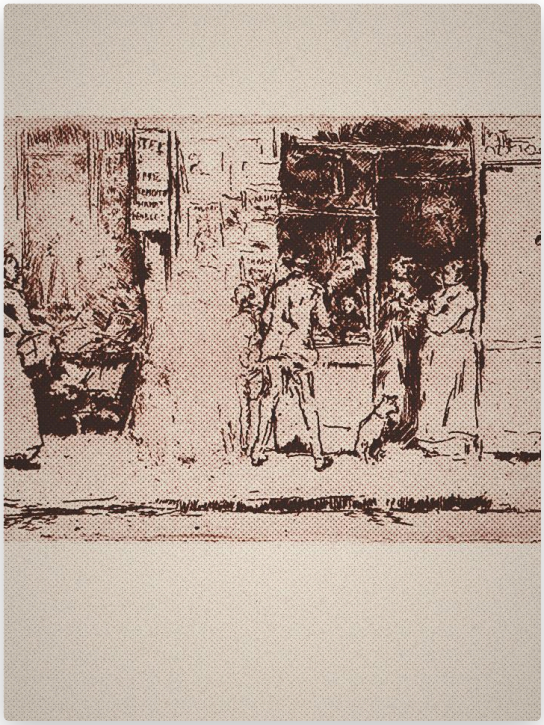
FORM S-1 · REGISTRATION STATEMENT

PubMatic Inc

IPO priced 2020-12-09 · $20.00 a share · PUBM



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As filed with the U.S. Securities and Exchange Commission on November 13, 2020.

REGISTRATION NO. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

PUBMATIC, INC.

(Exact name of registrant as specified in its charter)

Delaware	7370	20-5863224
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

3 LAGOON DRIVE, SUITE 180

REDWOOD CITY, CALIFORNIA 94065

(650) 331-3485

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

RAJEEV K. GOEL

CHIEF EXECUTIVE OFFICER

PubMatic, Inc.

3 LAGOON DRIVE, SUITE 180

REDWOOD CITY, CALIFORNIA 94065

(650) 331-3485

(NAME, ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF AGENT FOR SERVICE)

Mark Stevens, Esq. James D. Evans, Esq. Nicolas H.R. Dumont, Esq. Eli Curi, Esq. FENWICK & WEST LLP 801 CALIFORNIA STREET MOUNTAIN VIEW, CALIFORNIA 94041 (650) 988-8500	Thomas C. Chow, Esq. GENERAL COUNSEL AND SECRETARY PubMatic, Inc. 3 LAGOON DRIVE, SUITE 180 REDWOOD CITY, CALIFORNIA 94065 (650) 331-3485	Tad Freese, Esq. LATHAM & WATKINS LLP 140 SCOTT DRIVE MENLO PARK, CALIFORNIA 94025 (650) 328-4600

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

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended (the "Securities Act") check the following box. ☐

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company", and "emerging growth company" in Rule 12b-2 of the Securities Exchange Act of 1934, as amended.

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 to Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE (1)(2)	Amount of registration fee
Class A common stock, $0.0001 par value per share	$75,000,000	$8,183

(1)Estimated solely for the purpose of calculating the amount of the registration fee in accordance with Rule 457(o) of the Securities Act.

(2)Includes the additional shares that the underwriters have the option to purchase from the Registrant.

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

The information in this preliminary prospectus is not complete and may be changed. Neither we nor the selling stockholders may sell the securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell, and neither we nor the selling stockholders are soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED NOVEMBER 13, 2020

PRELIMINARY PROSPECTUS

SHARES

CLASS A COMMON STOCK

This is an initial public offering of shares of Class A common stock of PubMatic, Inc. We are offering shares of our Class A common stock, and the selling stockholders are offering shares of Class A common stock. We will not receive any proceeds from the sale of shares by the selling stockholders. We have two classes of authorized common stock, Class A common stock and Class B common stock. The rights of the holders of Class A common stock and Class B common stock are identical, except with respect to voting and conversion rights. Each share of Class A common stock is entitled to one vote . Each share of Class B common stock is entitled to votes and is convertible into one share of Class A common stock. Immediately following the completion of this offering, outstanding shares of Class B common stock will represent approximately % of the voting power of our outstanding capital stock, and our directors, executive officers, and 5% stockholders, and their respective affiliates will hold approximately % of the voting power of our outstanding capital stock.

Prior to this offering, there has been no public market for our Class A common stock. The initial public offering price of the Class A common stock is expected to be between $ and $ per share. We have applied to list our Class A common stock on the Nasdaq Global Market under the symbol “PUBM.”

We are an “emerging growth company” as defined under federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements.

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

Investing in our Class A common stock involves risks. See “Risk Factors” on page 15.

	PRICE TO PUBLIC	UNDERWRITING DISCOUNTS AND COMMISSIONS(1)	PROCEEDS TO PUBMATIC (BEFORE EXPENSES)	PROCEEDS TO SELLING STOCKHOLDERS (BEFORE EXPENSES)
Per Share	$	$	$	$
Total	$	$	$	$

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

We and the selling stockholders have granted the underwriters the option to purchase up to an additional shares of Class A common stock at the initial public offering price, less the underwriting discount.

Delivery of the shares of Class A common stock will be made on or about , 2020.

Joint Book-Running Managers

Jefferies	RBC Capital Markets		

Co-Managers

JMP Securities	KeyBanc Capital Markets	Oppenheimer & Co.	Raymond James

, 2020

	Page
Prospectus Summary	
Risk Factors	
Special Note Regarding Forward-Looking Statements	
Market and Industry Data	
Use of Proceeds	
Dividend Policy	
Capitalization	
Dilution	

Selected Consolidated Financial Data	
Management's Discussion and Analysis of Financial Condition and Results of Operations	
Business	
Management	
Executive Compensation	
Certain Relationships and Related Person Transactions	
Principal and Selling Stockholders	
Description of Capital Stock	
Shares Eligible For Future Sale	
Material U.S. Federal Tax Consequences to Non-U.S. Holders Of Our Class A Common Stock	
Underwriting	
Legal Matters	
Experts	
Additional Information	
Index to Consolidated Financial Statements	F-1

Neither we, the selling stockholders, nor the underwriters have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. Neither we, the selling stockholders, nor the underwriters take any responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of shares of our Class A common stock. Our business, financial condition, results of operations, and prospects may have changed since that date.

Until (25 days after the date of this prospectus), all dealers that buy, sell, or trade shares of our Class A common stock, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

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

Prospectus Summary

Prospectus Summary

The following summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all the information you should consider before investing in our Class A common stock. You should carefully read this prospectus in its entirety before investing in our Class A common stock, including the sections entitled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this prospectus. Some of the statements in this prospectus constitute forward-looking statements that involve risks and uncertainties. See "Special Note Regarding Forward-Looking Statements."

Our Mission

PubMatic fuels the endless potential of Internet content creators.

Our Company

Our company provides a specialized cloud infrastructure platform that enables real-time programmatic advertising transactions. We believe that our purpose-built technology and infrastructure provides superior outcomes for both Internet content creators (publishers) and advertisers (buyers). In September 2020, our platform efficiently processed approximately 134 billion ad impressions daily, each in a fraction of a second.

PubMatic was founded 14 years ago with the vision that data-driven decisions would be the future of advertising and over that time we have invested significantly in developing our platform. By harnessing our massive data asset and leveraging our sophisticated machine learning algorithms, we increase publisher revenue, advertiser return on investment (ROI), and marketplace liquidity, while improving the cost efficiency of our technology platform and our publishers' and buyers' businesses.

Our cloud infrastructure platform provides superior monetization for publishers by increasing the value of an impression and providing incremental demand through our deep and growing relationships with buyers. We are aligned with our publisher and app developer partners by being independent. We do not own media and therefore do not have a vested interest in driving ad revenue to specific media properties. Our global platform is omnichannel, supporting a wide array of ad formats and digital device types. In the third quarter of 2020, we served approximately 1,100 publishers and app developers, including many of the leading digital companies such as Verizon Media Group and News Corp. We have demonstrated that we can retain and grow revenues from our publisher customers, as evidenced by our net dollar-based retention rate of 110% for the twelve months ended September 30, 2020 and 109% for 2019.

Building on our early success as a Sell Side Platform (SSP), we have extended our platform to also meet the needs of buyers. We are integrated with the leading Demand Side Platforms (DSPs), such as The Trade Desk and Google DV360, allowing them to execute real-time transactions with our publisher clients. More recently, agencies and advertisers have started consolidating their spend with fewer, larger technology platforms to improve transparency, quality, and control over their advertising dollars. In 2019 and 2020 we entered into agreements directly with some of the largest agencies and advertisers in the world and believe this will continue to drive more ad spend to our platform.

We believe we are positioned to benefit from several trends in the advertising industry, including the rapid proliferation of digital media, the emergence of new media and advertising formats, and the increasing sophistication of the digital advertising ecosystem. Innovations in how digital advertising is delivered have driven a meaningful increase in the available number of ad impressions to be processed, which occur when an advertisement is shown to an Internet user's device. This growth has driven a corresponding need for scaled, real-time processing of massive volumes of data and efficient infrastructure. These trends are occurring as buyers and consumers seek increased transparency and governments are creating new data and privacy regulations.

We own and operate our own software and hardware infrastructure around the world, which saves significant costs as compared to companies that rely on public cloud alternatives, partly due to the data-intensive nature of digital advertising. As we have extended our cloud infrastructure to service more ad formats and devices, we have expanded our profit margins and maintained our capital efficiency that is among best-in-class for similar publicly-traded technology companies.

Our culture and our team are two of the most important assets in building and expanding our business. We have been recognized as a "Great Place to Work" by Great Place to Work Institute Inc. and have benefited from strong employee retention rates. We foster deep employee engagement through personal development and learning to create a diverse and inclusive culture focused on rapid innovation, customer focus, and strong team execution.

Global advertising (digital and analog) spending was $647 billion in 2019 and is expected to grow to $841 billion in 2024, according to eMarketer. As advertisers follow audiences online, digital advertising is expected to outpace growth of the overall advertising market. According to eMarketer, global digital ad spend was approximately $325 billion in 2019 and is expected to grow to $526 billion by 2024. We believe that changes in the digital advertising landscape will continue to enhance our market opportunity.

We have achieved significant revenue scale with $99.3 million in revenue in 2018 and $113.9 million in 2019, representing a growth rate of 15%. For the nine months ended September 30, 2019 and 2020, our revenue was $79.5 million and $92.5 million, respectively, representing a growth rate of 16%. We have also achieved profitability while growing our business rapidly, demonstrating the power of our platform, the strength of our relationships in the digital advertising ecosystem, and the operating leverage and efficiency inherent in our business model. We generated net income of $4.4 million and Adjusted EBITDA of $20.4 million in 2018, and net income of $6.6 million and Adjusted EBITDA of $23.3 million in 2019. We generated net income of $2.5 million and Adjusted EBITDA of $14.0 million in the nine months ended September 30, 2019, and net income of $7.8 million and Adjusted EBITDA of $23.4 million in the nine months ended September 30, 2020. We also generated net cash provided by operating activities of $15.6 million in 2018 and $35.1 million in 2019, and $22.5 million and $13.8 million for the nine months ended September 30, 2019 and 2020. Through our efficient use of capital expenditures and rigorous working capital management, 2019 was our sixth straight year of achieving positive net cash provided by operating activities. For a definition of Adjusted EBITDA, an explanation of our management's use of this measure and reconciliation of Adjusted EBITDA to net income, please refer to "Selected Consolidated Financial Data."

Our Industry

Digital advertising is the primary business model of the Internet.

Advertising funds the creation of journalism, news, and entertainment, and for billions of consumers around the world, it subsidizes or enables free Internet consumption. Buyers can achieve significantly higher return on investment with online advertisements that are delivered both at scale and on a personalized basis. Publishers can successfully sell their advertising inventory by sharing data and information about their digital audiences on an individualized basis and at scale.

In recent years, the digital advertising ecosystem has become increasingly complex due to a variety of factors. While programmatic header bidding, a core digital advertising technology, has enabled the purchasing and selling of vast amounts of digital advertising inventory, there now exist significant challenges related to the proliferation of media across platforms, transaction speed, increased costs, transparency, and regulatory requirements. To address these issues at scale for both buyers and sellers, specialized software, and hardware infrastructure are needed to optimally power these technology-driven transactions.

Rapid Proliferation of Digital Media Across Multiple Platforms

In the past decade, consumers have dramatically increased the amount of time that they spend online and on mobile devices communicating with friends, consuming media, conducting business, and researching and purchasing goods and services. According to eMarketer, consumers accessed the Internet via a mobile device on average 77 minutes per day in 2012. This usage increased to 202 minutes per day in 2019, an increase of 162%. Numerous activities that historically occurred offline continue to shift online, including visiting your doctor (telehealth), staying fit (streaming classes), ordering food (online delivery), and buying cars (online with local delivery), in addition to work and school from home. In order to better reach consumers, every major media format has transitioned or is in the process of transitioning content from traditional or analog means of delivery to digital. The television market transition to over-the-

top and connected TV, which is enabling consumers to stream content via the Internet, is the latest transition and represents a significant opportunity for digital advertising. The COVID-19 pandemic has further accelerated digital adoption habits which should lead to further rapid growth in the number of available ad impressions that can be monetized programmatically, as well as increased advertiser budgets seeking to reach these audiences online.

The Rise of Programmatic Header Bidding

Direct sales via manual, person-to-person processes is inadequate to create a real-time advertising marketplace for buyers and sellers. The challenges of scale and complexity of the digital advertising ecosystem require an automated and efficient approach to purchasing ads online, known as programmatic advertising. Programmatic advertising, on an automated basis, enables buyers, advertisers, and/or their ad agencies, to purchase ad impressions on publisher supplied inventory, including websites, apps, TVs, and various other formats to transact within milliseconds in a sophisticated, technology-driven marketplace.

Header bidding, which came to prominence starting in 2016, further increased the complexity of programmatic advertising. Header bidding involves putting software code on a publisher's website or app allowing it to host a single parallel auction with multiple interested parties simultaneously, rather than the earlier process of sequential auctions for that impression. This innovation has fundamentally transformed programmatic advertising by providing buyers with increased transparency and equal access to ad impressions, which results in greater demand for each ad impression and increased publisher revenue. According to Adzerk, header bidding has now been adopted by over 60% of digital publishers in the United States.

Massive Volumes of Data and Increased Costs

Header bidding has led to a significant increase in the number of ad impressions that need to be processed and analyzed in real-time by each participant in the digital advertising ecosystem. As consumers increasingly engage with digital media, and as advertisers bid on a growing array of ad formats and impressions, an immense amount of data is generated. The data includes anonymized consumer information about interests and intent, log files of winning and losing advertiser bids, and transaction records for billing and payment reconciliation. Technology infrastructure platforms must rapidly process this data while offering a seamless digital ad experience for consumers.

Growing transaction volumes and increasingly complex data processing requirements can lead to rising overall costs for technology vendors. While header bidding increases the number of SSPs processing each ad impression, the underlying number of opportunities to place a personalized ad in front of a consumer does not grow, which creates processing complexity. Similarly, as SSPs process more ad impressions due to header bidding, so must DSPs. Each of these trends created by header bidding can significantly increase costs for technology providers if not properly addressed with superior technology.

Ad Spending Consolidating on Fewer Sell Side Platforms

As advertisers increase the percentage of their overall advertising budgets spent on digital formats, they are increasingly demanding improved transparency and control of their entire digital advertising supply chain. Transparency includes understanding what fees are being paid for every ad transaction, to whom the fees are being paid, and what value is being delivered by every fee recipient. In addition, transparency allows the advertiser to know the type of ad inventory being purchased and the content appearing adjacent to the advertiser's ads to avoid purchasing fraudulent or fake inventory or appearing next to content that reflects poorly on the advertiser's brand. This desire for transparency and control has led to a growing trend for advertisers to establish direct relationships with vendors in the digital advertising ecosystem which have transparent business practices and technical capabilities to meet their objectives. This has resulted in a larger portion of media spend consolidating onto fewer, more transparent technology platforms.

