which

could result in fines, administrative delays, or service interruptions. We also cannot predict whether our role in facilitating our customers' or other users' activities would expose us to liability under applicable state or federal law, or whether that possibility could become more likely if changes to current laws regulating content moderation, such as Section 230 of the Communications Decency Act are enacted. There are various Congressional and legal efforts to eliminate or restrict the scope of the protections under Section 230, which limits the liability of internet platforms for third-party content that is transmitted via those platforms and for good-faith moderation of offensive content. In addition, Florida and Texas adopted statutes intended to reduce or eliminate the protections granted under Section 230, although implementation of both statutes has been stayed by various federal courts, including the U.S. Supreme Court. On August 18, the parties in the Florida case requested, and were granted, a stay of the appeals court mandate pending Supreme Court review, and on September 21, 2022, Florida requested that the Supreme Court review the case. On September 16, the U.S. Court of Appeals for the Fifth Circuit issued a decision upholding the Texas law. On September 30, the parties in that case filed an unopposed motion to stay the Fifth Circuit decision pending Supreme Court review, and the Fifth Circuit granted that request on October 13. The conflict between the decisions on the two laws increases the likelihood that the Supreme Court will review these statutes. Florida recently amended its statute in an effort to address issues that led the court to issue the stay. Similar legislation has been introduced in other states in 2022. Further, on October 3, 2022, the U.S. Supreme Court agreed to hear a case to determine whether Google should be liable for damages because YouTube's suggestion algorithm promoted radical Islamic videos that incited a terrorist attack in France. Even if claims asserted against us do not result in liability, we may incur substantial costs in investigating and defending such claims. If we are found liable for our customers' or other users' activities, we could be required to pay fines or penalties, redesign business methods or otherwise expend resources to remedy any damages caused by such actions and to avoid future liability.

***Our use of open source software could negatively affect our ability to sell our products and subject us to possible litigation.***

Our products and platform incorporate open source software, and we expect to continue to incorporate open source software in our products and platform in the future. Few of the licenses applicable to open source software have been interpreted by courts, and there is a risk that these licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to commercialize our products and platform. Moreover, although we have implemented policies to regulate the use and incorporation of open source software into our products and platform, we cannot be certain that we have not incorporated open source software in our products or platform in a manner that is inconsistent with such policies. If we fail to comply with open source licenses, we may be subject to certain requirements, including requirements that we offer our products that incorporate the open source software for no cost, that we make available source code for modifications or derivative works we create based upon, incorporating or using the open source software and that we license such modifications or derivative works under the terms of applicable open source licenses. If an author or other third party that distributes such open source software were to allege that we had not complied with the conditions of one or more of these licenses, we could be required to incur significant legal expenses defending against such allegations and could be subject to significant damages, enjoined from generating revenue from customers using products that contained the open source software and required to comply with onerous conditions or restrictions on these products. In any of these events, we and our customers could be required to seek licenses from third parties in order to continue offering our products and platform and to re-engineer our products or platform or discontinue offering our products to customers in the event re-engineering cannot be accomplished on a timely basis. Any of the foregoing could require us to devote additional research and development resources to re-engineer our products or platform, could result in customer dissatisfaction and may adversely affect our business, results of operations and financial condition.

***Changes in laws and regulations related to the Internet or changes in the Internet infrastructure itself may diminish the demand for our products, and could adversely affect our business, results of operations and financial condition.***

The future success of our business depends upon the continued use of the Internet as a primary medium for commerce, communications and business applications. Federal, state or foreign government bodies or agencies have in the past adopted, and may in the future adopt, laws or regulations affecting the use of the Internet as a commercial medium. Changes in these laws or regulations could require us to modify our products and platform in order to comply with these changes. In addition, government agencies or private organizations have imposed and may impose additional taxes, fees or other charges for accessing the Internet or commerce conducted via the Internet. These laws or charges could limit the growth of Internet-related commerce or communications generally or result in reductions in the demand for Internet-based products and services such as our products and platform. In particular, a re-adoption of "network neutrality" rules in the United States, which President Biden supported during his campaign, could affect the services used by us and our customers. California's state network neutrality law went into effect after a federal district court denied a motion for preliminary injunction on March 10, 2021, and that decision was affirmed by the U.S. Court of Appeals for the Ninth Circuit on January 28, 2022, and on April 20, 2022 it declined to rehear the case. The appellants did not appeal to the U.S. Supreme Court. A temporary injunction preventing implementation of a similar law in Vermont expired on April 20, 2022, but the challenge to that law remains pending. A number of other states have adopted or are adopting or considering legislation or executive actions that would regulate the conduct of broadband providers. In addition, the use of the Internet as a business tool could be adversely affected due to delays in the development or

adoption of new standards and protocols to handle increased demands of Internet activity, security, reliability, cost, ease-of-use, accessibility and quality of service. The performance of the Internet and its acceptance as a business tool has been adversely affected by "viruses," "worms," and similar malicious programs. If the use of the Internet is reduced as a result of these or other issues, then demand for our products could decline, which could adversely affect our business, results of operations and financial condition.

***The technology industry is subject to increasing scrutiny that could result in government actions that would negatively affect our business.***

The technology industry is subject to intense media, political and regulatory scrutiny, both domestic and foreign, including on issues related to antitrust, privacy, and artificial intelligence, which exposes us to government investigations, legal actions and penalties. For instance, various regulatory agencies, including competition and consumer protection authorities, have active proceedings and investigations concerning multiple technology companies on antitrust and other issues. If we become subject to such investigations, we could be liable for substantial fines and penalties, be required to change our products and services or alter our business operations, receive negative publicity, or be subject to civil litigation, all of which could harm our business. Lawmakers also have proposed new laws and regulations, and modifications to existing laws and regulations, that affect the activities of technology companies, such as the recent legislative efforts to eliminate or modify Section 230 of the Communications Decency Act and to regulate platforms that offer apps and other similar actions in some U.S. states. If such laws and regulations are enacted or modified, they could impact us, even if they are not intended to affect our company. In addition, the introduction of new products and services, expansion of our activities in certain jurisdictions, or other actions that we may take may subject us to additional laws, regulations, and other scrutiny. The increased scrutiny of certain acquisitions in the technology industry also could affect our ability to enter into strategic transactions or to acquire other businesses.

Compliance with new or modified laws and regulations could increase the cost of conducting our business, limit the opportunities to increase our revenues, or prevent us from offering products or services. There can be no assurance that our employees, contractors or agents will not violate such laws and regulations. If we are found to have violated laws and regulations, it could materially adversely affect our reputation, financial condition and results of operations.

We also could be harmed by government investigations, litigation, or changes in laws and regulations directed at our customers, business partners, or suppliers in the technology industry that have the effect of limiting our ability to do business with those entities. There can be no assurance that our business will not be materially adversely affected, individually or in the aggregate, by the outcomes of such investigations, litigation or changes to laws and regulations in the future.