Protecting Consumer Privacy and Regulatory Challenges

There is an increasing awareness of how Internet user data is being leveraged to target ads, resulting in a growing number of privacy laws and regulations being established globally, including the General Data Protection Regulation in the European Union, the California Consumer Privacy Act in California, and the Video Privacy Protection Act in the United States. We believe these trends will continue locally and globally. There have also been a growing number of consumer-focused non-profit organizations and commercial entities advocating for privacy rights. These institutions are enabling Internet consumers to assert their rights over the use of their online data in advertising transactions, a trend which we support.

The digital advertising landscape must continue to adapt to these trends and incorporate awareness of consumer privacy and compliance with regulatory authorities. For example, publishers, and their downstream supply and demand partners, are required to obtain unambiguous consent from EU data subjects to process their personal data. In addition to legal and policy requirements, participants in the digital advertising supply chain were encouraged to agree upon technical specifications to collect and transmit detailed records of consent (or an alternative basis for the processing of personal data) and the purposes of that data processing. This demand resulted in widespread adoption of the Interactive Advertising Bureau (IAB) Transparency & Consent Framework 2.0 (TCF) in August 2020. Prior to the TCF, dueling technical standards resulted in industry-wide confusion following adoption of the GDPR.

Over the years, Apple has greatly limited the use of third-party cookies within its web browser (Safari's Intelligent Tracking Prevention) and recently announced the decision to make the app-based Identifier for Advertisers (IDFA) opt-in by consumers rather than opt-out. Google has also announced its intention to limit the use of third-party cookies potentially starting in 2022 in its Chrome web browser and along with Apple is leading an active industry dialogue to deliver the next wave in privacy compliant advertising solutions. We believe the "Open Internet" outside the "walled gardens" (a colloquial term that refers to closed advertising platforms including Google and Facebook) will shift from targeting by anonymized and invisible third-party cookies or identifiers to known identities based on consumer choice and opt-in. This shift towards significantly more reliable and accurate consumer identity has the potential to significantly increase advertiser ROI and therefore publisher revenue.

Our Role in the Digital Advertising Ecosystem

Our platform is a key component of powering the digital advertising ecosystem because of the role we play in meeting the needs of ad sellers and ad buyers.

Publishers and App Developers. Publishers and app developers create websites and apps that contain content for consumers along with adjacent viewable space for advertisements. As consumers navigate through these websites and apps, individual ad impressions are shown to them. These impressions are typically sold to buyers programmatically in real-time via a third-party technology infrastructure platform or SSP. Publishers and app developers rely on advertising revenue as the key driver for their businesses and rely on the capabilities of these third parties in order to achieve optimal yield for their advertising inventory. In the third quarter of 2020, we served approximately 1,100 publishers and app developers worldwide on our platform, consisting of over 55,000 domains and 8,000 apps.

Sell Side Platforms. Traditionally referred to as Sell Side Platforms, platforms such as ours are designed to monetize inventory for publishers and app developers. Buyers and sellers come together through our marketplace to present, target, and purchase available advertising inventory. Our platform rapidly and efficiently processes significant volumes of ad bid data, providing a seamless digital experience for consumers. Traditionally, SSPs have focused exclusively on the needs of sellers in this process and have limited their interactions with buyers to the buyer's agent, the Demand Side Platform. As buyers have sought greater control of their advertising supply chains, we have extended the capabilities of our specialized cloud infrastructure platform over the last several years to serve the needs of advertisers and agencies as well.

Demand Side Platforms. Advertisers and agencies often engage Demand Side Platforms, which act as advertising demand aggregators, to execute their digital marketing campaigns across various ad formats. We are integrated with the leading DSPs around the world, such as The Trade Desk and Google DV360, enabling them to execute real-time transactions with our publisher clients. We maintain active integrations with DSPs around the world, some of which are global and omnichannel in nature or more narrowly targeted on specific ad formats or geographic markets.

Advertisers and Agencies. Spending begins with advertisers, who often engage advertising agencies to help plan and execute their advertising campaigns. To better control and optimize their advertising operations, advertisers and agencies are consolidating their spend with fewer, larger technology platforms who can deliver transparency and ensure the highest levels of inventory quality and control. These advertisers and agencies access our platform through DSPs. We believe our purpose-built technology platform and direct relationships with advertisers and agencies will lead to significant consolidation of spend onto our platform.

Our Specialized Cloud Infrastructure Platform

We designed our specialized cloud infrastructure for the rapid and efficient processing of real-time, programmatic ad transactions and the aggregation and analysis of the significant data accompanying each transaction. By harnessing our massive data assets and advanced machine learning capabilities, we are able to deliver superior outcomes by increasing advertiser ROI and publisher revenue, while increasing the cost efficiency of our platform and our customers' and partners' businesses. As an independent infrastructure platform, we are aligned with both publishers and buyers. We operate on a fundamental principle of transparency, being one of the first digital advertising infrastructure platforms to provide log-level data to buyers and provide transparency on every ad impression. We designed our technology platform to be highly flexible and dynamic, which has enabled us to innovate rapidly as the advertising industry has evolved.

For example, in 2018 and 2019, we extended our platform's header bidding capabilities to be relevant for mobile app and digital video ads. As of the third quarter of 2020, the share of ad impressions processed on our platform coming from mobile web, mobile app, and digital video accounted for over 70% of all ad impressions. A further example of the flexible and dynamic nature of our platform relates to the evolving area of identity for ad targeting purposes. While there are various constituents across the digital advertising industry creating new identity solutions, we have built a comprehensive platform that greatly simplifies the implementation and ongoing management of identity solution providers. Our solution allows for the use of many of the leading identifiers in a scaled and privacy-compliant fashion.

Our cloud infrastructure solutions are available via self-serve, including an easy-to-use customer user interface and a set of application programming interfaces (APIs) that allow our publisher customers to configure new inventory, extend into new geographies or ad formats, review reporting insights, and manage and track payments and billing cycles.

Our Strengths

We believe the following strengths provide us with long-term competitive advantages.

n Investment in Innovation Enabled by Profitable Business Model. Our business model driven by our technology platform, owned infrastructure, and offshore R&D has led to positive net income since 2016 and positive Adjusted EBITDA for seven consecutive years through the end of 2019. We have generated positive net cash provided by operating activities for six consecutive years, and have consistently achieved among best-in-class margins compared to other similar publicly-traded technology companies.

n Flexible Platform and Culture of Rapid Innovation. We built our company and our technology platform to be highly dynamic and to support rapid innovation. Our platform is highly modular, which allows us to innovate and improve individual software components without affecting the rest of the platform.

n Highly Efficient Infrastructure. As a result of our long-term, internal development efforts on our technology stack and strategic approach of owning our own hardware, we believe that we have among the lowest cost infrastructures of any specialized cloud infrastructure platform in the advertising market. We own and operate our proprietary software and hardware infrastructure around the world. This approach saves significant costs compared to companies that rely on public cloud alternatives due to the data-intensive nature of digital advertising and the immense volume of ad impressions created by header bidding. As a result, our cost of revenue per impression processed decreased by 18% in 2019 compared to 2018, and by 12% in 2018 compared to 2017.

n Machine Learning and Data Processing. We leverage our artificial intelligence and machine learning capabilities to record, aggregate, analyze, and act on vast amounts of data to help our customers optimize their digital advertising businesses in real-time.

n Customer Trust and Alignment. We are aligned with both publishers and buyers, by being an independent and transparent infrastructure provider. We do not own media and therefore do not have a vested interest in driving ad revenue to specific media properties. Our trusted status has enabled us to build direct relationships with publishers, advertisers, agencies, and Demand Side Platforms.

n Global, Omnichannel Reach. We are a global business with distributed critical infrastructure and a go-to-market presence in every major advertising market in the world outside of China.

Growth Strategy

Our growth strategy includes:

n Attract New Publishers and Expand our Relationship with Existing Publishers;

n Attract New Buyers and Expand our Relationship with Existing Buyers;

n Efficiently Expand Our Infrastructure Platform to Process More Ad Impressions;

n Improve Liquidity in Our Marketplace;

n Develop New Products;

n Expand Into New Ad Formats; and n Expand into New Geographies.

Risk Factor Summary

Our business is subject to many risks, which are highlighted in the section entitled "Risk Factors" immediately following this prospectus summary. Some of these risks relate to:

n Our revenue and results of operations are highly dependent on the overall demand for advertising. Factors that affect the amount of advertising spending, such as economic downturns and the COVID-19 pandemic, can make it difficult to predict our revenue and could adversely affect our business, results of operations, and financial condition;

n If our existing customers do not expand their usage of our platform, or if we fail to attract new publishers and buyers, our growth will suffer. Moreover, any decrease in the use of the advertising channels that we primarily depend on, or failure to expand into emerging channels, could adversely affect our business, results of operations, and financial condition;

n Our business depends on our ability to maintain and expand access to valuable ad impressions from publishers, including our largest publishers;

n Our business depends on our ability to maintain and expand access to spend from buyers, including a limited number of DSPs, agencies, and advertisers;

n If the use of digital advertising is rejected by consumers, through opt-in, opt-out or ad-blocking technologies or other means, it could have an adverse effect on our business, results of operations, and financial condition;

n Our results of operations may fluctuate significantly and may not meet our expectations or those of securities analysts and investors;

n If we fail to make the right investment decisions in our platform, or if we fail to innovate and develop new solutions that are adopted by publishers, we may not attract and retain publishers, which could have an adverse effect on our business, results of operations, and financial condition;

n The extent to which the ongoing COVID-19 pandemic, including the resulting global economic uncertainty, and measures taken in response to the pandemic, could adversely affect our business, results of operations, and financial condition will depend on future developments, which are highly uncertain and difficult to predict;

n Our business depends on our ability to collect, use, and disclose data to deliver advertisements. Any limitation imposed on our collection, use or disclosure of this data could significantly diminish the value of our solution and cause us to lose publishers, buyers, and revenue. Consumer tools, regulatory restrictions, and technological limitations all threaten our ability to use and disclose data;

n If the use of third-party "cookies," mobile device IDs or other tracking technologies is restricted without similar or better alternatives, our platform's effectiveness could be diminished and our business, results of operations, and financial condition could be adversely affected;

n Our operating history makes it difficult to evaluate our business and prospects and may increase the risk associated with your investment; and n The digital advertising industry is intensely competitive, and if we do not effectively compete against current and future competitors, our business, results of operations, and financial condition could be harmed.

Corporate Information

We were incorporated in the State of Delaware in 2006. Our principal executive offices are located at 3 Lagoon Drive, Suite 180, Redwood City, California 94065. Our telephone number is (650) 331-3485. Our website address is www.pubmatic.com. The information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus. Unless otherwise indicated, the terms "PubMatic," "we," "us," and "our" refer to PubMatic, Inc. and our consolidated subsidiaries.

This prospectus contains our trade names, trademarks, and service marks, including the PubMatic name and logo, and all product names. This prospectus also contains the trade names, trademarks, and service marks of other companies. We do not intend our use or display of other companies' trade names, trademarks, or service marks to imply a relationship with these other companies, or endorsement or sponsorship of us by these other companies. Other trademarks appearing in this prospectus are the property of their respective holders.

Implications of Being an Emerging Growth Company

As a company with less than $1.07 billion in revenue during our most recently completed fiscal year, we qualify as an "emerging growth company" as defined in Section 2(a) of the Securities Act of 1933, as amended, or the Securities Act, as modified by the Jumpstart Our Business Startups Act of 2012 (JOBS Act). As an emerging growth company, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable, in general, to public companies that are not emerging growth companies. These provisions include:

n an exemption from compliance with the auditor attestation requirement on the effectiveness of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley Act);

n an exemption from compliance with any requirement that the Public Company Accounting Oversight Board may adopt regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;

n reduced disclosure about our executive compensation arrangements;

n exemptions from the requirements to obtain a non-binding advisory vote on executive compensation or a stockholder approval of any golden parachute arrangements; and n extended transition periods for complying with new or revised accounting standards.

We will remain an emerging growth company until the earliest to occur of: (i) the last day of the fiscal year in which we have more than $1.07 billion in annual revenue; (ii) the date we qualify as a "large accelerated filer," with at least $700 million of equity securities held by non-affiliates; (iii) the date on which we have issued, in any three-year period, more than $1.0 billion in non-convertible debt securities; and (iv) the last day of the fiscal year ending after the fifth anniversary of the completion of this offering.

We may take advantage of these exemptions until such time that we are no longer an emerging growth company. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock. Further, pursuant to Section 107 of the JOBS Act, as an emerging growth company, we have elected to take advantage of the extended transition period for complying with new or revised accounting standards until those standards would otherwise apply to private companies. As a result, our operating results and consolidated financial statements may not be comparable to the operating results and financial statements of other companies who have adopted the new or revised accounting standards. It is possible that some investors will find our Class A common stock less attractive as a result, which may result in a less active trading market for our Class A common stock and higher volatility in our stock price.

The Offering

The following is a brief summary of certain terms of this offering. For a more complete description of the terms of our Class A common stock and Class B common stock, see "Description of Capital Stock—Common Stock."

Class A common stock offered	shares
Option to purchase additional shares of Class A common stock	shares
Class A common stock to be outstanding after this offering	shares (shares, if the underwriters exercise their option to purchase additional shares in full)
Class B common stock to be outstanding after this offering	shares
Total Class A and Class B common stock to be outstanding after this offering	shares (shares, if the underwriters exercise their option to purchase additional shares in full)
Use of proceeds	We estimate that the net proceeds from the sale of shares of our Class A common stock in this offering will be approximately $, or approximately $ if the underwriters exercise their option to purchase additional shares in full, based upon an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses. We intend to use the net proceeds for working capital and other general corporate purposes. We may also use a portion of the proceeds for the acquisition of, or investment in, technologies, solutions or businesses that complement our business, although we have no present commitments or agreements to enter into any acquisitions or investments. In the event of a Cash Election, as described under "Description of Capital Stock—Special Conversion Adjustments for the Series D and Series D Prime Convertible Preferred Stock," we may use a portion of the proceeds to pay amounts owed to holders of our Series D and Series D Prime convertible preferred stock. See "Use of Proceeds."
Voting rights	Shares of Class A common stock are entitled to one vote per share. Shares of Class B common stock are entitled to votes per share. Holders of our Class A common stock and Class B common stock will generally vote together as a single class, unless otherwise required by law or our restated certificate of incorporation. Following the completion of this offering, each share of our Class B common stock will be convertible into one share of our Class A common stock at any time and convert automatically upon certain transfers and upon . The holders of our outstanding Class B common stock will hold % of the voting power of our outstanding capital stock following this offering, with our directors, executive officers, and 5% stockholders and their respective affiliates holding % in the aggregate. These holders will have the ability to control the outcome of matters submitted to our stockholders for approval, including the election of our directors and the approval of any change of control transaction. See "Principal and Selling Stockholders" and "Description of Capital Stock" for additional information.
Risk factors	See "Risk Factors" and other information included in this prospectus for a discussion of some of the factors you should consider before deciding to purchase shares of our common stock.

Proposed Nasdaq Global Market symbol	"PUBM."

The number of shares of our Class A and Class B common stock to be outstanding after this offering is based upon no shares of our Class A common stock outstanding and 45,171,504 shares of our Class B common stock outstanding, in each case, as of September 30, 2020, and excludes:

n 8,912,631 shares of Class B common stock issuable upon the exercise of options to purchase shares of our Class B common stock outstanding as of September 30, 2020, with a weighted-average exercise price $2.22 per share;

n 711,180 shares of Class B common stock issuable upon the exercise of options to purchase shares of our Class B common stock granted after September 30, 2020, with a weighted-average exercise price of $5.29 per share; and n shares of common stock reserved for future grants under our stock-based compensation plans, consisting of (a) 162,093 shares of Class B common stock reserved for future grants under our 2017 Equity Incentive Plan (2017 Plan), as of September 30, 2020, an additional 650,000 shares of Class B common stock reserved for issuance under our 2017 Plan subsequent to September 30, 2020, (b) shares of our Class A common stock that will be reserved for issuance under our 2020 Equity Incentive Plan (2020 Plan), which will become effective on the day immediately prior to the date of this prospectus and (c) shares of Class A common stock reserved for future issuance under our 2020 Employee Stock Purchase Plan (ESPP), which will become effective on the date of this prospectus. Upon completion of this offering, any remaining shares available for issuance under our 2017 Plan will be added to the shares of Class A common stock reserved under our 2020 Plan, and we will cease granting awards under the 2017 Plan. Our 2020 Plan and ESPP also provide for automatic annual increases in the number of shares reserved thereunder, as more fully described in "Executive Compensation—Employee Benefit and Stock Plans."

Unless otherwise noted, the information in this prospectus reflects and assumes the following:

n the amendment of our certificate of incorporation in 2020 to redesignate our outstanding common stock as Class B common stock and create a new class of Class A common stock to be offered and sold in this offering;

n the automatic conversion of all shares of our convertible preferred stock outstanding as of September 30, 2020 into an aggregate of 33,443,969 shares of Class B common stock effective immediately before the completion of this offering, assuming the Cash Election described in "Description of Capital Stock—Special Conversion Adjustments for the Series D and Series D Prime Convertible Preferred Stock";

n the filing of our restated certificate of incorporation and the effectiveness of our restated bylaws, which will occur immediately prior to the closing of this offering;

n no exercise of outstanding options or warrants; and n no exercise of the underwriters' option to purchase additional shares of our Class A common stock in this offering.

Summary Consolidated Financial Data

The following tables present summary consolidated financial data for our business for the years ended December 31, 2018 and 2019 and as of September 30, 2020, and for the nine months ended September 30, 2019 and 2020. You should read this summary consolidated financial and other data together with "Selected Consolidated Financial Data," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes that are included elsewhere in this prospectus. We derived the statements of operations data for the years ended December 31, 2018 and 2019 from our audited financial statements appearing elsewhere in this prospectus. We derived our summary consolidated statements of operations data for the nine months ended September 30, 2019 and 2020 and our summary consolidated balance sheet data as of September 30, 2020, from the unaudited consolidated financial statements included elsewhere in this prospectus. We have prepared the unaudited consolidated financial statements on the same basis as the audited consolidated financial statements and have included all adjustments, consisting only of normal recurring adjustments, which in our opinion are necessary to state fairly the financial information set forth in those statements. Our historical results are not necessarily indicative of the results that may be expected in the future, and our results of operations for the nine months ended September 30, 2020 are not necessarily indicative of the results to be expected for the full year or any other period.

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
	(in thousands, except share and per share data)			
Consolidated Statements of Operations Data:				
Revenue	$99,264	$113,871	$79,478	$92,506
Cost of revenue(1)	31,235	36,104	26,781	29,736
Gross profit	68,029	77,767	52,697	62,770
Operating expenses:(1)				
Technology and development	12,619	12,453	9,334	9,280
Sales and marketing	33,444	36,498	26,251	30,142
General and administrative	16,998	20,307	14,472	13,799
Total operating expenses	63,061	69,258	50,057	53,221

Operating income	4,968	8,509	2,640	9,549
Total other income, net	662	713	799	343
Income before provision for income taxes	5,630	9,222	3,439	9,892
Provision for income taxes	1,205	2,579	920	2,104
Net income	$4,425	$6,643	$2,519	$7,788
Net income per share attributable to common stockholders(2):				
Basic	$—	$0.04	$—	$0.10
Diluted	$—	$0.04	$—	$0.09
Weighted-average shares used to compute net income per share attributable to common stockholders(2):				
Basic	11,249,579	10,036,983	10,033,313	10,178,598
Diluted	14,157,492	12,169,884	12,511,940	14,752,090
Consolidated Statement of Cash Flow Data:				
Net cash provided by operating activities	$15,595	$35,125	$22,482	$13,792
Net cash used in investing activities	(12,749)	(22,089)	(16,786)	(11,791)
Net cash provided by (used in) financing activities	(7,993)	(1)	(1)	4,361
Non-GAAP Financial Data:				
Adjusted EBITDA(3)	$20,430	$23,307	$14,013	$23,430

(1)Amounts include stock-based compensation before tax benefit as follows:

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
	(in thousands)			
Cost of revenue	$38	$26	$17	$30
Technology and development	554	402	329	377
Sales and marketing	759	684	514	721
General and administrative	2,041	890	671	1,311
Total stock-based compensation expense	$3,392	$2,002	$1,531	$2,439

(2)See Notes 2 and 12 to our consolidated financial statements included elsewhere in this prospectus for an explanation of the calculations of our basic and diluted net income per share attributable to common stockholders and pro forma basic and diluted net income per share attributable to common stockholders as well as the weighted average number of shares used in computation of the per share amounts.

(3)For information on how we compute Adjusted EBITDA and a reconciliation of Adjusted EBITDA to net income on a GAAP basis, see "Selected Consolidated Financial Data—Non-GAAP Financial Measures."

	As of September 30, 2020		
	Actual	Pro Forma(1)	Pro Forma As Adjusted(2)(3)
	(in thousands)		
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$40,612	$ 40,612	$
Marketable securities	14,595	14,595	
Accounts receivable, net	140,526	140,526	
Total assets	240,124	240,124	
Accounts payable	118,532	118,532	
Total liabilities	131,984	131,984	
Convertible preferred stock	61,216	—	
Total stockholders' equity	46,924	108,140	

(1)Reflects the conversion of all outstanding shares of our convertible preferred stock as of September 30, 2020 into an aggregate of 33,443,969 shares of Class B common stock, and assumes the Cash Election described in "Description of Capital Stock—Special Conversion Adjustments for the Series D and Series D Prime Convertible Preferred Stock."

(2)Reflects the pro forma adjustment described in footnote (1) and the sale by us of shares of Class A common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, including estimated amounts payable under the Cash Election, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(3)A $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) each of pro forma as adjusted cash and cash equivalents, total assets, and total stockholders' equity by $ million, assuming the number of shares we are offering, as set forth on the cover page of this prospectus, remains the same, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase (decrease) of 1.0 million in the number of shares we are offering would increase (decrease) each of pro forma as adjusted cash and cash equivalents, total assets, and total stockholders' equity by approximately $ million, assuming the initial public offering price per share remains the same. The pro forma as adjusted information is illustrative only, and we will adjust this information based on the actual initial public offering price, number of shares offered, and other terms of this offering determined at pricing.

Risk Factors

Risk Factors

Investing in our Class A common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this prospectus, including our consolidated financial statements and related notes, before deciding to invest in our Class A common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that affect us. If any of the following risks materializes, our business, financial condition, results of operations, and prospects could be materially harmed, which could cause the price of our Class A common stock to decline, and cause any investment in our Class A common stock to lose some or all of its value.

Risks Related to Our Business and Our Industry

Our revenue and results of operations are highly dependent on the overall demand for advertising. Factors that affect the amount of advertising spending, such as economic downturns and the COVID-19 pandemic, can make it difficult to predict our revenue and could adversely affect our business, results of operations, and financial condition.

Our business depends on the overall demand for advertising and on the economic health of our current and prospective publishers and buyers. For example, due to the COVID-19 pandemic and the recession in the United States and global economy in the second quarter of 2020, advertising demand on our platform decreased and did not recover to pre-COVID-19 levels for two months. Various macroeconomic factors could cause advertisers to reduce their advertising budgets, including adverse economic conditions and general uncertainty about economic recovery or growth, particularly in North America, Europe, and Asia, where we do most of our business; instability in political or market conditions generally; and any changes in tax treatment of advertising expenses and the deductibility thereof. Reductions in overall advertising spending as a result of these factors could make it difficult to predict our revenue and could adversely affect our business, results of operations, and financial condition.

If our existing customers do not expand their usage of our platform, or if we fail to attract new publishers and buyers, our growth will suffer. Moreover, any decrease in the use of the advertising channels that we primarily depend on, or failure to expand into emerging channels, could adversely affect our business, results of operations, and financial condition.

We depend upon our buyer and publisher relationships to continue to grow the usage of our platform. In doing so, we compete for both supply and demand with larger, well-established companies that may have technological advantages stemming from their experience in the market. We must continue to adapt and improve our technology to compete effectively, and customers have not always embraced our offering due to various factors, including switching costs from moving away pre-existing technology integrations, such as already implemented header bidding wrappers, and lack of awareness of our omni-channel offerings. Although we believe we provide superior transparency and accountability to such competitors, certain customers may place technological or financial demands that we are unable to meet. These and other factors may make it difficult for us to increase our business with our publishers and buyers, cause some buyers to reduce their spending with us, or increase our costs of doing business, adversely affecting our business, results of operations, and financial condition.

Historically, our buyers have predominantly used our platform to purchase mobile, display, and video advertising inventory from our publishers. We expect that these will continue to be significant channels used by our customers for digital advertising in the future. We also believe that our revenue growth may depend on our ability to expand within mobile, video, and in particular, CTV, and we have been, and are continuing to, enhance such channels. We may not be able to accurately predict changes in overall advertiser demand for the channels in which we operate and cannot assure you that our investment in formats will correspond to any such changes. Any decrease in the use of mobile, display, and video advertising, whether due to customers losing confidence in the value or effectiveness of such channels, regulatory restrictions or other causes, or any inability to further penetrate CTV or enter new and emerging advertising channels, could adversely affect our business, results of operations, and financial condition.

Our business depends on our ability to maintain and expand access to valuable ad impressions from publishers, including our largest publishers.

Our business depends on our access to valuable ad impressions. We depend upon publishers, including channel partners, which aggregate large numbers of smaller publishers, to provide advertising space which we can offer to prospective buyers. A relatively small number of premium publishers have historically accounted for a significant portion of the ad impressions sold on our platform, as well as a significant portion of our revenue from publishers, including a relatively small number of channel partners. In particular, for the years ended December 31, 2018 and 2019 and the nine months ended September 30, 2019 and 2020, 30%, 28%, 29%, and 21%, respectively, of our revenue was derived from ad impressions sold on our platform from our largest publisher,

Verizon Media Group. Our agreement with Verizon Media Group, signed in 2015, automatically renews each year for successive one-year terms unless either party provides 30 days' prior written notice. Either party may also terminate for convenience immediately upon written notice. We expect to depend upon a relatively small number of premium publishers and channel partners for the foreseeable future. To support our continued growth, we will seek to add additional publishers to our platform, and to expand current utilization with our existing publishers.

We have no minimum commitments from publishers, so the amount, quality, and cost of ad impressions available to us can change at any time, and we cannot assure you that we will have access to a consistent volume or quality of ad impressions at a reasonable cost, or at all. For example, in January 2020, MoPub disabled all access to traffic from Grindr due to a European consumer advocacy group filing a complaints against it for alleged violations of the European General Data Protection Regulation (GDPR), which resulted in a pause of all monetization on Grindr for nearly two months and reduced the number of ad impressions available on our platform. Any disruptions in our relationships with premium publishers or largest channel partners could adversely affect our business, results of operations, and financial condition. If we cannot retain or add individual publishers with valuable ad impressions, or if such publishers decide not to make their valuable ad impressions available to us, then our buyers may be less inclined to use our platform, which could adversely affect our business, results of operations, and financial condition.

Our business depends on our ability to maintain and expand access to spend from buyers, including a limited number of DSPs, agencies, and advertisers.

Our business depends on our ability to maintain and expand our access to ad campaigns and spending from buyers such as Demand Side Platforms (DSPs), as well as agencies and advertisers (which execute their purchases through DSPs), to purchase advertising impressions from our publishers. A limited number of large DSPs – The Trade Desk and Google DV360 in particular – account for a significant portion of the ad impressions purchased on our platform. Our agreements with each of The Trade Desk and Google LLC, originally signed in 2011 and 2012, respectively, automatically renew each year for successive one-year terms unless, in the case of our agreement with Google LLC, either party provides at least 60 days' prior written notice. In addition, either party may terminate for convenience upon providing at least 30 days' prior written notice. We expect to depend upon these DSPs for a large percentage of impressions purchased for the foreseeable future. Any disruptions in our relationships with DSPs, agencies or advertisers could harm our business, results of operations, and financial condition. To support our continued growth, we will seek to expand upon current levels of utilization with these DSPs, agencies, and advertisers.

We have no minimum commitments from buyers to spend on our platform, so the amount of demand available to us can change at any time, and we cannot assure you that we will have access to a consistent volume or quality of ad campaigns or demand for our ad impressions at a reasonable, or at all. If a buyer or group of buyers representing a significant portion of the demand in our marketplace decides to materially reduce use of our platform, it could cause an immediate and significant decline in our revenue and profitability and adversely affect our business, results of operations, and financial condition. Additionally, if we overestimate future usage, we may incur additional expenses in adding infrastructure without a commensurate increase in revenue, which would adversely affect our business, results of operations, and financial condition.

If the use of digital advertising is rejected by consumers, through opt-in, opt-out or ad-blocking technologies or other means, it could have an adverse effect on our business, results of operations, and financial condition.

Consumers can, with increasing ease, implement technologies that limit our ability to collect and use data to deliver advertisements, or otherwise limit the effectiveness of our platform. Cookies may be deleted or blocked by consumers. The most commonly used Internet browsers allow consumers to modify their browser settings to block first-party cookies (placed directly by the publisher or website owner that the consumer intends to interact with) or third-party cookies (placed by parties, like us, that have no direct relationship with the consumer), and some browsers block third-party cookies by default. For example, Apple recently announced its intention to move to "opt-in" privacy models, requiring users to voluntarily choose to receive targeted ads, which may reduce the value of ad impressions on its iOS mobile application platform. Many applications and other devices allow consumers to avoid receiving advertisements by paying for subscriptions or other downloads. Mobile devices using Android and iOS operating systems limit the ability of cookies to track consumers while they are using applications other than their web browser on the device. As a consequence, fewer of our cookies or publishers' cookies may be set in browsers or be accessible in mobile devices, which adversely affects our business.

Some consumers also download free or paid "ad blocking" software on their computers or mobile devices, not only for privacy reasons, but also to counteract the adverse effect advertisements can have on the consumer experience, including increased load times, data consumption, and screen overcrowding. Ad-blocking technologies and other global privacy controls may prevent some third-party cookies, or other tracking technologies, from being stored on a consumer's computer or mobile device. If more consumers adopt these measures, our business, results of operations, and financial condition could be adversely affected. Ad-blocking technologies could have an adverse effect on our business, results of operations, and financial condition if they reduce the volume or effectiveness and value of advertising. In addition, some ad blocking technologies block only ads that are targeted through use of third-party data, while allowing ads based on first-party data (i.e., data owned by the publisher). These ad blockers could place us at a disadvantage because we rely on third-party data, while some large competitors have troves of first-party data they use to direct advertising. Other technologies allow ads that are deemed "acceptable," which could be defined in ways that place us or our publishers at a disadvantage, particularly if such technologies are controlled or influenced by our competitors. Even if ad blockers do not ultimately have an adverse effect on our business, investor concerns about ad blockers could cause our stock price to decline.

Our results of operations may fluctuate significantly and may not meet our expectations or those of securities analysts and investors.

Our results of operations have fluctuated in the past, and future results of operations are likely to fluctuate as well. In addition, because our business is evolving, our historical results of operations may be of limited utility in assessing our future prospects. Factors that can cause our results of operations to fluctuate include:

n changes in demand and pricing for ad impressions sold on our platform;

n changes in our access to valuable ad impressions from publishers;

n addition or loss of publishers on our platform, and costs associated with adding or attempting to retain them;

n seasonality in our business;

n changes in the structure of the buying and selling of ad impressions;

n changes in the pricing policies of publishers and competitors;

n changes in costs of third-party services;

n changes and uncertainty in our legislative, regulatory, and industry environment, particularly in the areas of data protection and consumer privacy;

n introduction of new technologies or solutions;

n unilateral actions taken by DSPs, agencies, advertisers, or publishers; and n changes in our capital expenditures as we acquire hardware, technologies, and other assets for our business.

Any one or more of the factors above may result in significant fluctuations in our results of operations. You should not rely on our past results as an indicator of our future performance.

Because many of our expenses are based upon forecasted demand and may be difficult to reduce in the short term, volatility in quarterly revenue could cause significant variations in quarterly results of operations. We may not forecast our revenue or expenses accurately, causing our results of operations to diverge from our estimates or the expectations of securities analysts, and investors. If we fail to meet or exceed such expectations for these or any other reasons, the trading price of our Class A common stock could fall, and we could face costly litigation, including securities class action lawsuits.

If we fail to make the right investment decisions in our platform, or if we fail to innovate and develop new solutions that are adopted by publishers, we may not attract and retain publishers, which could have an adverse effect on our business, results of operations, and financial condition.