***The standards imposed by private entities and inbox service providers to regulate the use and delivery of email have in the past interfered with, and may continue to interfere with, the effectiveness of our platform and our ability to conduct business.***

From time to time, some of our IP addresses have become, and we expect will continue to be, listed with one or more denylisting entities due to the messaging practices of our customers and other users. We may be at an increased risk of having our IP addresses denylisted due to our scale and volume of email processed, compared to our smaller competitors. There can be no guarantee that we will be able to successfully remove ourselves from those lists. Because we fulfill email delivery on behalf of our customers, denylisting of this type could undermine the effectiveness of our customers' transactional email, email marketing programs and other email communications, all of which could have a material negative impact on our business, financial condition and results of operations.

Additionally, inbox service providers can block emails from reaching their users or categorize certain emails as "promotional" emails and, as a result, direct them to an alternate or "tabbed" section of the recipient's inbox. The implementation of new or more restrictive policies by inbox service providers may make it more difficult to deliver our customers' emails, particularly if we are not given adequate notice of a change in policy or struggle to update our platform or services to comply with the changed policy in a reasonable amount of time. If the open rates of our customers' emails are negatively impacted by the actions of inbox service providers to block or categorize emails then customers may question the effectiveness of our platform and cancel their accounts. This, in turn, could harm our business, financial condition and results of operations.

***Our global operations subject us to potential liability under export control, economic trade sanctions, anti-corruption, and other laws and regulations, and such violations could impair our ability to compete in international markets and could subject us to liability for compliance violations.***

Certain of our products and services may be subject to export control and economic sanctions laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, and various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Control. Exports of our products and the provision of our services must be made in compliance with these requirements. Although we take precautions to prevent our products from being provided in violation of such laws, we are aware of previous exports of certain of our products to a small number of persons and organizations that are the subject of U.S. sanctions or are located in countries or regions subject to U.S. sanctions. If we fail to comply with these laws and regulations, we and certain of our employees could be subject to substantial civil or criminal penalties, including: the possible loss of export privileges; fines, which may be imposed on us and responsible employees or managers; and, in extreme cases, the incarceration of responsible employees or managers. Obtaining the necessary authorizations, including any required license, for a particular deployment may be time-consuming, is not guaranteed and may result in the delay or loss of sales opportunities. In addition, changes in our products or services, or changes in applicable export or economic sanctions regulations may create delays in the introduction and deployment of our products and services in international markets, or, in some cases, prevent the export of our products or provision of our services to certain countries or end users. Any change in trade protection laws, policies, export, sanctions and other regulatory requirements affecting trade and investments, shift in the enforcement or scope of existing regulations, or change in the countries, governments, persons or technologies targeted by such regulations, could also result in decreased use of our products and services, or in our decreased ability to export our products or provide our services to existing or prospective customers with international operations. Any decreased use of our products and services or limitations on our ability to export our products and provide our services could adversely affect our business, results of operations and financial condition.

Further, we incorporate encryption technology into certain of our products. Various countries regulate the import of certain encryption technology, including through import permitting and licensing requirements, and have enacted laws that could limit our customers' ability to import our products into those countries. Encryption products and the underlying technology may also be subject to export control restrictions. Governmental regulation of encryption technology and regulation of exports of encryption products, or our failure to obtain required approval for our products, when applicable, could harm our international sales and adversely affect our revenue. Compliance with applicable regulatory requirements regarding the export of our products and provision of our services, including with respect to new releases of our products and services, may create delays in the introduction of our products and services in international markets, prevent our customers with international operations from deploying our products and using our services throughout their globally-distributed systems or, in some cases, prevent the export of our products or provision of our services to some countries altogether.

We are also subject to U.S. and foreign anti-corruption and anti-bribery laws, including the Foreign Corrupt Practices Act, as amended, the UK Bribery Act 2010, and other anti-corruption laws and regulations in the countries in which we conduct activities. Anti-corruption laws are interpreted broadly and generally prohibit corrupt payments by our employees and third parties acting on our behalf from directly or indirectly authorizing, offering, or providing, improper payments or things of value to recipients in the public or private sector, and also require that we maintain accurate books and records and adequate internal controls. Our employees or third parties acting on our behalf may fail to comply with our policies, resulting in violations of applicable anti-corruption laws and regulations. Such violations could result in significant fines and penalties, criminal liability for us, our individual officers or employees, prohibitions on our ability to conduct business, and potential reputational damage.

***Our reliance on SaaS technologies from third parties may adversely affect our business, results of operations and financial condition.***

We rely on hosted SaaS technologies from third parties in order to operate critical internal functions of our business, including enterprise resource planning, customer support and customer relations management services. If these services become unavailable due to extended outages or interruptions, or because they are no longer available on commercially reasonable terms or prices, our expenses could increase. As a result, our ability to manage our operations could be interrupted and our processes for managing our sales process and supporting our customers could be impaired until equivalent services, if available, are identified, obtained and implemented, all of which could adversely affect our business, results of operations and financial condition.

***We may have additional tax liabilities, which could harm our business, results of operations and financial condition.***

Significant judgments and estimates are required in determining our provision for income taxes and other tax liabilities. Our tax expense may be impacted, for example, if tax laws change or are clarified to our detriment or if tax authorities

successfully challenge the tax positions that we take, such as, for example, positions relating to the arms-length pricing standards for our intercompany transactions and our indirect tax positions. In determining the adequacy of our provision for income taxes, we assess the likelihood of adverse outcomes that could result if our tax positions were challenged by the Internal Revenue Service ("IRS"), and other tax authorities. Should the IRS or other tax authorities assess additional taxes as a result of examinations, we may be required to record charges to operations that could adversely affect our results of operations and financial condition.

We conduct operations in many tax jurisdictions throughout the United States and internationally. In many of these jurisdictions, non-income-based taxes, such as sales, VAT, GST, and telecommunications taxes, are assessed on our operations or our sales to customers. We are subject to indirect taxes, and may be subject to certain other taxes, in some of these jurisdictions. We collect certain telecommunications-based taxes from our customers in certain jurisdictions, and we expect to continue expanding the number of jurisdictions in which we will collect these taxes in the future.

Many states are also pursuing legislative expansion of the scope of goods and services that are subject to sales and similar taxes as well as the circumstances in which a vendor of goods and services must collect such taxes. Following the U.S. Supreme Court decision in South Dakota v. Wayfair, Inc., states are now free to levy taxes on sales of goods and services based on an "economic nexus," regardless of whether the seller has a physical presence in the state. Any additional fees and taxes levied on our services by any state may adversely impact our results of operations.

Historically, we have not billed or collected taxes in certain jurisdictions and, in accordance with generally accepted accounting principles in the United States ("U.S. GAAP"), we have recorded a provision for our tax exposure in these jurisdictions when it is both probable that a liability has been incurred and the amount of the exposure can be reasonably estimated. We reserved $27.7 million and $21.6 million for domestic jurisdictions and jurisdictions outside of the U.S., respectively, on our September 30, 2022 balance sheet for these tax payments. These estimates include several key assumptions, including, but not limited to, the taxability of our products, the jurisdictions in which we believe we have nexus or a permanent establishment, and the sourcing of revenues to those jurisdictions. In the event these jurisdictions challenge our assumptions and analysis, our actual exposure could differ materially from our current estimates and reserves. If the actual payments we make to any jurisdiction exceed the accrual in our balance sheet, our results of operations would be harmed. In addition, some customers may question the incremental tax charges and seek to negotiate lower pricing from us, which could adversely affect our business, results of operations and financial condition.