We face intense competition in the marketplace and are confronted by rapidly changing technology, evolving industry standards, and consumer preferences, regulatory changes, and the frequent introduction of new solutions by our competitors that we must adapt and respond to. We need to continuously update our platform and the technology we invest in and develop, including our machine learning and other proprietary algorithms, in order to attract publishers and buyers and keep ahead of changes in technology, evolving industry standards and regulatory requirements. Our platform is complex and new solutions can require a significant investment of time and resources to develop, test, introduce, and enhance. These activities can take longer than we expect. Moreover, we may not make the right decisions regarding these investments. New formats and channels, such as mobile header bidding and CTV, present unique challenges that we must address in order to succeed. Our success in new formats and channels depends upon our ability to integrate our platform with these new formats and channels. If our mobile and video solutions or our new CTV solutions are not widely adopted by publishers, we may not retain publishers. In addition, new demands from publishers and buyers, superior offerings by competitors, changes in technology, or new industry standards or regulatory requirements could render our platform or our existing solutions less effective and require us to make unanticipated changes to our platform or business model. Our failure to adapt to a rapidly changing market, anticipate publisher and buyer demand, or attract and retain publishers would cause our revenue or revenue growth rate to decline, and adversely affect our business, results of operations, and financial condition.

The extent to which the ongoing COVID-19 pandemic, including the resulting global economic uncertainty, and measures taken in response to the pandemic, could adversely affect our business, results of operations, and financial condition will depend on future developments, which are highly uncertain and difficult to predict.

In March 2020, the WHO characterized COVID-19 as a pandemic. Since then, the COVID-19 pandemic has disrupted the flow of the economy and put unprecedented strains on governments, health care systems, educational institutions, businesses, and individuals around the world and resulted in regional quarantines, labor shortages or stoppages, changes in consumer purchasing patterns, disruptions to service providers to deliver data on a timely basis, or at all, and overall economic instability. The impact on the global population and the duration of the COVID-19 pandemic is difficult to assess or predict. It is even more difficult to predict the impact on the global economic market, which will be highly dependent upon the actions of governments, businesses, and other enterprises in response to the pandemic and the effectiveness of those actions. The pandemic has already caused, and is likely to result in further, significant disruption of global financial markets and economic uncertainty. Although the advertising market and our business have generally recovered from the economic effects of the COVID-19 pandemic, it did initially adversely impact our sales and operations. We continue to monitor our operations, the operations of publishers, DSPs, and agencies, as well as government recommendations as the pandemic continues to impact the U.S. and global economy.

In light of the uncertain and rapidly evolving situation relating to the spread of COVID-19, we have taken temporary precautionary measures intended to help minimize the risk of the virus to our employees, our customers, and the communities in which we participate, which could adversely affect our business, results of operations, or financial condition. As a company with employees, customers, partners, and investors across the globe, we believe in upholding our company value of being good people by doing our part to help slow the spread of the virus. To this end, we are temporarily requiring most employees to work remotely, have suspended all non-essential travel worldwide for our employees, are canceling or postponing company-sponsored events, and are discouraging employee attendance at industry events and in-person work-related meetings. We have also downsized our headquarters in the Bay Area as we expect greater numbers of our employees to work remotely in the short-term future, reducing our operating costs. Although we continue to monitor the situation and may adjust our current policies as more information and guidance become available, temporarily suspending travel and doing business in-person could negatively impact our marketing efforts, lengthen sales cycles and result in an increase in certain prospective and current customers seeking lower prices or other more favorable contract terms, slow down our recruiting efforts, or create operational or other challenges as we adjust to a fully-remote workforce, any of which could adversely affect our business, results of operations, and financial condition.

A recession, depression, or other sustained adverse market events resulting from the spread of COVID-19 could adversely affect our business, results of operations, and financial condition, as well as the value of our common stock. Our customers or potential customers, particularly in industries most impacted by the COVID-19 pandemic including transportation, travel and hospitality, retail, and energy, may reduce their advertising spending or delay

their advertising initiatives, which could adversely affect our business, results of operations, and financial condition. We may also experience curtailed customer demand, reduced customer spend or contract duration, delayed collections, lengthened payment terms, and increased competition due to changes in terms and conditions and pricing of our competitors' products and services.

Our business depends on our ability to collect, use, and disclose data to deliver advertisements. Any limitation imposed on our collection, use or disclosure of this data could significantly diminish the value of our solution and cause us to lose publishers, buyers, and revenue. Consumer tools, regulatory restrictions and technological limitations all threaten our ability to use and disclose data.

As we process transactions through our platform, we collect large amounts of data about advertisements and where they are placed, such as advertiser and publisher preferences for media and advertising content. We also collect data on ad specifications such as placement, size and format, ad pricing, and auction activity such as price floors, bid response behavior, and clearing prices. Further, we collect data on consumers that does not identify the individual, including browser, device location and characteristics, online browsing behavior, exposure to and interaction with advertisements, and inferential data about purchase intentions, and preferences. We collect this data through various means, including from our own systems, pixels that publishers allow us to place on their websites to track consumer visits, software development kits installed in mobile applications, cookies, and other tracking technologies. Our publishers, buyers, and data providers may choose to provide us with their proprietary data about consumers.

We aggregate this data and analyze it in order to enhance our services, including the pricing, placement, and scheduling of advertisements. As part of our real-time analytics service offering we also share the data, or analyses based on it, with our publishers and buyers. Our ability to collect, use and share data about advertising transactions and consumer behavior is critical to the value of our services. There are many technical challenges relating to our ability to collect, aggregate and associate the data, and we cannot assure you that we will be able to do so effectively. Evolving regulatory standards could place restrictions on the collection, management, aggregation and use of information, which could result in a material increase in the cost of collecting or otherwise obtaining certain kinds of data and could limit the ways in which we may use or disclose information. Internet users can, with increasing ease, implement practices or technologies that may limit our ability to collect and use data to deliver advertisements, or otherwise inhibit the effectiveness of our platform. Although our publishers and buyers generally permit us to aggregate and use data from advertising placements, subject to certain restrictions, publishers or buyers might decide to restrict our collection or use of their data.

Any limitations on this ability could impair our ability to deliver effective solutions, which could adversely affect our business, results of operations, and financial condition.

If the use of third-party "cookies," mobile device IDs or other tracking technologies is restricted without similar or better alternatives, our platform's effectiveness could be diminished and our business, results of operations, and financial condition could be adversely affected.

We use "cookies," or small text files placed on consumer devices when an Internet browser is used, as well as mobile device identifiers, to gather data that enables our platform to be more effective. Our cookies and mobile device IDs do not identify consumers directly, but record information such as when a consumer views or clicks on an advertisement, when a consumer uses a mobile app, the consumer's location, and browser or other device information. Publishers and partners may also choose to share their information about consumers' interests or give us permission to use their cookies and mobile device IDs. We use data from cookies, mobile device IDs, and other tracking technologies to help advertisers decide whether to bid on, and how to price, an ad impression in a certain location, at a given time, for a particular consumer. Without cookies, mobile device IDs, and other tracking technology data, transactions processed through our platform would be executed with less insight into consumer activity, reducing the precision of advertisers' decisions about which impressions to purchase for an advertising campaign. This could make placement of advertising through our platform less valuable, and harm our revenue. If our ability to use cookies, mobile device IDs or other tracking technologies is limited, we may be required to develop or obtain additional applications and technologies to compensate for the lack of cookies, mobile device IDs and other tracking technology data, which could be time consuming or costly to develop, less effective, and subject to additional regulation.

Our operating history makes it difficult to evaluate our business and prospects and may increase the risk associated with your investment.

We operate in an evolving industry with ever-changing customer needs, and, as a result, our business has evolved over time such that our operating history makes it difficult to evaluate our business and future prospects. Although we have experienced substantial revenue growth, we may not be able to sustain this growth rate, current revenue levels or profitability. We expect to face challenges, risks, and difficulties frequently experienced by growing companies in rapidly developing industries, including those relating to:

n recruiting, integrating, and retaining qualified and motivated employees, particularly engineers;

n developing, maintaining, and expanding relationships with publishers, DSPs, agencies, and advertisers;

n innovating and developing new solutions that are adopted by and meet the needs of publishers, DSPs, agencies, and advertisers;

n competing against companies with a larger customer base or greater financial or technical resources;

n global economic disruption and technological changes driven by the COVID-19 pandemic;

n further expanding our business internationally;

n managing expenses as we invest in our infrastructure and platform technology to scale our business and operate as a public company; and n responding to evolving industry standards and government regulations that impact our business, particularly in the areas of data protection and consumer privacy.

If we are not successful in addressing these and other issues, our business may suffer, our revenue may decline and we may not be able to achieve further growth or sustain profitability.

The digital advertising industry is intensely competitive, and if we do not effectively compete against current and future competitors, our business, results of operations, and financial condition could be harmed.

The digital advertising ecosystem is competitive and complex due to a variety of factors. While programmatic header bidding has enabled the purchasing and selling of vast amounts of digital advertising inventory, there now exist significant challenges related to proliferation of media across platforms, transaction speed, increased costs, transparency, and regulatory requirements. To address these issues at scale for both buyers and sellers, we provide specialized software and hardware infrastructure to optimally power technology-driven transactions. To successfully grow our business, we compete with Sell Side Platforms (SSPs) like Magnite, Inc., smaller private SSPs in markets around the world, as well as divisions of larger companies like Google.

Some of our competitors have longer operating histories, greater name recognition, and greater financial, technical, sales, and marketing resources than we have. In addition, some competitors, particularly those with greater scale or a more diversified revenue base and a broader offering, have greater flexibility than we do to compete aggressively on the basis of price and other contract terms, or to compete with us by including in their product offerings services that we may not provide. Some competitors are able or willing to agree to contract terms that expose them to risks that might be more appropriately allocated to publishers or buyers of advertising (including inventory risk and the risk of having to pay publishers for unsold advertising impressions), and in order to compete effectively we might need to accommodate risks that could be difficult to manage or insure against. Some existing and potential buyers have their own relationships with publishers or are seeking to establish such relationships, and many publishers are investing in capabilities that enable them to connect more effectively directly with buyers. Our business suffers to the extent that publishers and buyers purchase and sell advertising inventory directly from one another or through other intermediaries other than us, reducing the amount of advertising spend on our platform. If we are unable to compete effectively for publishers' ad impressions and buyer's advertising spend, we may experience less demand for the ad impressions processed on our platform, which could adversely affect our business, results of operations, and financial condition.

There has also been rapid evolution and consolidation in the advertising technology industry, and we expect these trends to continue, thereby increasing the capabilities and competitive posture of larger companies, particularly those that are already dominant in various ways, and enabling new or stronger competitors to emerge. Many publishers and buyers are large consolidated organizations that may need to acquire other companies in order to grow. Smaller publishers and buyers may need to consolidate in order to compete effectively. There is a finite number of large publishers and buyers in our target markets, and any consolidation of publishers or buyers may give the resulting enterprises greater bargaining power or result in the loss of publishers and buyers that use our platform, reducing our potential base of publishers and buyers, each of which would lead to erosion of our revenue.

Some of our competitors may also choose to sell products or services competitive to ours at lower prices by accepting lower margins and profitability, or may be able to sell products or services competitive to ours at lower prices given proprietary ownership of data, technical superiority, or economies of scale. Such introduction of competent, competitive products, pricing strategies, or other technologies by our competitors that are superior to or that achieve greater market acceptance than our products and services could adversely affect our business. In such event, we could experience a decline in market share and revenues and be forced to reduce our prices, resulting in lower profit margins for us. Loss of existing or future market share to new competitors and increased price competition could substantially harm our business, results of operations, and financial condition.

Our sales and marketing efforts may require significant investments and, in certain cases, involve long sales cycles, and may not yield the results we seek.

Our sales and marketing teams educate prospective publishers and buyers about the use, technical capabilities, and benefits of our platform. Our sales cycle, from initial contact to contract execution and implementation, can take significant time with certain buyers, including agencies. We are often required to explain how our platform can optimize the value of a premium publisher's ad impressions or how a DSP can discover valuable ad impressions. We may spend substantial time and resources prospecting for new business or responding to requests for proposals from potential publishers and buyers, and it may not result in revenue. Following contract execution and implementation, ongoing sales cycles and account management can take significant time. We are often required to explain how an additional platform integration can enhance incremental demand or engage multiple trading teams within an advertising agency to source ad campaigns and create additional demand. We may not succeed in attracting new publishers despite our significant investment in our business development, sales and marketing organizations, and it is difficult to predict when new publishers will begin generating revenue through our platform, and the extent of that revenue. We may not succeed in expanding relationships with existing publishers and buyers, despite our significant investment in our sales, account management, and marketing organizations, and it is difficult to predict when additional products will generate revenue through our platform, and the extent of that revenue.

If we do not manage our growth effectively, the quality of our platform and solutions may suffer, and our business, results of operations, and financial condition may be adversely affected.

The continued growth in our business may place demands on our infrastructure and our operational, managerial, administrative, and financial resources. Our success will depend on the ability of our management to manage growth effectively. Among other things, this will require us at various times to:

n strategically invest in the development and enhancement of our platform and data center infrastructure;

n improve coordination among our engineering, product, operations, and other support organizations;

n manage multiple relationships with various partners, customers, and other third parties;

n manage international operations;

n develop our operating, administrative, legal, financial, and accounting systems and controls; and n recruit, hire, train, and retain personnel.

If we do not manage our growth well, the efficacy and performance of our platform may suffer, which could harm our reputation and reduce demand for our platform and solutions. Failure to manage future growth effectively could harm our business and have an adverse effect on our business, results of operations, and financial condition.

Market pressure may reduce our revenue per impression.

Our revenue may be affected by market changes, new demands by publishers and buyers, new solutions, and competitive pressure. Our solutions may be priced too high or too low, either of which may carry adverse consequences. We may receive requests from publishers for discounts, fee revisions, rebates, and refunds, or from DSPs, agencies and advertisers for volume discounts, fee revisions, and rebates. Any of these developments could adversely affect our business, results of operations, or financial condition.

In addition, although header bidding is well-established, some of our other, newer products such as OpenWrap and Audience Encore utilize different pricing approaches, and we do not know whether our current or potential customers or the market in general will continue to accept such approaches going forward. Any failure for our pricing approaches to gain acceptance could adversely affect our business, results of operations, and financial condition.

We must scale our platform infrastructure to support anticipated growth and transaction volume. If we fail to do so, we may limit our ability to process ad impressions, and we may lose revenue.

Our business depends on processing ad impressions in milliseconds, and we must handle an increasingly large volume of such transactions. The addition of new solutions, such as header bidding in mobile and the connected TV (CTV) and over-the-top (OTT) formats, support of evolving advertising formats, handling, and use of increasing amounts of data, and overall growth in impressions place growing demands upon our platform infrastructure. If we are unable to grow our platform to support substantial increases in the number of transactions and in the amount of data we process, on a high-performance, cost-effective basis, our business, results of operations, and financial condition could be adversely affected. We expect to continue to invest in our platform in order to meet these requirements, and that investment may adversely affect our business, results of operations, and financial condition.

If we fail to detect or prevent fraud on our platform, or malware intrusion into the systems or devices of our publishers and their consumers, publishers could lose confidence in our platform, and we could face legal claims that could adversely affect our business, results of operations, and financial condition.

We may be subject to fraudulent or malicious activities undertaken by persons seeking to use our platform for improper purposes. For example, someone may attempt to divert or artificially inflate advertiser purchases through our platform, or to disrupt or divert the operation of the systems, and devices of our publishers, and their consumers in order to misappropriate information, generate fraudulent billings or stage cyberattacks, or for other illicit purposes. For example, sophisticated bot-nets and other complex forms of click fraud might be used to generate fraudulent impressions and divert advertising revenue from legitimate websites of publishers. Those activities could also introduce malware through our platform in order to commandeer or gain access to information on consumers' computers. We use third-party tools and proprietary technology to identify non-human traffic and malware, and we may reduce or terminate relationships with publishers that we find to be engaging in such activities. For example, in May 2020, we terminated a publisher for sending traffic that was part of the Icebucket spoofing scheme, where cybercriminals sent traffic mimicking connected TVs to fraudulently take CTV advertising dollars. During the investigative phase, we terminated the publisher which was reportedly a major vector for this particular spoofing attack. Although we continuously assess the quality and performance of advertising on publishers' digital media properties, it may be difficult to detect fraudulent or malicious activity, and we rely on our own and third-party tools, as well as the controls of publishers. Further, perpetrators of fraudulent impressions and malware frequently change their tactics and may become more sophisticated over time, requiring both us and third parties to improve processes for assessing the quality of publisher inventory and controlling fraudulent activity. If we fail to detect or prevent fraudulent or malicious activity of this sort, our reputation could be damaged, publishers may contest payment, demand refunds, or fail to give us future business, or we could face legal claims from publishers. Even if we are not directly involved in fraud or malicious activity, any sustained failures of others in our industry to adequately detect and prevent fraud could generate the perception that programmatic trading is unsafe and lead our publishers to avoid programmatic advertising.

If publishers, buyers, and data providers do not obtain necessary and requisite consents from consumers for us to process their personal data, we could be subject to fines and liability.

Because we do not have direct relationships with consumers, we rely on publishers, buyers, and data providers, as applicable, to obtain the consent of the consumer on our behalf to process their data and deliver interest-based advertisements, and to implement any notice or choice mechanisms required under applicable laws, but if publishers, buyers, or data providers do not follow this process (and in any event as the legal requirements in this area continue to evolve and develop), we could be subject to fines and liability. We may not have adequate insurance or contractual indemnity arrangements to protect us against any such claims and losses.

Prominent technology companies have announced plans to replace cookies with alternative mechanisms, and if cookies are discontinued in favor of proprietary tracking mechanisms, our costs to develop alternatives could increase.

Some prominent technology companies, including Google, have announced intentions to discontinue the use of cookies, and to develop alternative methods and mechanisms for tracking consumers. For example, in January 2020, Google announced its intention to limit the use of third-party cookies potentially starting in 2022 in its Chrome web browser. As companies replace cookies, it is possible that such companies may rely on proprietary algorithms or statistical methods to track consumers without cookies, or may utilize log-in credentials entered by consumers into other web properties owned by these companies, such as their email services, to track web usage, including usage across multiple devices. Alternatively, such companies may build different and potentially proprietary consumer tracking methods into their widely-used web browsers. Although we believe our platform is well-positioned to adapt and continue to provide key data insights to our publishers without cookies, this transition could be more disruptive, slower, or more expensive than we currently anticipate, and could materially affect our ability to serve our customers, and our business, results of operations, and financial condition could be adversely affected.

We are subject to laws and regulations related to data privacy, data protection, and information security, and consumer protection across different markets where we conduct our business, including in the United States and Europe and industry requirements and such laws, regulations, and industry requirements are constantly evolving and changing. Our actual or perceived failure to comply with such obligations could have an adverse effect on our business, results of operations, and financial condition.

We receive, store, and process data about or related to consumers in addition to our customers, employees, and services providers. Our handling of this data is subject to a variety of federal, state, and foreign laws and regulations and is subject to regulation by various government authorities. Our data handling also is subject to contractual obligations and may be deemed to be subject to industry standards.

The U.S. federal and various state and foreign governments have adopted or proposed limitations on the collection, distribution, use, and storage of data relating to individuals, including the use of contact information and other data for marketing, advertising and other communications with individuals and businesses. In the United States, various laws and regulations apply to the collection, processing, disclosure, and security of certain types of data. Additionally, the FTC and many state attorneys general are interpreting federal and state consumer protection laws as imposing standards for the online collection, use, dissemination, and security of data. If we fail to comply with any such laws or regulations, we may be subject to enforcement actions that may not only expose us to litigation, fines, and civil and/or criminal penalties, but also require us to change our business practices as well as have an adverse effect on our business, results of operations, and financial condition.

The regulatory framework for data privacy issues worldwide is currently evolving and is likely to remain uncertain for the foreseeable future. The occurrence of unanticipated events often rapidly drives the adoption of legislation or regulation affecting the use, collection, or other processing of data and manners in which we conduct our business. Restrictions could be placed upon the collection, management, aggregation, and use of information, which could result in a material increase in the cost of collecting or otherwise obtaining certain kinds of data and could limit the ways in which we may use or disclose information. In particular, interest-based advertising, or the use of data to draw inferences about a user's interests and deliver relevant advertising to that user, and similar or related practices (sometimes referred to as behavioral advertising or personalized advertising), such as cross-device data collection and aggregation, steps taken to de-identify personal data, and to use and distribute the resulting data, including for purposes of personalization and the targeting of advertisements, have come under increasing scrutiny by legislative, regulatory, and self-regulatory bodies in the United States and abroad that focus on consumer protection or data privacy. Much of this scrutiny has focused on the use of cookies and other technology to collect information about Internet users' online browsing activity on web browsers, mobile devices, and other devices, to associate such data with user or device identifiers or de-identified identities across devices and channels. In addition, providers of Internet browsers have engaged in, or announced plans to continue or expand, efforts to provide increased visibility into, and certain controls over, cookies and similar technologies and the data collected using such technologies. For example, in January 2020, Google announced that at some point in the following 24 months the Chrome browser will block third-party cookies. Because we, and our customers, rely upon large volumes of such data collected primarily through cookies and similar technologies, it is possible that these efforts may have a substantial impact on our ability to collect and use data from Internet users, and it is essential that we monitor developments in this area domestically and globally, and engage in responsible privacy practices, including providing consumers with notice of the types of data we collect and how we use that data to provide our services.

In the United States, the U.S. Congress and state legislatures, along with federal regulatory authorities have recently increased their attention on matters concerning the collection and use of consumer data. In the United States, non-sensitive consumer data generally may be used under current rules and regulations, subject to certain restrictions, so long as the person does not affirmatively "opt-out" of the collection or use of such data. If an "opt-in" model or other more restrictive regulations were to be adopted in the United States, less data would be available, and the cost of data would be higher.

California recently enacted legislation, the California Consumer Privacy Act that became operative on January 1, 2020 and became enforceable by the California Attorney General on July 1, 2020, along with related regulations which came into force on August 14, 2020 (CCPA). The CCPA creates individual privacy rights for California residents and increases the privacy and security obligations of businesses handling personal data. The CCPA is enforceable by the California Attorney General and there is also a private right of action relating to certain data security incidents. The CCPA generally requires covered businesses to, among other things, provide new disclosures to California consumers and afford California consumers new abilities to opt-out of certain sales of personal information, a concept that is defined broadly, and although formal guidance has not been issued, behavioral advertising is believed to be a sale under CCPA by us, consumer advocacy groups and in some cases our larger competitors. We cannot yet fully predict the impact of the CCPA or subsequent guidance on our business or operations, but it may require us to further modify our data processing practices and policies and to incur substantial costs and expenses in an effort to comply. Decreased availability and increased costs of information could adversely affect our ability to meet our customers' requirements and could have an adverse effect on our business, results of operations, and financial condition.

Additionally, a recent California ballot initiative, the California Privacy Rights Act (CPRA), imposes additional data protection obligations on companies doing business in California, including additional consumer rights processes and opt-outs for certain uses of sensitive data and sharing of personal data starting in January 2023. As voted into law by California residents in November 2020, the CPRA could have an adverse effect on our business, results of operations, and financial condition. The effects of the CCPA and CPRA are potentially significant and may require us to modify our data collection or processing practices and policies and to incur substantial costs and expenses in an effort to comply and increase our potential exposure to regulatory enforcement and/or litigation.

The CCPA has encouraged "copycat" laws and in other states across the country, such as in Nevada, Virginia, New Hampshire, Illinois, and Nebraska. This legislation may add additional complexity, variation in requirements, restrictions, and potential legal risk, require additional investment in resources to compliance programs, and could impact strategies and availability of previously useful data and could result in increased compliance costs and/or changes in business practices and policies. Such new privacy laws add additional complexity, requirements, restrictions, and potential legal risk, require additional investment in resources to compliance programs, and could impact trading strategies and availability of previously useful data.

In Europe, the GDPR took effect on May 25, 2018 and applies to products and services that we provide in Europe, as well as the processing of personal data of EU citizens, wherever that processing occurs. The GDPR includes operational requirements for companies that receive or process personal data of residents of the European Union that are different than those that were in place in the European Union. For example, we have been required to offer new controls to data subjects in Europe before processing data for certain aspects of our service. Failure to comply with GDPR may result in significant penalties for non-compliance of up to the greater of €20 million or 4% of an enterprise's global annual revenue. In addition to the foregoing, a breach of the GDPR could result in regulatory investigations, reputational damage, orders to cease/ change our processing of our data, enforcement notices, and/ or assessment

notices (for a compulsory audit). We may also face civil claims including representative actions and other class action type litigation (where individuals have suffered harm), potentially amounting to significant compensation or damages liabilities, as well as associated costs, diversion of internal resources, and reputational harm.

Further, in the European Union, regulators are increasingly focusing on compliance with requirements in the online behavioral advertising ecosystem, and current national laws that implement the ePrivacy Directive will be replaced by an EU Regulation, known as the ePrivacy Regulation, which will significantly increase fines for non-compliance and impose burdensome requirements around obtaining consent. While the text of the ePrivacy Regulation is still under development, a recent European court decision and regulators' recent guidance are driving increased attention to cookies and tracking technologies. As regulators start to enforce the strict approach (which has already begun to occur in Germany, where data protection authorities have initiated a probe on third-party cookies), this could lead to substantial costs, require significant systems changes, limit the effectiveness of our marketing activities, divert the attention of our technology personnel, adversely affect our margins, increase costs, and subject us to additional liabilities. In addition, some countries are considering or have passed legislation implementing data protection requirements or requiring local storage and processing of data or similar requirements that could increase the cost and complexity of delivering our services. Any failure to achieve required data protection standards (which are not currently clear when applied to the online advertising ecosystem) may result in lawsuits, regulatory fines, or other actions or liability, all of which may harm our results of operations. Because the interpretation and application of privacy and data protection laws such as the CCPA and GDPA, and the related regulations and standards, are uncertain, it is possible that these laws, regulations and standards may be interpreted and applied in manners that are, or are asserted to be, inconsistent with our data management practices or the technological features of our solutions.

We are also subject to laws and regulations that dictate whether, how, and under what circumstances we can transfer, process and/or receive certain data that is critical to our operations, including data shared between countries or regions in which we operate and data shared among our products and services.

In addition to government regulation, privacy advocacy and industry groups may propose new and different self-regulatory standards that either legally or contractually apply to us or our customers. We are members of self-regulatory bodies that impose additional requirements related to the collection, use, and disclosure of consumer data. Under the requirements of these self-regulatory bodies, in addition to other compliance obligations, we are obligated to provide consumers with notice about our use of cookies and other technologies to collect consumer data and of our collection and use of consumer data for certain purposes, and to provide consumers with certain choices relating to the use of consumer data. Some of these self-regulatory bodies have the ability to discipline members or participants, which could result in fines, penalties, and/or public censure (which could in turn cause reputational harm). Additionally, some of these self-regulatory bodies might refer violations of their requirements to the Federal Trade Commission or other regulatory bodies. If we were to be found responsible for such a violation, it could adversely affect our reputation, as well as our business, results of operations, and financial condition.

Our success depends on our ability to retain key members of our management team, and on our ability to hire, train, retain, and motivate new employees.

Our success depends upon the continued service of members of our senior management team and other key employees. Our Co-Founder and Chief Executive Officer, Rajeev K. Goel, is critical to our overall management, as well as the continued development of our platform and relationships with publishers, DSPs, and agencies, and our strategic direction. We do not maintain key-person insurance on any of our employees. Some of our key employees may receive significant proceeds from sales of our Class A common stock after this offering, which may reduce their motivation to continue to work for us. As a result, we may be unable to retain them, which could make it difficult to operate our business, cause us to lose expertise or know-how, and increase our recruitment and training costs.

Our success also depends on our ability to hire, train, retain, and motivate new employees. Competition for employees in our industry can be intense, and we compete for experienced personnel with many companies that have greater resources than we have. The market for talent in our key areas of operations, especially in engineering, and competition for qualified personnel is particularly intense in the San Francisco Bay Area, where we are headquartered, as well as in Pune, India, and New York, where we maintain offices.

Seasonal fluctuations or market changes in digital advertising activity could adversely affect our business, results of operations, or financial condition.

We generate all of our revenue directly or indirectly from the purchase and sale of digital ad impressions processed on our platform. Our revenue, net cash provided by operating activities, results of operations, and other key operating and performance metrics may vary from quarter to quarter due to the seasonal nature of digital advertising spending. For example, digital advertisers tend to devote a large portion of their budgets to campaigns in the fourth quarter of the year, to coincide with consumer holiday spending, and then have a significantly smaller advertising budget in the first calendar quarter. Pricing of digital ad impressions in the fourth quarter is likely to be higher due to increased demand. In addition, adverse economic conditions or economic uncertainty may cause advertisers to decrease purchases of digital ad impressions, adversely affecting our revenue and results of operations. For example, if the walled gardens of Google and Facebook become the preferred destinations for advertisers, lower demand for ad impressions processed on our platform could cause publishers to reduce their use of our platform or to cease using it altogether. A decline in the market for programmatic advertising or the failure of that market to grow as expected could also adversely affect our business, results of operations, and financial condition. Any decline in the volume or perceived quality of the ad impressions available on our platform could further reduce demand. Any such developments could have a material adverse effect on our business, results of operations, and financial condition.

Our efforts to offer private marketplace solutions may not be successful, or we may not be able to scale our platform to meet this demand in a timely manner, and, as a result, we may not realize a return from our investments in that area.

We believe there is significant and growing demand for private marketplace solutions (PMPs), and we are making significant investments to meet that demand and grow our market share of PMPs. PMPs may involve lower fees than we can charge for our real-time bidding services, which may not be fully offset by anticipated higher pricing. In some cases, we have experienced fee pressure as we have built out our PMP offering, and we expect this fee pressure to increase as more competitors, including new entrants as well as publishers themselves, build their own technology and infrastructure to enter this business. Even if the market for these solutions develops as we anticipate, publishers and buyers might not embrace our offerings to the degree we expect

due to various factors such as inertia from moving off of existing implementations of competitive products. Additionally, even if publishers and buyers embrace our offerings, the positive effect of our PMP offerings on our results of operations may be offset or negated if PMPs cannibalize our open marketplace transaction volumes, by similar offerings from our competitors, or other adverse developments.

We are subject to payment-related risks if DSPs dispute or do not pay their invoices, and any decreases in payments or in our overall take rate could have a material adverse effect on our business, results of operations, and financial condition. These risks mays be heightened as a result of the COVID-19 pandemic and resulting economic downturn.

We generate revenue primarily through revenue share agreements with our publishers. We invoice DSPs and collect the full purchase price for the digital ad impressions they purchase, retain our fees, and remit the balance to the publisher. However, in some cases, we are required to pay publishers for digital ad impressions delivered even if we are unable to collect from the buyer that purchased the digital ad impressions. In the past, certain buyers have sought to slow their payments to us or been forced into filing for bankruptcy protection, resulting in us not receiving payment. These challenges have been exacerbated by the COVID-19 pandemic and resulting economic impact, as many of our buyers are experiencing financial difficulties and liquidity constraints. In certain cases, buyers have been unable to timely make payments and we have suffered losses. For example, in early 2019, the advertising company Sizmek declared bankruptcy, which led us to lose approximately $6 million in contracted spending on our platform. While our contracts generally do not contain such exposure, there are certain agreements under which we may be responsible for the whole amount of contracted spending, whether or not ultimately paid by the buyer.

In addition, a prolonged economic downturn, as a result of the COVID-19 pandemic or otherwise, may lead additional buyers to slow or default on payments or in some cases seek bankruptcy protection. We cannot assure you that we will not experience bad debt in the future, and write-offs for bad debt could have an adverse effect on our business, results of operations, or financial condition in the periods in which the write-offs occur. If our cash collections are significantly diminished as a result of these dynamics, our revenue and/or cash flow could be adversely affected, and we may need to use working capital to fund our accounts payable pending collection from the buyers. This may result in additional costs and cause us to forgo or defer other more productive uses of that working capital.

Moreover, a majority of our advertising spend comes from buyers purchasing advertising inventory programmatically on our platform through their DSPs. We experience requests from publishers and buyers for discounts, fee concessions or revisions, rebates, or other forms of consideration, refunds, and greater levels of pricing transparency and specificity, in some cases as a condition to maintain the relationship or to increase the amount of advertising spend that the buyer sends to our platform. In addition, we charge fees to publishers for use of our platform, and we may decide to offer discounts or other pricing concessions in order to attract more inventory or demand, or to compete effectively with other providers that have different or lower pricing structures and may be able to undercut our pricing due to greater scale or other factors. Our revenue, take rate, the value of our business, and the price of our Class A common stock could be adversely affected if we cannot maintain and grow our revenue and profitability through volume increases that compensate for any price reductions, or if we are forced to make significant fee concessions, rebates, or refunds, or if buyers reduce spending with us, or publishers reduce inventory available through our exchange due to fee disputes or pricing issues.