We are in discussions with certain jurisdictions regarding potential sales and other indirect taxes for prior periods that we may owe. If any of these jurisdictions disagree with management's assumptions and analysis, the assessment of our tax exposure could differ materially from management's current estimates. For example, San Francisco City and County has assessed us for $38.8 million in taxes, including interest and penalties, which exceeded the $11.5 million we had accrued for that assessment. We have paid the full amount, as required by law, and the payment made in excess of the accrued amount is reflected as a deposit on our balance sheet. We believe, however, that this assessment is incorrect and, after failing to reach a settlement, filed a lawsuit on May 27, 2021 contesting the assessment. The court has set a trial date of March 6, 2023. However, litigation is uncertain and a ruling against us may adversely affect our financial position and results of operations.

***Our global operations and structure subject us to potentially adverse tax consequences.***

We generally conduct our global operations through subsidiaries and report our taxable income in various jurisdictions worldwide based upon our business operations in those jurisdictions. In particular, our intercompany relationships are subject to complex transfer pricing regulations administered by taxing authorities in various jurisdictions. Also, our tax expense could be affected depending on the applicability of withholding and other taxes (including withholding and indirect taxes on software licenses and related intercompany transactions) under the tax laws of certain jurisdictions in which we have business operations. The relevant revenue and taxing authorities may disagree with positions we have taken generally, or our determinations as to the value of assets sold or acquired or income and expenses attributable to specific jurisdictions. If such a disagreement were to occur, and our position were not sustained, we could be required to pay additional taxes, interest and penalties, which could result in one-time tax charges, higher effective tax rates, reduced cash flows and lower overall profitability of our operations.

***Changes in global and U.S. tax legislation may adversely affect our financial condition, results of operations, and cash flows.***

We are unable to predict what global or U.S. tax reforms may be proposed or enacted in the future or what effects such future changes would have on our business. Any such changes in tax legislation, regulations, policies or practices in the jurisdictions in which we operate could increase the estimated tax liability that we have expensed to date and paid or accrued on our balance sheet; affect our financial position, future results of operations, cash flows, and effective tax rates where we have

operations; reduce post-tax returns to our stockholders; and increase the complexity, burden, and cost of tax compliance. We are subject to potential changes in relevant tax, accounting, and other laws, regulations, and interpretations, including changes to tax laws applicable to corporate multinationals. For example, on August 16, 2022, President Biden signed into law the Inflation Reduction Act ("IRA"), which includes a new fifteen percent alternative minimum tax on the "adjusted financial statement income" of certain large corporations for tax years beginning after December 31, 2022, and a one percent excise tax on share buybacks made on or after January 1, 2023. The IRA may require complex computations to be performed that were not previously required in U.S. tax law, which could require significant judgments to be made in interpretation of the provisions of the IRA, significant estimates in calculations, and the preparation and analysis of information not previously relevant or regularly produced. Pending further guidance from the U.S. Treasury Department and the IRS on the IRA, and the possibility of future changes to tax laws, it is possible that the IRA could increase our tax liability, which could in turn adversely impact our business, cash flows, results of operations and financial position.

Certain government agencies in jurisdictions where we and our affiliates do business have had an extended focus on issues related to the taxation of multinational companies. In addition, the Organisation for Economic Co-operation and Development (the "OECD") is conducting a project focused on base erosion and profit shifting in international structures, which seeks to establish certain international standards for taxing the worldwide income of multinational companies. In addition, the OECD is working on a "BEPS 2.0" initiative, which is aimed at (i) shifting taxing rights to the jurisdiction of the consumer and (ii) ensuring all companies pay a global minimum tax. On October 8, 2021, the OECD announced an agreement by members of the Inclusive Framework delineating an implementation plan, and on December 20, 2021, the OECD released model rules for the domestic implementation of a 15% global minimum tax. Further, several countries have proposed or enacted taxes applicable to digital services, which could apply to our business. As a result of these developments, the tax laws of certain countries in which we and our affiliates do business could change on a prospective or retroactive basis, and any such changes could increase our liabilities for taxes, interest and penalties, and therefore could harm our business, cash flows, results of operations and financial position.

The governments of countries in which we operate and other governmental bodies could make unprecedented assertions about how taxation is determined in their jurisdictions that are contrary to the way in which we have interpreted and historically applied the rules and regulations in our tax returns filed in such jurisdictions. New laws could significantly increase our tax obligations in the countries in which we do business or require us to change the way we operate our business. As a result of the large and expanding scale of our international business activities, many of these changes to the taxation of our activities could increase our worldwide effective tax rate and harm our financial position, results of operations, and cash flows.

***If we experience fraudulent activity relating to our products, we could incur substantial costs.***

Our products may be subject to fraudulent usage, including but not limited to revenue share fraud, domestic traffic pumping, subscription fraud, premium text message scams and other fraudulent schemes. Although our customers are required to set passwords or personal identification numbers to protect their accounts, third parties have in the past been, and may in the future be, able to access and use their accounts through fraudulent means. Furthermore, spammers attempt to use our products to send targeted and untargeted spam messages. We cannot be certain that our efforts to defeat spamming attacks will be successful in eliminating all spam messages from being sent using our platform. In addition, a cybersecurity breach of our customers' systems could result in exposure of their authentication credentials, unauthorized access to their accounts or fraudulent calls on their accounts, any of which could adversely affect our business, results of operations and financial condition.

***We may require additional capital to support our business, and this capital might not be available on acceptable terms, if at all.***

We intend to continue to make investments to support our business and may require additional funds. In particular, we may seek additional funds to develop new products and enhance our platform and existing products, expand our operations, including our sales and marketing organizations and our presence outside of the United States, improve our infrastructure or acquire complementary businesses, technologies, services, products and other assets. In addition, we may use a portion of our cash to satisfy tax withholding and remittance obligations related to outstanding restricted stock units. Accordingly, we may need to engage in equity or debt financings to secure additional funds. If we raise additional funds through future issuances of equity or convertible debt securities, our stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our Class A and Class B common stock. Any debt financing that we may secure in the future could involve restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities. We may not be able to obtain additional financing on terms favorable to us, if at all, particularly during times of market volatility and general economic instability. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to support our business growth, scale our infrastructure, develop product enhancements and to respond to business challenges could be significantly impaired, and our business, results of operations and financial condition may be adversely affected.

***We face exposure to foreign currency exchange rate fluctuations, and such fluctuations could adversely affect our business, results of operations and financial condition.***

As our international operations expand, our exposure to the effects of fluctuations in currency exchange rates grows. For example, global geopolitical events, such as the war in Ukraine, economic events, public health epidemics and pandemics such as the COVID-19 pandemic, trade tariff developments and other events have caused global economic uncertainty and variability in foreign currency exchange rates. While we have primarily transacted with customers and business partners in U.S. dollars, we have also conducted business in currencies other than the U.S. dollar. We expect to significantly expand the number of transactions with customers that are denominated in foreign currencies in the future as we continue to expand our business internationally. We also incur expenses for some of our network service provider costs outside of the United States in local currencies and for employee compensation and other operating expenses at our non-U.S. locations in the respective local currency. Fluctuations in the exchange rates between the U.S. dollar and other currencies could result in an increase to the U.S. dollar equivalent of such expenses.

In addition, our international subsidiaries maintain net assets that are denominated in currencies other than the functional operating currencies of these entities. As we continue to expand our international operations, we become more exposed to the effects of fluctuations in currency exchange rates. Accordingly, changes in the value of foreign currencies relative to the U.S. dollar can affect our results of operations due to transactional and translational remeasurements. As a result of such foreign currency exchange rate fluctuations, it could be more difficult to detect underlying trends in our business and results of operations. In addition, to the extent that fluctuations in currency exchange rates cause our results of operations to differ from our expectations or the expectations of our investors and securities analysts who follow our stock, the trading price of our Class A common stock could be adversely affected.

We recently implemented a program to hedge transactional exposure against the Euro, and may do so in the future with respect to other foreign currencies. We also use derivative instruments, such as foreign currency forward and option contracts, to hedge certain exposures to fluctuations in foreign currency exchange rates. The use of such hedging activities may not offset any or more than a portion of the adverse financial effects of unfavorable movements in foreign exchange rates over the limited time the hedges are in place. Moreover, the use of hedging instruments may introduce additional risks if we are unable to structure effective hedges with such instruments.

***Our ability to use our net operating losses and certain other tax attributes to offset future taxable income and taxes may be subject to certain limitations.***

As of December 31, 2021, we had U.S. federal, state and foreign net operating loss carryforwards (“NOLs”), of $4.2 billion, $2.7 billion and $268.7 million, respectively. Utilization of these NOL carryforwards depends on our future taxable income, and there is risk that a portion of our existing NOLs could expire unused, and that even if we achieve profitability, the use of our unexpired NOLs would be subject to limitations, which could materially and adversely affect our operating results.

U.S. federal NOLs generated in taxable years beginning before January 1, 2018, may be carried forward only 20 years to offset future taxable income, if any. Under current law, U.S. federal NOLs generated in taxable years beginning after December 31, 2017, can be carried forward indefinitely, but the deductibility of such U.S. federal NOLs in taxable years beginning after December 31, 2020, is limited to 80% of taxable income. It is uncertain if and to what extent various states will conform to federal law.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the "Code"), and corresponding provisions of state law, a corporation that undergoes an "ownership change" (generally defined as a greater than 50-percentage-point cumulative change (by value) in the equity ownership of certain stockholders over a rolling three-year period) is subject to limitations on its ability to utilize its pre-change NOLs and other pre-change tax attributes to offset post-change taxable income and taxes. Our existing NOLs and other tax attributes may be subject to limitations arising from previous ownership changes, and if we undergo an ownership change in the future, our ability to utilize NOLs could be further limited by Section 382 of the Code. Future changes in our stock ownership, some of which may be outside of our control, could result in an ownership change under Section 382 of the Code. In addition, at the state level, there may be periods during which the use of NOL carryforwards is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed.

***If our estimates or judgments relating to our critical accounting policies prove to be incorrect, our results of operations could be adversely affected.***

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, as provided in Part I, Item 2, "Management's Discussion and Analysis of Financial Condition and Results of Operations." The results of these estimates form the basis for making judgments about the carrying values of assets, liabilities and equity, and the amount of revenue and expenses that are not readily apparent from other sources. Assumptions and estimates used in preparing our consolidated financial statements include those related to revenue recognition and business combinations. Our results of operations may be adversely affected if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our results of operations to fall below the expectations of securities analysts and investors, resulting in a decline in the trading price of our Class A common stock.

***Changes in financial accounting standards or practices may cause adverse, unexpected financial reporting fluctuations and affect our results of operations.***

A change in accounting standards or practices may have a significant effect on our results of operations and may even affect our reporting of transactions completed before the change is effective. New accounting pronouncements and varying interpretations of accounting pronouncements have occurred and may occur in the future. Changes to existing rules or the questioning of current practices may adversely affect our reported financial results or the way we conduct our business.

For example, Accounting Standards Codification ("ASC") 842, *"Leases"* that became effective January 1, 2019, had a material impact on our consolidated financial statements as described in detail in Note 2 to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2020, filed with the SEC on February 26, 2021. Adoption of these types of accounting standards and any difficulties in implementation of changes in accounting principles, including the ability to modify our accounting systems, could cause us to fail to meet our financial reporting obligations, which result in regulatory discipline and harm investors' confidence in us.

***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 required to maintain internal control over financial reporting and to report any material weaknesses in such internal control. Section 404 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act") requires that we evaluate and determine the effectiveness of our internal control over financial reporting and provide a management report on internal control over financial reporting. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our financial statements will not be prevented or detected on a timely basis.

Our current controls and any new controls that we develop may become inadequate because of changes in conditions in our business. Further, weaknesses in our disclosure controls and internal control over financial reporting may be discovered in the future. In addition, if we acquire additional businesses, we may not be able to successfully integrate the acquired operations and technologies and maintain internal control over financial reporting, if applicable, in accordance with the requirements of Section 404 of the Sarbanes-Oxley Act. Any failure to develop or maintain effective controls or any difficulties encountered in their implementation or improvement could harm our results of operations or cause us to fail to meet our reporting obligations and may result in a restatement of our financial statements for prior periods. Any failure to implement and maintain effective internal control over financial reporting also could adversely affect the results of periodic management evaluations and annual independent registered public accounting firm attestation reports regarding the effectiveness of our internal control over financial reporting that we are required to include in our periodic reports that will be filed with the SEC. Ineffective disclosure controls and procedures and internal control over financial reporting could also cause investors to lose confidence in our reported financial and other information, and could have a material and adverse effect on our business, results of operations and financial condition and could cause a decline in the trading price of our Class A 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 or the Long-Term Stock Exchange.

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

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. As of September 30, 2022, we carried a net $6.2 billion of goodwill and intangible assets. An adverse change in market conditions, 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 charges may adversely affect our results of operations.