Our international operations subject us to additional costs and risks, and may not yield returns, and our continued international expansion may not be successful.

We have entered into several international markets and expect to enter into additional markets in the future. For the year ended December 31, 2019 and the nine months ended September 30, 2020, we generated approximately 32% and 34% of our revenue, respectively, from outside the United States. We expect to continue to expand our international operations; further expansion may require significant management attention and financial resources and may place burdens on our management, administrative, operational, legal, and financial infrastructure. The costs and risks inherent in conducting business internationally include:

n difficulty and cost associated with maintaining effective controls at foreign locations;

n adapting our platform and solutions to non-U.S. publishers' preferences and customs;

n difficulties in staffing and managing foreign operations;

n difficulties in enforcing our intellectual property rights;

n new and different sources of competition;

n regulatory and other delays and difficulties in setting up foreign operations;

n compliance with anti-bribery laws, such as the U.S. Foreign Corrupt Practices Act and the U.K. Anti-Bribery Act 2010, by us, our employees, and our business partners;

n compliance with export and import control and economic sanctions, laws and regulations, such as those administered by the U.S. Office of Foreign Assets Control;

n compliance with foreign data privacy laws, such as the European Union (EU) ePrivacy Directive and GDPR;

n restrictions on the transfers of funds;

n currency exchange rate fluctuations and foreign exchange controls;

n economic and political instability in some countries;

n health or similar issues, such as a pandemic or epidemic;

n compliance with the laws of numerous taxing jurisdictions where we conduct business, potential double taxation of our international earnings, and potentially adverse tax consequences due to changes in applicable U.S. and foreign tax laws; and n the complexity and potential adverse consequences of U.S. tax laws as they relate to our international operations.

As we continue to expand our business globally, our success will depend, in large part, on our ability to anticipate and effectively manage these risks. These factors and others could harm our ability to increase international revenues and, consequently, could adversely affect our business, results of operations, and financial condition. The expansion of our existing international operations and entry into additional international markets will require significant management attention and financial resources. Our failure to manage these risks successfully could adversely affect our business, results of operations, and financial condition.

Our use and reliance upon technology and development resources in India may expose us to unanticipated costs and liabilities, which could affect our ability to realize cost savings from our technology operations in India.

Most of our technology and development work is conducted in Pune, India. We cannot assure you that our reliance upon development resources in India will enable us to achieve meaningful cost reductions or greater resource efficiency. Further, our development efforts and other operations in India involve significant risks, including:

n difficulty hiring and retaining engineering and management resources due to intense competition for such resources and resulting wage inflation;

n heightened exposure to changes in economic, security, and political conditions in India;

n the effects of the COVID-19 pandemic on general health and economic conditions in India; and n fluctuations in currency exchange rates and tax compliance in India.

In addition, enforcement of intellectual property rights and confidentiality protections in India may not be as effective as in the United States or other countries. Policing unauthorized use of proprietary technology is difficult and expensive, and we might need to resort to litigation to protect our trade secrets and confidential information. The experience and capabilities of Indian courts in handling intellectual property litigation vary, and outcomes are unpredictable. Further, such litigation may require significant expenditure of cash and management efforts and could harm our business, financial condition, and results of operations. An adverse determination in any such litigation will impair our intellectual property rights and may harm our business, results of operations, and financial condition.

We expect to continue to rely on significant cost savings obtained by concentrating our technology and development and engineering work in India, rather than in the United States, but difficulties resulting from the factors noted above and other risks related to our operations in India could increase our expenses and harm our competitive position. The historical rate of wage inflation has been higher in India than in the United States. In addition, if the Rupee strengthens against the U.S. Dollar, our costs would increase. If the cost of technology and development work in India significantly increases or the labor environment in India changes unfavorably, our cost savings may be diminished. Any such developments could adversely affect our business, results of operations, and financial condition.

We must provide value to both publishers and buyers of advertising without being perceived as favoring one over the other or being perceived as competing with them through our service offerings.

We provide a platform that intermediates between publishers seeking to sell advertising space and buyers seeking to purchase that space. Although only the publishers are our direct customers and represent nearly all of our revenue, we believe we have strong relationships with the DSPs, agencies, and advertisers that purchase advertisements through our programmatic bidding and other solutions. Our ability to provide quality impressions with price transparency and competitive pricing to both publishers and buyers is critical to our ability to succeed, and if we were to be perceived as favoring one side of the transaction to the detriment of the other, or presenting a competitive challenge to their own businesses, demand for our platform from publishers or buyers would decrease and our business, results of operations, and financial condition would be adversely affected.

We depend on third-party data centers, the disruption of which could adversely affect our business, results of operations, and financial condition.

We host our company-owned infrastructure at third-party data centers. Any damage to or failure of our systems generally would prevent us from operating our business. We rely on the Internet and, accordingly, depend upon the continuous, reliable, and secure operation of Internet servers, related hardware and software, and network infrastructure. While we control and have access to our servers and all of the components of our network that are located in our external data centers, we do not control the operation of these facilities. The owners of our data center facilities have no obligation to renew their agreements with us on commercially reasonable terms, or at all. If we are unable to renew these agreements on commercially reasonable terms, or if one of our data center operators is acquired, we may be required to transfer our servers and other infrastructure to new data center facilities, and we may incur significant costs and possible service interruption in connection with doing so.

Problems faced by our third-party data center operations, with the telecommunications network providers with whom we or they contract, or with the systems by which our telecommunications providers allocate capacity among their customers, including us, could adversely affect the experience of publishers. Additionally, improving our platform's infrastructure and expanding its capacity in anticipation of growth in new channels and formats, as well as implementing technological enhancements to our platform to improve its efficiency and cost-effectiveness are key components of our business strategy, and if our data centers are unable to keep up with our growing needs for capacity, this could have an adverse effect on our business. Any changes in third-party service levels at our data centers or any errors, defects, disruptions, or other performance problems could adversely affect our reputation, expose us to liability, cause us to lose customers, or otherwise adversely affect our business, results of operations, and financial condition. Service interruptions might reduce our revenue, trigger refunds to publishers, subject us to potential liability, or adversely affect our business, results of operations, and financial condition.

The ongoing effects of the COVID-19 pandemic, or the occurrence of a natural disaster, an act of terrorism, vandalism or sabotage, or other unanticipated problems at these facilities could result in interruptions in the availability of our platform. While we have disaster recovery arrangements in place, they have not been tested under actual disasters or similar events and may not effectively permit us to continue to provide our products and services in the event of any problems with respect to our data centers. Moreover, because we do not currently have full redundancy with respect to the services at each data center, if one of our data centers shuts down there may be a period of time that our products or services, or some of our products or services, will be unavailable to publishers served by that data center. If any of these events were to occur to our business, our business, results of operations, or financial condition could be adversely affected.

Platform outages or disruptions, including any interruptions due to cyberattacks or to our failure to maintain adequate security and supporting infrastructure as we scale, could damage our reputation and our business, results of operations, and financial condition.

As we grow our business, we expect to continue to invest in our platform infrastructure, including hardware and software solutions, network services and database technologies, as well as potentially increase our reliance on open source software. Without these improvements, our operations might suffer from unanticipated system disruptions, slow transaction processing, unreliable service levels, impaired quality or delays in reporting accurate information regarding transactions in our platform, any of which could negatively affect our reputation and ability to attract and retain publishers. The steps we take to enhance the reliability, integrity and security of our platform as it scales are expensive and complex, and poor execution could result in operational failures. In addition, cyberattack techniques are constantly evolving and becoming increasingly diverse growing increasingly more sophisticated and could involve denial-of-service attacks or other maneuvers that have the effect of disrupting the availability of services on our platform, which could seriously harm our reputation and business. Other types of cyberattacks could harm us even if our platform operations are left undisturbed. For example, attacks may be designed to deceive employees into releasing control of their systems to a hacker, while others may aim to introduce computer viruses or malware into our systems with a view to stealing confidential or proprietary data. We are also vulnerable to unintentional errors or malicious actions by persons with authorized access to our systems that exceed the scope of their access rights, distribute data erroneously, or, unintentionally or intentionally, interfere with the intended operations of our platform. Incidents like this can give rise to a variety of losses and costs, including legal exposure, and regulatory fines, damages to deputation, amongst others. Although we maintain insurance coverage, it may be insufficient to protect us against all losses and costs stemming from security breaches, cyberattacks and other types of unlawful activity, or any resulting disruptions from such events. Outages and disruptions of our platform, including any caused by cyberattacks, may harm our reputation and our business, results of operations, and financial condition.

Maintaining the security and availability of our platform, network, and internal IT systems and the security of information we hold on behalf of our customers is a critical issue for us and our customers. Attacks on our customers and our own network are frequent and take a variety of forms, including DDoS attacks, infrastructure attacks, botnets, malicious file attacks, cross-site scripting, credential abuse, ransomware, bugs, viruses, worms, and malicious software programs.

Our software platform could be susceptible to errors, defects, or unintended performance problems that could adversely affect our business, results of operations, and financial condition.

We depend upon the sustained and uninterrupted performance of our platform to operate our business. Software bugs, faulty algorithms, technical or infrastructure problems, or system updates could lead to an inability to process data to place advertisements or price inventory effectively, or cause advertisements to display improperly or be placed in proximity to inappropriate content, which could adversely affect our business, results of operations, and financial condition. These risks are compounded by the complexity of our technology and the large amounts of data we utilize. Because our software is complex, undetected material defects, errors and failures may occur. Despite testing, errors, or bugs in our software may not be found until the software is in our live operating environment. For example, changes to our solution have in the past caused errors in the measurements of transactions conducted through our platform, resulting in disputes raised by publishers. Errors or failures in our solution, even if caused by the implementation of changes by publishers or partners to their systems, could also result in negative publicity, damage to our reputation, loss of or delay in market acceptance of our solution, increased costs or loss of revenue, or loss of competitive position. In such an event, we may be required or choose to expend additional resources to help mitigate any problems resulting from defects, errors and failures in our software. As a result, defects or errors in our products or services could harm our reputation, result in significant costs to us, impair the ability of publishers to sell and for buyers to purchase inventory and impair our ability to fulfill obligations with publishers and partners. Any significant interruptions could adversely affect our business, results of operations, and financial condition.

Legal uncertainty and industry unpreparedness for new regulations may mean substantial disruption and inefficiency, demand constraints, and reduced inventory supply and value.

Some of our publishers may be unprepared to comply with evolving regulatory guidance under the CCPA, CPRA, GDPR, or other new regulations, and may therefore remove personal data from their inventory before passing it into the bid stream, at least temporarily. This may lower their inventory, resulting in loss of ad spend and revenue for us. Further, since do not have direct relationships with end users, we rely on publishers to obtain such consents as required. While we can and do provide training and guidance on compliance, the nature of the ecosystem and technology does not support 100% verification that consent from end users has been obtained, when required, and we may pass on unknowingly pass on consumer personal information when we should not be. This exposes us to potential regulatory scrutiny, investigations, fines, penalties, and other legal and financial exposure. Additionally, privacy and data protection laws are evolving, and it is possible that these laws may be interpreted and applied in a manner that is inconsistent with our safeguards and practices that could result in fines, lawsuits and other penalties, and significant changes to our publishers business practices and inventory. Even well-prepared publishers and buyers may be confronted with difficult choices and administrative and technical hurdles as they implement their compliance programs and integrate with multiple other parties in the ecosystem. Privacy and data protection laws are evolving, and it is possible that these laws may be interpreted and applied in a manner that is inconsistent with our safeguards and practices that could result in fines, lawsuits and other penalties, and significant changes to our publisher's business practices. Further, compliance program design and implementation will be an ongoing process as understanding of CCPA, GDPR, or other new regulations increase and industry compliance standards evolve. The resulting process friction could result in substantial inefficiency and loss of inventory and demand, as well as increased burdens upon our organization as we seek to assist customers and adapt our own technology and processes as necessary to comply with the law and adapt to industry practice. The uncertain regulatory environment caused by the

CCPA, GDPR, or other new regulations may disadvantage us in comparison to large, integrated competitors such as Google and Facebook, which have greater compliance resources and can take advantage of their direct relationships with end users to secure consents from end users. Changes in the business practices of such large integrated competitors could impose additional requirements with respect to the retention and security of our handling or ability to handle customer and end user data, could limit our marketing and core business activities, and have an adverse effect on our business, results of operations, and financial condition.

Recent rulings from the Court of Justice of the European Union invalidated the EU-US Privacy Shield as a lawful means for transferring personal data from the European Union to the United States; this introduces increased uncertainty and may require us to change our EU data practices and/or rely on an alternative legally sufficient compliance measure.

The GDPR generally prohibits the transfer of personal data of EU subjects outside of the European Union, unless a lawful data transfer solution has been implemented or a data transfer derogation applies. On July 16, 2020, in a case known as Schrems II, the Court of Justice of the European Union (CJEU) ruled on the validity of two of the primary data transfer solutions. The first method, EU-US Privacy Shield operated by the U.S. Department of Commerce, was declared invalid as a legal mechanism to transfer data from Europe to the United States. As a result, despite the fact that we have certified our compliance to the EU-US Privacy Shield, our customers may no longer rely on this mechanism as a lawful means to transfer European data to us in the United States. For the time being, however, the Department of Commerce continues to operate the EU-US Privacy Shield, and if we fail to comply with the Privacy Shield requirements, we risk investigation and sanction by U.S. regulatory authorities, including the Federal Trade Commission. Such investigation could cost us significant time and resources, and could potentially result in fines, criminal prosecution, or other penalties. While the United States and the European Union are in discussions regarding a replacement to Privacy Shield, we cannot predict if we it will happen or if it does, what impact it will have on our business and industry.

The second mechanism, Standard Contractual Clauses (SCCs), an alternative transfer measure that we also offer to our EU customers for extra-EU data transfers, was upheld as a valid legal mechanism for transnational data transfer. However, the ruling requires that European organizations seeking to rely on the SCCs to export data out of the European Union ensure the data is protected to a standard that is "essentially equivalent" to that in the European Union including, where necessary, by taking "supplementary measures" to protect the data. It remains unclear what "supplementary measures" must be taken to allow the lawful transfer of personal data to the United States, and it is possible that EU data protection authorities may determine that there are no supplementary measures that can legitimize EU-US data transfers. For the time being, we will rely on SCCs for EU-US transfers of EU personal data and explore what "supplementary measures" it can implement to protect EU personal data that is transferred to us in the United States. SCCs also contemplate data received from a third party, but may not cover data that is collected directly on behalf of a third party. It remains unclear whether SCCs can cover our use of cookies and other tracking technologies placed directly on consumer’s browsers or devices through our publishers or buyers’ websites.

We may also need to restructure our data export practices as a result of Brexit. At the end of this year, European Union law will cease to apply to the United Kingdom. This means that data may not be able to flow freely between the European Union and the United Kingdom, and our United Kingdom subsidiaries may need to enter into SCCs and adopt "supplementary measures" both with customers and other group entities, in order to ensure the continuing flow of data to and from the United Kingdom subsidiary. We would likely need to restructure our transfers of European data via another European subsidiary and have such entity enter into the SCCs with other group entities and implement "supplementary measures" to ensure the continuing flow of data from the European Union to the United States. In the event that use of the SCCs is subsequently invalidated as a solution for data transfers to the United States, or there are additional changes to the data protection regime in the European Union resulting in any inability to transfer personal data from the European Union to the United States in compliance with data protection laws, European customers may be more inclined to work with businesses that do not rely on such compliance mechanisms to ensure legal and regulatory compliance, such as EU-based companies or other competitors that do not need to transfer personal data to the United States in order to avoid the above-identified risks and legal issues. Such changes could cause us to incur penalties under GDPR and could increase the cost and complexity of operating our business.

If mobile devices or their operating systems and Internet browsers develop in ways that prevent advertisements from being delivered to consumers, our header bidding business, as well as our business, results of operations, and financial condition generally, will be adversely affected.