**Risks Related to Ownership of Our Class A Common Stock**

***The trading price of our Class A common stock has been volatile and may continue to be volatile, and you could lose all or part of your investment.***

Prior to our initial public offering in June 2016, there was no public market for shares of our Class A common stock. On June 23, 2016, we sold shares of our Class A common stock to the public at $15.00 per share. From June 23, 2016, the date that our Class A common stock started trading on the New York Stock Exchange, through September 30, 2022, the trading price of our Class A common stock has ranged from $22.80 per share to $457.30 per share. The trading price of our Class A common stock may continue to fluctuate significantly in response to numerous factors, many of which are beyond our control, including:

- price and volume fluctuations in the overall stock market from time to time;
- volatility in the trading 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 Class A common stock by us or our stockholders;
- 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 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;
- rumors and market speculation involving us or other companies in our industry;
- changes in laws, industry standards, regulations or regulatory enforcement in the United States or internationally, GDPR, the California Consumer Privacy Act of 2018 and other privacy or cybersecurity regulations that may be

implemented in the future, SHAKEN/STIR and other robocalling prevention and anti-spam standards and increased costs associated with such compliance, as well as enhanced Know-Your-Client processes that impact our ability to market, sell or deliver our products;

- actual or anticipated changes in our results of operations or fluctuations in our results of operations;
- actual or anticipated developments in our business, our competitors' businesses or the competitive landscape generally;
- litigation 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, products, services or technologies by us or our competitors;
- changes in accounting standards, policies, guidelines, interpretations or principles;
- any significant change in our management, including changes in the pace of hiring; and
- general political, social, economic and market conditions, in both domestic and foreign markets, including the effects of the COVID-19 pandemic and the war in Ukraine on the global economy, labor shortages, supply chain disruptions, inflation, increased interest rates 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. This litigation, if instituted against us, could result in substantial costs and a diversion of our management's attention and resources.

***Substantial future sales of shares of our Class A common stock could cause the market price of our Class A common stock to decline.***

The market price of our Class A common stock could decline as a result of substantial sales of our Class A common stock, particularly sales by our directors, executive officers and significant stockholders, or the perception in the market that holders of a large number of shares intend to sell their shares.

Additionally, the shares of Class A common stock subject to outstanding options and restricted stock unit awards under our equity incentive plans and the shares reserved for future issuance under our equity incentive plans will become eligible for sale in the public market upon issuance, subject to applicable insider trading policies.

***The dual class structure of our common stock has the effect of concentrating voting control with those stockholders who held our capital stock prior to the completion of our initial public offering, including our directors, executive officers and their respective affiliates. This limits or precludes holders of our Class A common stock from the ability to influence corporate matters, including the election of directors, amendments of our organizational documents and any merger, consolidation, sale of all or substantially all of our assets, or other major corporate transaction requiring stockholder approval.***

Our Class B common stock has 10 votes per share, and our Class A common stock has one vote per share. As of September 30, 2022, our directors, executive officers and their respective affiliates, held in the aggregate 21.0% of the voting power of our capital stock. Because of the 10-to-one voting ratio between our Class B common stock and Class A common stock, the holders of our Class B common stock collectively will continue to have concentrated control of the combined voting power of our common stock and therefore may be able to control certain matters submitted to our stockholders for approval until the earlier of (i) June 28, 2023, or (ii) the date the holders of two-thirds of our Class B common stock elect to convert the Class B common stock to Class A common stock. This concentrated control limits or precludes your ability to influence corporate matters for the foreseeable future, including the election of directors, amendments of our organizational documents, and any merger, consolidation, sale of all or substantially all of our assets, or other major corporate transaction requiring stockholder approval. In addition, this may prevent or discourage unsolicited acquisition proposals or offers for our capital stock that you may feel are in your best interest as one of our stockholders.

Future transfers by holders of Class B common stock will generally result in those shares converting to Class A common stock, subject to limited exceptions, such as certain transfers effected for estate planning purposes. The conversion of Class B common stock to Class A common stock will have the effect, over time, of increasing the relative voting power of those holders of Class B common stock who retain their shares in the long term.

***If securities or industry analysts cease publishing research or reports about us, our business or our market, or if they change their recommendations regarding our Class A common stock adversely, the trading price of our Class A common stock and trading volume could decline.***

The trading market for our Class A common stock is influenced by the research and reports that securities or industry analysts may publish about us, our business, our market or our competitors. If any of the analysts who cover us change their recommendation regarding our Class A common stock adversely, or provide more favorable relative recommendations about our competitors, the trading price of our Class A common stock would likely decline. If any analyst who covers us were to cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause the trading price of our Class A common stock or trading volume to decline.

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

Our amended and restated certificate of incorporation, second 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 second amended and restated bylaws include provisions:

- 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 Class A and Class B 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;

- providing for a dual class common stock structure in which holders of our Class B common stock have the ability to control the outcome of matters requiring stockholder approval, even if they own significantly less than a majority of the outstanding shares of our Class A and Class B common stock, including the election of directors and significant corporate transactions, such as a merger or other sale of our company or its assets;

- providing that our board of directors is classified into three classes of directors with staggered three-year terms;

- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;

- 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;

- controlling the procedures for the conduct and scheduling of board of directors and stockholder meetings; and

- providing for advance notice procedures that stockholders must comply with in order to nominate candidates to our board of directors or to propose matters to be acted upon at a meeting of stockholders, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer’s own slate of directors or otherwise attempting to obtain control of us.

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

As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the 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, second 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 Class A common stock.

***Our second amended and restated bylaws provides that the Court of Chancery of the State of Delaware is the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.***

Our second amended and restated bylaws provides that the Court of Chancery of the State of Delaware is the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

- any derivative action or proceeding brought on our behalf;
- any action asserting a breach of fiduciary duty owed by our directors, officers, employees or our stockholders;
- any action asserting a claim against us arising under the Delaware General Corporation Law; and
- any action asserting a claim against us that is governed by the internal-affairs doctrine (the "Delaware Forum Provision").

The Delaware Forum Provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act or any other claim under the Securities Act, for which the United States District Court for the Northern District of California has sole and exclusive jurisdiction (the "Federal Forum Provision"), as we are based in the State of California. In addition, our second amended and restated bylaws provide that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to the Delaware Forum Provision and the Federal Forum Provision; provided, however, that stockholders cannot and will not be deemed to have waived our compliance with the U.S. federal securities laws and the rules and regulations thereunder.

The Delaware Forum Provision and the Federal Forum Provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or employees, which may discourage lawsuits against us and our directors, officers and employees. If a court were to find the Delaware Forum Provision and the Federal Forum Provision in our second amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could seriously harm our business.

***We do not expect to declare any dividends in the foreseeable future.***

We have never paid dividends and we do not anticipate declaring any cash dividends to holders of our common stock in the foreseeable future. Consequently, investors may need to rely on sales of their Class A common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investment. Investors seeking cash dividends should not purchase our Class A common stock.

**Risks Related to our Indebtedness**

***Our indebtedness could adversely affect our financial condition.***

As of September 30, 2022, we had $1.0 billion of indebtedness outstanding (excluding intercompany indebtedness). Our indebtedness could have important consequences, including:

- limiting our ability to obtain additional financing to fund future working capital, capital expenditures, acquisitions or other general corporate requirements;
- requiring a portion of our cash flows to be dedicated to debt service payments instead of other purposes, thereby reducing the amount of cash flows available for working capital, capital expenditures, acquisitions and other general corporate purposes;
- increasing our vulnerability to adverse changes in general economic, industry and competitive conditions;

- exposing us to the risk of increased interest rates as certain of our borrowings, including borrowings under a future revolving credit facility, may be at variable rates of interest; and

- increasing our cost of borrowing.

In addition, the indenture governs our 3.625% notes due 2029 (the “2029 Notes”) and our 3.875% notes due 2031 (the “2031 Notes,” and together with the 2029 Notes, the “Notes”) and contains restrictive covenants that limit our ability to engage in activities that may be in our long-term best interest. Our failure to comply with those covenants could result in an event of default which, under the indenture governing the Notes, if not cured or waived, could permit the trustee, or permit the holders of the Notes to cause the trustee, to declare all or part of the Notes to be immediately due and payable or to exercise any remedies provided to the trustee and/or result in the acceleration of substantially all of our indebtedness.

***We may not be able to generate sufficient cash to service all of our indebtedness, including the Notes, and may be forced to take other actions to satisfy our obligations under our indebtedness, which may not be successful.***

Our ability to make scheduled payments on or to refinance our debt obligations, including the Notes, depends on our financial condition and results of operations, which in turn are subject to prevailing economic and competitive conditions and to certain financial, business and other factors beyond our control. We may not be able to maintain a level of cash flows from operating activities sufficient to permit us to pay the principal, premium, if any, and interest on our indebtedness, including the Notes.

If our cash flows and capital resources are insufficient to fund our debt service obligations, we could face substantial liquidity problems and may be forced to reduce or delay investments and capital expenditures, or to sell assets, seek additional capital or restructure or refinance our indebtedness, including the Notes. Our ability to restructure or refinance our debt will depend on, among other things, the condition of the capital markets and our financial condition at such time. Any refinancing of our debt could be at higher interest rates and may require us to comply with more onerous covenants, which could further restrict our business operations. The terms of existing or future debt instruments and the indenture that governs the Notes may restrict us from adopting some of these alternatives. In addition, any failure to make payments of interest and principal on our outstanding indebtedness on a timely basis would likely result in a reduction of our credit rating, which could harm our ability to incur additional indebtedness. In the absence of such cash flows and resources, we could face substantial liquidity problems and might be required to dispose of material assets or operations to meet our debt service and other obligations.

***Our inability to generate sufficient cash flows to satisfy our debt obligations, or to refinance our indebtedness on commercially reasonable terms or at all, would materially and adversely affect our financial position and results of operations.***

If we cannot make scheduled payments on our indebtedness, we will be in default and holders of the Notes and other indebtedness could declare all outstanding principal and interest to be due and payable, the lenders under a future revolving credit facility could terminate their commitments to loan money, our secured lenders could foreclose against the assets securing their borrowings and we could be forced into bankruptcy or liquidation. If we breach the covenants under our debt instruments, we would be in default under such instruments. The holders of such indebtedness could exercise their rights, as described above, and we could be forced into bankruptcy or liquidation.

***The indenture governing the Notes contain cross-default provisions that could result in the acceleration of all of our indebtedness.***

A breach of the covenants under the indenture governing the Notes could result in an event of default under the applicable indebtedness. Such a default may allow the creditors to accelerate the related indebtedness and may result in the acceleration of any other indebtedness to which a cross-acceleration or cross-default provision applies. In addition, an event of default under a revolving credit facility may permit the lenders thereunder to terminate all commitments to extend further credit under that facility. Furthermore, if we were unable to repay amounts due and payable under a secured credit facility, those lenders could proceed against the collateral granted to them to secure that indebtedness. In the event our note holders accelerate the repayment of our borrowings, we and our guarantors may not have sufficient assets to repay that indebtedness. Additionally, we may not be able to borrow money from other lenders to enable us to refinance our indebtedness.

## Risks Related to our Acquisitions

***We may not realize potential benefits from our recent acquisitions, partnerships and investments because of difficulties related to integration, the achievement of synergies, and other challenges.***

We regularly acquire or invest in businesses and technologies that are complementary to our business through acquisitions, partnerships or investments, including several transactions in fiscal year 2021. There can be no assurances that our businesses can be combined in a manner that allows for the achievement of substantial benefits. Any integration process may require significant time and resources, and we may not be able to manage the process successfully as our ability to acquire and integrate larger or more complex companies, products, or technology in a successful manner is unproven. If we are not able to successfully integrate these acquired businesses with ours or pursue our customer and product strategy successfully, the anticipated benefits of such acquisitions may not be realized fully or may take longer than expected to be realized. Further, it is possible that there could be a loss of our key employees and customers, disruption of ongoing businesses or unexpected issues, higher than expected costs and an overall post-completion process that takes longer than originally anticipated. In addition, the following issues, among others, must be addressed in order to realize the anticipated benefits of our acquisitions, partnerships or investments:

- combining the acquired businesses' corporate functions with our corporate functions;
- combining acquired businesses with our business in a manner that permits us to achieve the synergies anticipated to result from such acquisitions, the failure of which would result in the anticipated benefits of our acquisitions not being realized in the time frame currently anticipated or at all;
- maintaining existing agreements with customers, distributors, providers, talent and vendors and avoiding delays in entering into new agreements with prospective customers, distributors, providers, talent and vendors;
- determining whether and how to address possible differences in corporate cultures and management philosophies;
- integrating the companies’ administrative and information technology infrastructure;
- developing products and technology that allow value to be unlocked in the future;
- evaluating and forecasting the financial impact of such acquisitions, partnerships and investments, including accounting charges; and
- effecting potential actions that may be required in connection with obtaining regulatory approvals.

In addition, at times the attention of certain members of our management and resources may be focused on integration of the acquired businesses and diverted from day-to-day business operations, which may disrupt our ongoing business.

We have incurred, and may continue to incur, significant, nonrecurring costs in connection with our acquisitions, partnerships and investments and integrating our operations with those of the acquired businesses, including costs to maintain employee morale and to retain key employees. Management cannot ensure that the elimination of duplicative costs or the realization of other efficiencies will offset the transaction and integration costs in the near term or at all.

***Purchase price accounting in connection with our acquisitions requires estimates that may be subject to change and could impact our consolidated financial statements and future results of operations and financial position.***

Pursuant to the acquisition method of accounting, the purchase price we pay for our acquired businesses is allocated to the underlying tangible and intangible assets acquired and liabilities assumed based on their respective fair market values with any excess purchase price allocated to goodwill. The acquisition method of accounting is dependent upon certain valuations and other studies that are preliminary. Differences between these preliminary estimates and the final acquisition accounting may occur, and these differences could have a material impact on the consolidated financial statements and the combined company’s future results of operations and financial position.

## General Risks

***Any legal proceedings or claims against us could be costly and time-consuming to defend and could harm our reputation regardless of the outcome.***

We are and may in the future become subject to legal proceedings and claims that arise in the ordinary course of business, such as disputes or employment claims made by our current or former employees. Any litigation, whether meritorious or not, could harm our reputation, will increase our costs and may divert management's attention, time and resources, which may in turn seriously harm our business. Insurance might not cover such claims, might not provide sufficient payments to cover all the costs to resolve one or more such claims, and might not continue to be available on terms acceptable to us. A claim brought against us that is uninsured or underinsured could result in unanticipated costs and could seriously harm our business.