Our success in the mobile channel depends upon the ability of our platform to provide advertising for mobile connected devices, the major operating systems or Internet browsers that run on them, and the thousands of applications that are downloaded onto them. The design of mobile devices and operating systems or browsers is controlled by third parties that may also introduce new devices and operating systems or modify existing ones, and network carriers may affect our ability to access specified content on mobile devices. For example, Apple recently announced its intent to eliminate the Identifier for Advertisers, which we and other advertising firms have used to deliver targeted advertisements to consumers. While the effects of this development are uncertain and would not prevent us from operating our header bidding technology on Apple products, it could reduce the value of the ad impressions we offer. If our platform cannot operate effectively with popular devices, operating systems, or Internet browsers, including Apple devices and iOS, our business, results of operations, and financial condition would be adversely affected.

Our platform utilizes header bidding, a nascent technology solution for mobile advertising, by which impressions that would have previously been exposed to different potential sources of demand in a sequence dictated by ad server priorities are instead available for concurrent competitive bidding by demand sources. This can help publishers increase revenue by exposing their inventory to more bidders, thereby allocating more inventory to demand sources that value it most highly. Header bidding allows us to compete with demand sources that would previously have been above us in publishers' ad server sequences.

We sell advertisement inventory directly through mobile application publishers, as well as through software development kits such as our OpenWrap SDK, and other proprietary technology of third parties, such as aggregators. From time to time our relationships with these third parties are terminated, the scale of these third parties' business with application providers is reduced, these third parties develop their own solutions that render ours obsolete, and the third parties' customers begin transacting directly between each other rather than through the third party, which causes the amount of mobile inventory available through our platform to decline. Any rapid or significant decline in mobile inventory would adversely affect our business, results of operations, and financial condition.

If CTV develops in ways that prevent advertisements from being delivered to consumers, our business, results of operations, and financial condition may be adversely affected.

As online video advertising has continued to scale and evolve, the amount of online video advertising being bought and sold programmatically has increased dramatically; this market continues to grow with the increased popularity of CTV and OTT media. However, despite the opportunities created by programmatic advertising, programmatic solutions for CTV and OTT publishers are still nascent compared to desktop and mobile video solutions. Many CTV publishers have backgrounds in cable or broadcast television and have limited experience with digital advertising, and in particular programmatic advertising. For these publishers, it is extremely important to protect the quality of the viewer experience to maintain brand goodwill and ensure that online advertising efforts do not create sales channel conflicts or otherwise detract from their direct sales force. In this regard, programmatic advertising presents a number of potential challenges, including the ability to ensure that ads are brand safe, comply with business rules around competitive separation, are not overly repetitive, are played at the appropriate volume, and do not cause delays in load-time of content. We believe that our platform is well-positioned to allow publishers the opportunity to achieve these goals and also reliably achieve "ad potting," or the placement of the desired number of advertisements in commercial breaks. In fact, our OpenWrap OTT platform was designed to address these challenges and we have invested significant time and resources cultivating relationships with CTV publishers to establish best practices and evangelize the benefits of programmatic CTV. While we believe that programmatic advertising will continue to grow as a percentage of overall CTV advertising, there can be no assurance that CTV publishers will adopt programmatic solutions such as ours, or the rate at which they may adopt such solutions, which could adversely affect our business, results of operations, and financial condition.

Failure to comply with industry self-regulation could adversely affect our business, results of operations, and financial condition.

In addition to complying with government regulations, we participate in trade associations and industry self-regulatory groups that promote best practices or codes of conduct addressing privacy. For example, we have undertaken to comply with industry codes of conduct in the United States and Europe. On our website, we offer consumers the ability to opt out of receiving advertisements based on cookies or other technologies. If we encounter difficulties implementing such guidelines, or our opt-out mechanisms fail to work as designed, we may experience negative publicity and be the subject of investigations or litigation. Any representations that we make regarding our adherence to self-regulatory standards could result in regulatory action if we fail to meet them. Any such action against us could be costly and time consuming, require us to change our business practices, cause us to divert management's attention and our resources, and be damaging to our reputation and our business. New self-regulatory guidelines that are inconsistent with our practices or in conflict with applicable laws and regulations in the United States and other countries where we do business could arise. If we fail to abide by or are perceived as not operating in accordance with applicable laws and regulations and industry best practices or any industry guidelines or codes with regard to privacy or the provision of Internet advertising, our reputation may suffer and we could lose relationships with our publishers or others.

In addition to government regulation, privacy advocates, and industry groups may propose new and different self-regulatory standards that may apply to us, and are constantly evolving in the United States, European Union, and other countries. Because the interpretation and application of privacy and data protection laws, regulations, rules, and other standards are still uncertain, it is possible that these laws, rules, regulations, and other actual or alleged legal obligations, such as contractual or self-regulatory obligations, may be interpreted and applied in a manner that is inconsistent with our existing data management practices or the functionality of our platform. If so, in addition to the possibility of fines, lawsuits, and other claims, we could be required to fundamentally change our business activities and practices or modify our software, which could have an adverse effect on our business, results of operations, and financial condition.

We generally do not have a direct relationship with consumers who view advertisements placed through our platform, so we may not be able to disclaim liabilities from such consumers through terms of use on our platform.

Advertisements on websites, applications and other digital media properties of publishers purchased through our platform are viewed by consumers visiting the publishers' digital media properties. Those publishers often have terms of use in place with their consumers that disclaim or limit their potential liabilities to consumers, or pursuant to which consumers waive rights to bring class actions against the publishers. We generally do not have terms of use in place with such consumers, so we cannot disclaim or limit potential liabilities to them through terms of use, which may expose us to greater liabilities than certain of our competitors.

Our continued business success depends upon our ability to offer high-quality inventory with appropriate viewability capabilities, and if our inventory quality declines or if we are unable to offer functionality that addresses quality concerns of both advertisers and publishers, our business, results of operations, and financial condition could be adversely affected.

We must address quality concerns of both advertisers and publishers. Publishers require ad quality tools that enable granular control over the characteristics of the ads that run on their ad impressions, including those relating to the advertiser, industry and content for a particular ad. We must also provide automatic or ad hoc blocking of ads that contain malware or other ads the publisher deems undesirable. Our inventory quality tools must continue to help publishers demonstrate the value and quality of their ad impressions to DSPs, advertisers, and agencies with automated fraud detection and viewability reporting. Maintaining and upgrading our capabilities associated with ad quality and inventory quality is complex and costly. If we fail to maintain high quality controls for our publishers and partners, our business, results of operations, and financial condition could be adversely affected.

In addition, the viewability of ad impressions is important to certain advertisers, because it enables them to assess the value of particular ad impressions as a means to reach a target audience. However, there is no consensus regarding the definition of viewability or the minimum standard viewability thresholds and metrics that should apply for different ad formats. We cannot predict whether consensus views will emerge, or what they will be. Incorporating accepted viewability approaches fully into our business as they evolve will require us to incur additional costs to integrate relevant technologies and process additional information through our platform. In addition, ad impressions that are well differentiated on the basis of viewability will also typically be differentiated on the basis of value, with those that are less viewable valued lower. In this context, if we are not able to effectively transact ad impressions with higher viewability and to incorporate appropriate viewability capabilities into our platform, we could be competitively disadvantaged and our business, results of operations, and financial condition could be adversely affected.

Future acquisitions or strategic investments could be difficult to identify and integrate, divert the attention of management, and could disrupt our business, dilute stockholder value and adversely affect our business, results of operations, and financial condition.

As part of our growth strategy, we may acquire or invest in other businesses, assets or technologies that are complementary to and fit within our strategic goals. Any acquisition or investment may divert the attention of management and require us to use significant amounts of cash, issue dilutive equity securities or incur debt. We have limited experience in acquiring other businesses. In addition, the anticipated benefits of any acquisition or investment may not be realized, and we may be exposed to unknown risks, any of which could adversely affect our business, results of operations, and financial condition, including risks arising from:

n difficulties in integrating the operations, technologies, product or service offerings, administrative systems, and personnel of acquired businesses, especially if those businesses operate outside of our core competency or geographies in which we currently operate;

n ineffectiveness or incompatibility of acquired technologies or solutions;

n potential loss of key employees of the acquired business;

n inability to maintain key business relationships and reputation of the acquired business;

n diversion of management attention from other business concerns;

n litigation arising from the acquisition or the activities of the acquired business, including claims from terminated employees, customers, former stockholders or other third parties;

n assumption of contractual obligations that contain terms that are not beneficial to us, require us to license or waive intellectual property rights, or increase our risk of liability;

n complications in the integration of acquired businesses or diminished prospects, including as a result of the COVID-19 pandemic and its global economic effects;

n failure to generate the expected financial results related to an acquisition on a timely manner or at all;

n failure to accurately forecast the impact of an acquisition transaction; and n implementation or remediation of effective controls, procedures, and policies for acquired businesses.

To fund future acquisitions, we may pay cash or issue additional shares of our Class A common stock, which could dilute our stockholders or diminish our cash reserves. Borrowing to fund an acquisition would result in increased fixed obligations and could also subject us to covenants or other restrictions that could limit our ability to effectively run our business.

We rely on publishers, buyers, and partners to abide by contractual requirements and relevant laws, rules, and regulations when using our platform, and legal claims or enforcement actions resulting from their actions could expose us to liabilities, damage our reputation, and be costly to defend.

The publishers, buyers, and partners engaging in transactions through our platform impose various requirements upon each other, and they and the underlying advertisers are subject to regulatory requirements by governments and standards bodies applicable to their activities. We may assume responsibility for satisfying or facilitating the satisfaction of some of these requirements through the contracts we enter into with publishers, buyers, and partners. In addition, we may have responsibility for some acts or omissions of publishers, buyers, or partners transacting business through our platform under applicable laws or regulations or as a result of common law duties, even if we have not assumed responsibility contractually. These responsibilities could expose us to significant liabilities, perhaps without the ability to impose effective mitigating controls upon, or to recover from, publishers and buyers. Moreover, for those third parties who are both publishers and buyers on our platform, it is feasible that they could use our platform to buy and sell advertisements in an effort to inflate their own revenue. We could be subject to litigation as a result of such actions, and, if we were sued, we would incur legal costs in our defense and cannot guarantee that a court would not attribute some liability to us.

We contractually require our publishers, buyers, data providers, and partners to abide by relevant laws, rules and regulations, and restrictions by their counterparties, when transacting on our platform, and we generally attempt to obtain representations from buyers that the advertising they place through our platform complies with applicable laws and regulations and does not violate third-party intellectual property rights, and from publishers about the quality and characteristics of the impressions they provide. We also generally receive representations from publishers, buyers, and data providers about their privacy practices and compliance with applicable laws and regulations, including their maintenance of adequate privacy policies that disclose and permit our data collection practices. Nonetheless, there are many circumstances in which it is difficult or impossible for us to monitor or evaluate their compliance. For example, we cannot control the content of publisher's media properties, and we are often unable to determine exactly what information a partner collects after an ad has been placed, and how the buyer uses any such collected information. Moreover, we are unable to prevent DSPs from aggregating bid requests from publishers and directing it to their own buying platforms or even reselling such bid data to advertisers or third parties.

If publishers, buyers, data providers, or partners fail to abide by relevant laws, rules and regulations, or contract requirements, when transacting over our platform, or after such a transaction is completed, we could potentially face liability to consumers for such misuse. Potential sources of liability to consumers include malicious activities, such as the introduction of malware into consumers' computers through advertisements served through our platform, and code that redirects consumers to sites other than the ones consumers sought to visit, potentially resulting in malware downloads or use charges from the redirect site. Publishers often have terms of use in place with their consumers that disclaim or limit their potential liabilities to such consumers, or pursuant to which consumers waive rights to bring class-action lawsuits against the publishers related to advertisements. Similarly, if such misconduct results in enforcement action by a regulatory body or other governmental authority, we could become involved in a potentially time-consuming and costly investigation or we could be subject to some form of sanction or penalty. We may not have adequate indemnity to protect us against, and our policies of insurance may not cover, such claims and losses.

We are subject to anti-bribery, anti-corruption, and similar laws and non-compliance with such laws can subject us to criminal penalties or significant fines and harm our business and reputation.

We are subject to anti-bribery and similar laws, such as the U.S. Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the USA PATRIOT Act, U.S. Travel Act, the U.K. Bribery Act 2010 and Proceeds of Crime Act 2002, and possibly other anti-corruption, anti-bribery, and anti-money laundering laws in countries in which we conduct activities. Anti-corruption laws have been enforced with great rigor in recent years and are interpreted broadly and prohibit companies and their employees and their agents from making or offering improper payments or other benefits to government officials and others in the private sector. The FCPA or other applicable anti-corruption laws may also hold us liable for acts of corruption or bribery committed by our third-party business partners, representatives, and agents, even if we do not authorize such activities. As we increase our international sales and business, and increase our use of third parties, our risks under these laws will increase. As a public company, the FCPA separately requires that we keep accurate books and records and maintain internal accounting controls sufficient to assure management's control, authority, and responsibility over our assets. We have adopted policies and procedures and conduct training designed to prevent improper payments and other corrupt practices prohibited by applicable laws, but cannot guarantee that improprieties will not occur. Noncompliance with these laws could subject us to investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension and/or debarment from contracting with specified persons, the loss of export privileges, reputational harm, adverse media coverage, and other collateral consequences. Any investigations, actions, and/or sanctions could have an adverse effect on our business, results of operations, and financial condition.

We are subject to governmental economic sanctions requirements and export and import controls that could impair our ability to compete in international markets or subject us to liability if we are not in compliance with applicable laws.

We are subject to various U.S. export control and trade and economic sanctions laws and regulations, including the U.S. Export Administration Regulations and the various sanctions programs administered by the U.S. Department of the Treasury's Office of Foreign Assets Control (collectively, Trade Controls). U.S. Trade Controls may prohibit the shipment of specified products and services to certain countries, governments, and persons. Although we endeavor to conduct our business in compliance with Trade Controls, our failure to successfully comply may expose us to negative legal and business consequences, including civil or criminal penalties, governmental investigations, and reputational harm.

Furthermore, if we export our technology or software, the exports may require authorizations, including a license, a license exception, or other appropriate government authorization or regulatory requirements. Complying with Trade Controls may be time-consuming and may result in the delay or loss of opportunities.

In addition, various countries regulate the import of encryption technology, including the imposition of import permitting and licensing requirements, and have enacted laws that could limit our ability to offer our platform or could limit our customers' ability to use our platform in those countries. Changes in our platform or future changes in export and import regulations may create delays in the introduction of our platform in international markets or prevent our customers with international operations from deploying our platform globally. Any change in export or import regulations, economic sanctions or related legislation, or change in the countries, governments, persons, or technologies targeted by such regulations, could result in decreased use of our platform by, or in our decreased ability to export our technology and services to, existing or potential customers with international operations. Any decreased use of our platform or limitation on our ability to export our platform would likely adversely affect our business, results of operations, and financial condition.

Our corporate culture has contributed to our success, and if we cannot maintain it as we grow, we could lose the innovation, creativity, and teamwork fostered by our culture, and our business may be harmed.

We believe our corporate culture has been a critical component of our success as we believe it fosters innovation, creativity, and teamwork across our business, helping to drive our success. We intend to expand our overall headcount and operations both domestically and internationally, with no assurance that we will be able to do so while effectively maintaining our corporate culture. As we expand and change, in particular across multiple geographies or following acquisitions, it may be difficult to preserve our corporate culture, which could reduce our ability to innovate, create, and operate effectively. In turn, the failure to preserve our culture could adversely affect our business, results of operations, and financial condition by negatively affecting our ability to attract, recruit, integrate and retain employees, continue to perform at current levels, and effectively execute our business strategy.

Our intellectual property rights may be difficult to enforce and protect, which could enable others to copy or use aspects of our technology without compensating us, thereby eroding our competitive advantages and having an adverse effect on our business, results of operations, and financial condition.