***Unfavorable conditions in our industry or the global economy or reductions in spending on information technology and communications could adversely affect our business, results of operations and financial condition.***

Our results of operations may vary based on the impact of changes in our industry or the global economy on our customers. Our results of operations depend in part on demand for information technology and cloud communications. In addition, our revenue is dependent on the usage of our products, which in turn is influenced by the scale of business that our customers are conducting. To the extent that weak or volatile economic conditions, including due to the COVID-19 pandemic, labor shortages, supply chain disruptions and inflation, geopolitical developments, such as the war in Ukraine and the implementation of, or changes to or further expansions of, trade sanctions, export restrictions, tariffs, and embargoes, and other events outside of our control, result in a reduced volume of business for, and communications by, our customers and prospective customers, demand for, and use of, our products may decline. Furthermore, weak economic conditions may make it more difficult to collect on outstanding accounts receivable and increase our expenses. Additionally, we generate a portion of our revenue from small and medium-sized businesses, which may be affected by economic downturns and other adverse macroeconomic conditions to a greater extent than enterprises, and typically have more limited financial resources, including capital borrowing capacity, than enterprises. If our customers reduce their use of our products, or prospective customers delay adoption or elect not to adopt our products, as a result of a weak economy or rising inflation and increased costs, this could adversely affect our business, results of operations and financial condition.

***Our business is subject to the risks of pandemics, earthquakes, fire, floods and other natural catastrophic events, and to interruption by man-made problems such as power disruptions, computer viruses, data security breaches, terrorism or war.***

Our business operations are subject to interruption by natural disasters, flooding, fire, power shortages, public health epidemics or pandemics such as COVID-19, terrorism, political unrest, cyber-attacks, geopolitical instability, war, the effects of climate change and other events beyond our control. For example, our corporate headquarters are located in the San Francisco Bay Area, a region known for seismic activity. A significant natural disaster, such as an earthquake, fire or flood, occurring at our headquarters, at one of our other facilities or where a business partner is located could adversely affect our business, results of operations and financial condition. Further, if a natural disaster or man-made problem were to affect our service providers, this could adversely affect the ability of our customers to use our products and platform. Natural disasters, public health epidemics or pandemics, such as the COVID-19 pandemic, and geopolitical events, such as the war in Ukraine, could cause disruptions in our or our customers' businesses, national economies or the world economy as a whole.

We also rely on our network and third-party infrastructure and enterprise applications and internal technology systems for our engineering, sales and marketing, and operations activities. Although we maintain incident management and disaster response plans, in the event of a major disruption caused by a natural disaster or man-made problem, we may be unable to continue our operations and may endure system interruptions, reputational harm, delays in our development activities, lengthy interruptions in service, breaches of data security and loss of critical data, any of which could adversely affect our business, results of operations and financial condition.

In addition, computer malware, viruses and computer hacking, fraudulent use attempts and phishing attacks have become more prevalent in our industry, have occurred on our platform in the past and may occur on our platform in the future. Though it is difficult to determine what, if any, harm may directly result from any specific interruption or attack, any failure to maintain performance, reliability, security, integrity and availability of our products and technical infrastructure to the satisfaction of our users may harm our reputation and our ability to retain existing users and attract new users. In addition, global climate change could result in certain types of natural disasters occurring more frequently or with more intense effects. Any such events may result in users being subject to service disruptions or outages, and we may not be able to recover our technical infrastructure in a timely manner to maintain or resume operations, which may adversely affect our financial results.

***Climate change may have an impact on our business.***

While we seek to mitigate our business risks associated with climate change (such as drought, wildfires, hurricanes, increased storm severity and sea level rise), we recognize that there are inherent climate-related risks wherever business is conducted. Our primary locations may be vulnerable to the adverse effects of climate change. For example, certain of our offices have experienced, and are projected to continue to experience, climate-related events at an increasing frequency, including drought, heat waves, wildfires and resultant air quality impacts and power shutoffs associated with wildfire prevention. Changing market dynamics, global and domestic policy developments and the increasing frequency and impact of extreme weather events on critical infrastructure in the U.S. and elsewhere have the potential to disrupt our business, the business of our third-party suppliers and the business of our customers, and may cause us to experience losses and additional costs to maintain or resume operations. In addition, we expect to be subject to increased regulations, reporting requirements, standards or expectations regarding the environmental impacts of our business.

## Item 2. *Unregistered Sales of Equity Securities and Use of Proceeds*

*Unregistered Sales of Equity Securities*

None

## Item 5. *Other Information*

Not applicable.

## 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.

**EXHIBIT INDEX**

| Exhibit Number | Description | Incorporated by Reference | | | Filing Date |
|---|---|---|---|---|---|
| | | Form | File No. | Exhibit | |
| 10.1+ | Amended and Restated Non-Employee Director Compensation Policy | | | | Filed herewith |
| 31.1 | Certification of the Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) or 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 | | | | Filed herewith |
| 31.2 | Certification of the Chief Operating Officer (Principal Financial Officer) pursuant to Exchange Act Rules 13a-14(a) or 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 | | | | Filed herewith |
| 32.1* | Certification of the Chief Executive Officer and Chief Operating Officer (Principal Financial Officer) pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 | | | | Furnished herewith |
| 101.INS | Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document | | | | Filed herewith |
| 101.SCH | Inline XBRL Taxonomy Extension Schema Document | | | | Filed herewith |
| 101.CAL | Inline XBRL Taxonomy Extension Calculation Linkbase Document | | | | Filed herewith |
| 101.DEF | Inline XBRL Taxonomy Extension Definition Linkbase Document | | | | Filed herewith |
| 101.LAB | XBRL Taxonomy Extension Label Linkbase Document | | | | Filed herewith |
| 101.PRE | Inline XBRL Taxonomy Extension Presentation Linkbase Document | | | | Filed herewith |
| 104 | Cover Page with Interactive Data File (formatted as Inline XBRL with applicable taxonomy extension information contained in Exhibits 101) | | | | |

+ Indicates management control of a compensatory plan, contract or agreement.
* The certifications furnished in Exhibit 32.1 hereto are deemed to accompany this Quarterly Report on Form 10-Q and will not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the registrant specifically incorporates it by reference.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

**Twilio Inc.**

| | |
|---|---|
| November 4, 2022 | /s/ JEFF LAWSON |
| | Jeff Lawson<br>*Director and Chief Executive Officer (Principal Executive Officer)* |
| November 4, 2022 | /s/ KHOZEMA Z. SHIPCHANDLER |
| | Khozema Z. Shipchandler<br>*Chief Operating Officer (Principal Accounting and Financial Officer)* |

**Exhibit 10.1**

**Twilio Inc.**

**Amended and Restated Non-Employee Director Compensation Policy**

The purpose of this Amended and Restated Non-Employee Director Compensation Policy (the "Policy") of Twilio Inc., a Delaware corporation (the "Company"), is to provide a total compensation package that enables the Company to attract and retain, on a long-term basis, high- caliber directors who are not employees or officers of the Company or its subsidiaries ("Outside Directors").

In furtherance of the purpose stated above, all Outside Directors who will continue as a member of the Board of Directors following the Company's Annual Meeting of Stockholders shall receive, as compensation for services provided to the Company, grants of restricted stock units on the dates and with the Values as set forth below. Such grants shall vest as set forth below; provided, however that all grants and all vesting shall cease if the director resigns from our Board of Directors or otherwise ceases to serve as a director (or in the case of committee retainers or lead independent director retainer, ceases to serve on the applicable committee, or in their capacity as a lead independent director), unless the Board of Directors determines that the circumstances warrant continuation of vesting. An Outside Director must be in service to the Company as an Outside Director on the date of grant in order to be eligible to receive such grant.

## I. Equity Retainers and Annual Grant

(a) Annual Equity Retainer for Board Membership:

$45,000 for general availability and participation in meetings and conference calls of our Board of Directors.

(b) Additional Equity Annual Retainers for Committee Membership:

Audit Committee Chairperson: $26,000

Audit Committee member (other than Chairperson): $13,000

Compensation and Talent Management Committee Chairperson: $20,000

Compensation and Talent Management Committee member (other than Chairperson): $10,000

Nominating and Corporate Governance Committee Chairperson: $12,000

Nominating and Corporate Governance Committee member (other than Chairperson): $6,000

(c) Additional Annual Equity Retainer for Lead Independent Director:

$30,000 for serving as lead independent director of our Board of Directors.

(d) Annual Grant

Each Outside Director who will continue as a member of the Board of Directors following such Annual Meeting of Stockholders will be entitled to receive a grant of restricted stock units (the "Annual Grant") with a Value of $250,000.

(e) General Terms

The grants set forth in clauses (a), (b), (c) and (d) above shall be referred to in the aggregate as the "Retainer and Annual Grants."

The Retainer and Annual Grants shall be granted in four installments over the course of the year that commences on the date of each Annual Meeting of Stockholders, with such grants to be made on each (1) September 15, (2) December 15, (3) March 15 and (4) the earlier of (i) June 15; or (ii) the day that is immediately prior to the next subsequent Annual Meeting of Stockholders (each such date, a "Quarterly Date," and each such grant, a "Quarterly Grant"). The value of each Quarterly Grant shall be equal to the Value of the portion of the Retainer and Annual Grants applicable to the period beginning on the day after the immediately preceding Quarterly Date and ending on the then-current Quarterly Date (the "Quarterly Period"), based on the Board and committee roles held by the Outside Director during such Quarterly Period. Each Quarterly Grant shall be fully vested upon the date of grant.

## II. Initial Equity Grant

Upon initial election or appointment to the Board of Directors, each new Outside Director will receive an initial, one-time grant of restricted stock units (the "Initial Grant") with a Value of $575,000, that vests annually over three years; provided, however, if a new Outside Director is elected or appointed on a date other than at the Company's Annual Meeting of Stockholders, one-third (1/3rd) of such Value shall be pro-rated by the amount of time between such election or appointment and the one-year anniversary of the Annual Meeting of Stockholders held most recently prior to such election or appointment (such date, the "Initial Vesting Date"), and such pro-rated portion shall vest on the Initial Vesting Date. The other two-thirds (2/3rds) of the Initial Grant shall vest as follows: one-third (1/3rd) of the Initial Grant shall vest on the one year anniversary of the Initial Vesting Date and the other one-third (1/3rd) of the Initial Grant shall vest on the two year anniversary of the Initial Vesting Date. This Initial Grant applies to Outside Directors who are first elected or appointed to the Board of Directors effective as of or subsequent to June 1, 2020. For the avoidance of doubt, the Initial Grant may only be granted once to any Outside Director.

## III. General

All grants of equity awards to Outside Directors pursuant to this Policy will be automatic and nondiscretionary and will be made in accordance with the following provisions:

Value. For purposes of this Policy, "Value" means with respect to any award of restricted stock units, the product of (A) the average closing market price on the New York Stock Exchange (or such other market on which the Company's Class A common stock is then principally listed) of one share of the Company's Class A common stock over the 30-day period ending five business days immediately before the effective date of grant, and (B) the aggregate number of shares pursuant to such award. If the Value of each grant of restricted stock units is denominated in dollars, the number of shares of restricted stock units that are granted pursuant to each award shall be rounded down to the nearest whole share.

Revisions. The Compensation Committee in its discretion may change and otherwise revise the terms of awards to be granted under this Policy, including, without limitation, the number of

shares subject thereto, for awards of the same or different type granted on or after the date the Compensation Committee determines to make any such change or revision.

Sale Event Acceleration. In the event of a Sale Event (as defined in the Company's 2016 Stock Option and Incentive Plan (as amended from time to time, the "2016 Plan")), the equity retainer awards granted to Outside Directors pursuant to this Policy shall become 100% vested.

## IV. Expenses

The Company will reimburse all reasonable out-of-pocket expenses incurred by Outside Directors in attending meetings of the Board of Directors or any Committee thereof.

## V. Maximum Annual Compensation

The aggregate amount of compensation, excluding expense reimbursement paid to any Outside Director in a calendar year period shall not exceed $750,000 (or such other limit as may be set forth in Section 3(b) of the 2016 Plan or any similar provision of a successor plan). For this purpose, the "amount" of equity compensation paid in a calendar year shall be determined based on the grant date fair value thereof, as determined in accordance with ASC 718 or its successor provision, but excluding the impact of estimated forfeitures related to service-based vesting conditions.

**Date Policy Approved**: May 7, 2016, as amended on April 12, 2017, June 14, 2018, March 13, 2019, June 1, 2020, May 7, 2021, March 16, 2022 and September 15, 2022.

**Exhibit 31.1**

**CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF
THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002**

I, Jeff Lawson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Twilio 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(s) 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(s) 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: November 4, 2022

/s/ JEFF LAWSON

Jeff Lawson
*Chief Executive Officer (Principal Executive Officer)*

**Exhibit 31.2**

**CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF
THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002**

I, Khozema Z. Shipchandler certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Twilio 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(s) 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(s) 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: November 4, 2022

/s/ KHOZEMA Z. SHIPCHANDLER

Khozema Z. Shipchandler
*Chief Operating Officer (Principal Accounting and Financial Officer)*

**Exhibit 32.1**

**CERTIFICATION 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**

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, (the “Exchange Act”) and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. §1350), as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, Jeff Lawson, Chief Executive Officer of Twilio Inc. (the “Company”), and Khozema Z. Shipchandler, Chief Operating Officer of the Company, each hereby certifies that, to the best of his knowledge:

1. The Company’s Quarterly Report on Form 10-Q for the quarter ended September 30, 2022, to which this Certification is attached as Exhibit 32.1 (the “Periodic Report”), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

2. The information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 4, 2022

/s/ JEFF LAWSON

Jeff Lawson

*Chief Executive Officer (Principal Executive Officer)*

/s/ KHOZEMA Z. SHIPCHANDLER

Khozema Z. Shipchandler

*Chief Operating Officer (Principal Accounting and Financial Officer)*