We rely upon a combination of trade secrets, third-party confidentiality and non-disclosure agreements, additional contractual restrictions on disclosure and use, and trademark, copyright, patent, and other intellectual property laws to establish and protect our proprietary technology and intellectual property rights. We currently own trademark registrations and applications for the "PubMatic" name and variants thereof and other product-related marks in the United States and certain foreign countries. We have also registered numerous Internet domain names related to our business. We also rely on copyright laws to protect computer programs related to our platform and our proprietary technologies, although to date we have not registered for statutory copyright protection. In order to bring a copyright infringement lawsuit in the United States, the copyright must be registered. Accordingly, the remedies and damages available to us for unauthorized use of our software may be limited. Historically, we have prioritized keeping our technology architecture, trade secrets, and engineering roadmap private, and as a general matter, have not patented our proprietary technology. As a result, we cannot look to patent enforcement rights to protect much of our proprietary technology. Furthermore, our patent strategy is still in its early stages. We may not be able to obtain any further patents, and our pending application may not result in the issuance of a patent. Any issued patents may be challenged, invalidated, or circumvented, and any rights granted under these patents may not actually provide adequate defensive protection or competitive advantages to us. Additionally, the process of obtaining patent protection is expensive and time-consuming, and we may not be able to prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner.

While it is our policy to protect and defend our rights to our intellectual property, we cannot predict whether steps taken by us to protect our intellectual property will be adequate to prevent infringement, misappropriation, dilution, or other violations of our intellectual property rights. Third parties may knowingly or unknowingly infringe our intellectual property rights, third parties may challenge intellectual property rights held by us, and pending and future trademark and patent applications may not be approved. These claims may result in restrictions on our use of our intellectual property or the conduct of our business. In any of these cases, we may be required to expend significant time and expense to prevent infringement or to enforce our rights. We also cannot guarantee that others will not independently develop technology with the same or similar functions to any proprietary technology we rely on to conduct our business and differentiate ourselves from our competitors. Unauthorized parties may also attempt to copy or obtain and use our technology to develop applications with the same functionality as our solutions, and policing unauthorized use of our technology and intellectual property rights is difficult and may not be effective. In addition, the laws of some foreign countries may not be as protective of intellectual property rights as those of the United States, and mechanisms for enforcement of our intellectual property rights in such countries may be inadequate. If we are unable to protect our intellectual property rights (including in particular, the proprietary aspects of our platform) we may find ourselves at a competitive disadvantage to others who have not incurred the same level of expense, time and effort to create, and protect their intellectual property.

Our customer agreements generally restrict the use of our confidential information solely to such customer's use in connection with its use of our services. In spite of such limitations, reverse engineering our software or the theft or misuse of our confidential information could occur by customers or other third parties who have access to our technology.

We also endeavor to enter into agreements with our employees and contractors in order to limit access to and disclosure of our confidential information, as well as to clarify rights to intellectual property and technology associated with our business. These agreements may not effectively grant all necessary rights to any inventions that may have been developed by the employees or consultants party thereto. In addition, these agreements may not effectively prevent unauthorized use or disclosure of our confidential information, intellectual property or technology and may not provide an adequate remedy in the event of unauthorized use or disclosure of our confidential information, intellectual property, or technology. Furthermore, protecting our intellectual property is particularly challenging after our employees or our contractors end their relationship with us, and, in some cases, decide to work for our competitors. Enforceability of the non-compete agreements that we have in place is not guaranteed, and contractual restrictions could be breached without discovery or adequate remedies.

We rely on licenses to use the intellectual property rights of third parties to conduct our business.

We rely on products, technologies, and intellectual property that we license from third parties, for use in operating our business. We cannot assure you that these third-party licenses, or support for such licensed products and technologies, will continue to be available to us on commercially reasonable terms, if at all. We cannot be certain that our licensors are not infringing the intellectual property rights of others or that our suppliers and licensors have sufficient rights to the technology in all jurisdictions in which we may operate. Some of our license agreements may be terminated by our licensors for convenience. If we are unable to obtain or maintain rights to any of this technology because of intellectual property infringement claims brought by third parties against our suppliers and licensors or against us, or if we are unable to continue to obtain the technology or enter into new agreements on commercially reasonable terms, our ability to operate and expand our business could be harmed.

If publishers or buyers do not have sufficient rights to the content, technology, data, or other material that they provide or make available to us, our business and reputation may be harmed.

If publishers or buyers do not have sufficient rights to the content, technology, data, or other material associated with an ad impression that they provide, or if it infringes or is alleged to infringe the intellectual property rights of third parties, we could be subject to claims from those third parties, which could adversely affect our business, results of operations, and financial condition. For example, channel partners may aggregate ad impressions across several publishers, and we may not be able to verify that these aggregators own or have rights to all of their digital ad impressions. As a result, we may face potential liability for copyright, patent, trademark or other intellectual property infringement, or other claims. Litigation to defend these claims could be costly and have an adverse effect on our business, results of operations, and financial condition. We cannot assure you that we are adequately insured to cover claims of these types or adequately indemnified for all liability that may be imposed on us as a result of these claims.

We may be subject to intellectual property rights claims by third parties, which are costly to defend, could require us to pay significant damages and could limit our ability to use technology or intellectual property.

We operate in an industry with extensive intellectual property litigation. There is a risk that our business, platform, and services may infringe or be alleged to infringe the trademarks, copyrights, patents, and other intellectual property rights of third parties, including patents held by our competitors or by non-practicing entities. We may also face allegations that our employees have misappropriated or divulged the intellectual property of their former employers or other third parties. Regardless of whether claims that we are infringing patents or other intellectual property rights have any merit, the claims are time consuming, divert management attention and financial resources and are costly to evaluate and defend. Some of our competitors have substantially greater resources than we do and are able to sustain the cost of complex intellectual property litigation to a greater extent and for longer periods of time than we could. Results of these litigation matters are difficult to predict and may require us to stop offering some features, purchase licenses, which may not be available on favorable terms or at all, or modify our technology or our platform while we develop non-infringing substitutes, or incur significant settlement costs. Any of these events could have an adverse effect on our business, results of operations, and financial condition.

Our platform relies on third-party open source software components. Failure to comply with the terms of the underlying open source software licenses could expose us to liabilities, and the combination of open source software with code that we develop could compromise the proprietary nature of our platform.

Our platform utilizes software licensed to us by third-party authors under "open source" licenses and we expect to continue to utilize open source software in the future. The use of open source software may entail greater risks than the use of third-party commercial software, as open source licensors generally do not provide warranties or other contractual protections regarding infringement claims or the quality of the code. To the extent that our platform depends upon the successful operation of the open source software we use, any undetected errors or defects in this open source software could prevent the

deployment or impair the functionality of our platform, delay new solutions introductions, result in a failure of our platform, and injure our reputation. For example, undetected errors or defects in open source software could render it vulnerable to breaches or security attacks, and, in conjunction, make our systems more vulnerable to data breaches. Furthermore, some open source licenses contain requirements that we make available source code for modifications or derivative works we create based upon the type of open source software we use. If we combine our proprietary software with open source software in a specific manner, we could, under some open source licenses, be required to release the source code of our proprietary software to the public. This would allow our competitors to create similar solutions with lower development effort and time and ultimately put us at a competitive disadvantage.

Although we monitor our use of open source software to avoid subjecting our platform to conditions we do not intend, we cannot assure you that our processes for controlling our use of open source software in our platform will be effective. If we are held to have breached the terms of an open source software license, we could be required to seek licenses from third parties to continue operating using our solution on terms that are not economically feasible, to re-engineer our solution or the supporting computational infrastructure to discontinue use of code, or to make generally available, in source code form, portions of our proprietary code.

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

Our business is vulnerable to damage or interruption from pandemics, earthquakes, flooding, fire, power outages, telecommunications failures, terrorist attacks, acts of war, human errors, break-ins, and similar events. In particular, the COVID-19 pandemic, including the reactions of governments, markets, and the general public, may result in a number of adverse consequences for our business, results of operations, and financial condition, many of which are beyond our control. A significant natural disaster could have a material adverse effect on our business, results of operations, and financial condition, and our insurance coverage may be insufficient to compensate us for losses that may occur. Our corporate offices and one of our data center facilities are located in California, a state known for seismic activity. Significant portions of our development and advertising operations work is located in Pune, India, which is susceptible to earthquakes and flooding. In addition, acts of terrorism, which may be targeted at metropolitan areas that have higher population density than rural areas, could cause disruptions in our or publishers' and partners' businesses or the economy as a whole. Our servers may also be vulnerable to computer viruses, break-ins, denial-of-service attacks, and similar disruptions from unauthorized tampering with our computer systems, which could lead to interruptions, delays, loss of critical data. We may not have sufficient protection or recovery plans in some circumstances, such as natural disasters affecting California, New York, Virginia, or Pune, India. As we rely heavily on our data center facilities, computer and communications systems and the Internet to conduct our business and provide high-quality customer service, these disruptions could negatively impact our ability to run our business and either directly or indirectly disrupt publishers' and partners' businesses, which could have an adverse effect on our business, results of operations, and financial condition.

We are an emerging growth company subject to reduced disclosure requirements, and there is a risk that availing ourselves of such reduced disclosure requirements will make our Class A common stock less attractive to investors.

We are an emerging growth company, and for as long as we continue to be an emerging growth company, we intend to take advantage of exemptions from various reporting requirements such as, but not limited to, not being required to obtain auditor attestation of our reporting on internal control over financial reporting, having reduced disclosure obligations about our executive compensation in this prospectus and in our periodic reports and proxy statements, and not being required to hold advisory stockholder votes on executive compensation and stockholder approval of any golden parachute payments not previously approved. If some investors find our Class A common stock less attractive as a result, there may be a less active trading market for our Class A common stock, and our stock price may be more volatile.

We will remain an emerging growth company until the earliest of: the end of the fiscal year in which the market value of the shares of our outstanding capital stock held by non-affiliates is $700 million or more as of the end of the second quarter of that year, the end of the fiscal year in which we have total annual gross revenue of $1.07 billion, the date on which we issue more than $1.0 billion in nonconvertible debt in a three-year period, or five years from the date of this prospectus.

If we fail to establish and maintain effective internal controls, our ability to produce accurate financial statements and other disclosures on a timely basis could be impaired.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are continuing to develop and refine our disclosure controls and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we will file with the SEC is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms and that information required to be disclosed in reports under the Securities Exchange Act of 1934, as amended (Exchange Act), is accumulated and communicated to our principal executive and financial officers. We are also continuing to expand our internal controls over financial reporting. In order to maintain and improve the effectiveness of our disclosure controls and procedures and internal control over financial reporting, we have expended, and anticipate that we will continue to expend, significant resources, including accounting-related costs, and significant management oversight. If any of these new or improved controls and systems do not perform as expected, we may experience material weaknesses in our controls. In addition to our results determined in accordance with GAAP, we believe certain non-GAAP measures and key metrics may be useful in evaluating our operating performance. We present certain non-GAAP financial measures and key metrics in this prospectus and intend to continue to present certain non-GAAP financial measures and key metrics in future filings with the SEC and other public statements. Any failure to accurately report and present our non-GAAP financial measures and key metrics could cause investors to lose confidence in our reported financial and other information, which would likely have a negative effect on the trading price of our Class A common stock.

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. 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 consolidated 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 will eventually be 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, which would likely have a negative effect on 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 Nasdaq Global Market. We are not currently required to comply with the SEC rules that implement Section 404 of the Sarbanes-Oxley Act and are therefore not required to make a formal assessment of the effectiveness of our internal control over financial reporting for that purpose. As a public company, we will be required to provide an annual management report on the effectiveness of our internal control over financial reporting commencing with our second annual report on Form 10-K.

Our independent registered public accounting firm is not required to formally attest to the effectiveness of our internal control over financial reporting until after we are no longer an "emerging growth company" as defined in the JOBS Act. At such time, our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our internal control over financial reporting is documented, designed or operating. Any failure to maintain effective disclosure controls and internal control over financial reporting could harm our business, results of operations, and financial condition and could cause a decline in the price of our Class A common stock.

Our management team has limited experience managing a public company and we will incur significantly increased costs and devote substantial management time as a result of operating as a public company.

Most members of our management team have limited experience managing a publicly traded company, interacting with public company investors, and complying with the increasingly complex laws, rules, and regulations that govern public companies. As a public company, we are subject to significant obligations relating to reporting, procedures and internal controls, and our management team may not successfully or efficiently manage such obligations. These obligations and scrutiny will require significant attention from our management and could divert their attention away from the day-to-day management of our business, which could adversely affect our business, results of operations, and financial condition. We expect that compliance with these requirements will increase our compliance costs. We will need to hire additional accounting, financial, and legal staff with appropriate public company experience and technical accounting knowledge and will need to establish an internal audit function. We cannot predict or estimate the amount of additional costs we may incur as a result of becoming a public company or the timing of these costs.

We also expect that being a public company will make it more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our Audit Committee and Compensation Committee, and qualified executive officers.

Our loan agreement contains operating and financial covenants that may restrict our business and financing activities.

As of September 30, 2020, we had no outstanding borrowings under our loan and security agreement with Silicon Valley Bank (SVB). Borrowings under this agreement are secured by substantially all of our assets, excluding our intellectual property. This loan and security agreement also restricts our ability, without SVB's written consent, to, among other things:

n dispose of or sell our assets;

n make material changes in our business or management;

n consolidate or merge with other entities;

n incur additional indebtedness;

n create liens on our assets;

n pay dividends;

n make investments;

n enter into transactions with affiliates;

n pay off or redeem subordinated indebtedness; and n become an "investment company" under the Investment Company Act of 1940.

In addition, our loan and security agreement with SVB contains covenants requiring us to comply with minimum monthly liquidity requirements.

The operating and financial restrictions and covenants in the loan and security agreement, as well as any future financing arrangements that we may enter into, may restrict our ability to finance our operations, engage in, expand, or otherwise pursue our business activities and strategies. On occasion in the past, we failed to comply with covenants related to providing audited financial statements, for which we obtained waivers from SVB. Our ability to comply with these or other covenants may be affected by events beyond our control, and future breaches of these or other covenants could result in a default under the loan and security agreements. If not waived, future defaults could cause all of the outstanding indebtedness under our loan and security agreement to become immediately due and payable and terminate all commitments to extend further credit.

If we do not have or are unable to generate sufficient cash to repay our debt obligations when they become due and payable, either upon maturity or in the event of a default, we may not be able to obtain additional debt or equity financing on favorable terms, if at all, which may negatively impact our ability to operate and continue our business as a going concern.

We are subject to regulation with respect to political advertising, which lacks clarity and uniformity.

We are subject to regulation with respect to political advertising activities, which are governed by various federal and state laws in the United States, and national and provincial laws worldwide. Online political advertising laws are rapidly evolving and our publishers may impose restrictions on receiving political advertising. The lack of uniformity and increasing compliance requirements around political advertising may adversely impact the amount of

political advertising spent through our platform, increase our operating and compliance costs, and subject us to potential liability from regulatory agencies.

We may need additional capital in the future to meet our financial obligations and to pursue our business objectives. Additional capital may not be available on favorable terms, or at all, which could compromise our ability to meet our financial obligations and grow our business.

We may need to raise additional capital to fund operations in the future or to finance acquisitions or other business objectives. Additional capital may not be available on favorable terms or at all. Lack of sufficient capital resources could significantly limit our ability to meet our financial obligations or to take advantage of business and strategic opportunities. Any additional capital raised through the sale of equity or convertible debt securities would dilute your stock ownership, and any new equity securities we issue could have rights, preferences, and privileges superior to those of holders of our Class A common stock. Any debt financing we 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, including potential acquisitions. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, we may be required to delay, reduce the scope of, or eliminate material parts of our business strategy, including potential additional acquisitions or development of new technologies and geographic expansion.

Our tax liabilities may be greater than anticipated.

The U.S. and non-U.S. tax laws applicable to our business activities are subject to interpretation and are changing. We are subject to audit by the Internal Revenue Service and by taxing authorities of the state, local and foreign jurisdictions in which we operate. Our tax obligations are based in part on our corporate operating structure, including the manner in which we develop, value, use and hold our intellectual property, the jurisdictions in which we operate, how tax authorities assess revenue-based taxes such as sales and use taxes, the scope of our international operations, and the value we ascribe to our intercompany transactions. Taxing authorities may challenge, and have challenged, our tax positions and methodologies for valuing developed technology or intercompany arrangements, positions regarding the collection of sales and use taxes, and the jurisdictions in which we are subject to taxes, which could expose us to additional taxes. Any adverse outcomes of such challenges to our tax positions could result in additional taxes for prior periods, interest and penalties, as well as higher future taxes. In addition, our future tax expense could increase as a result of changes in tax laws, regulations or accounting principles, or as a result of earning income in jurisdictions that have higher tax rates. For example, the European Commission has proposed, and various jurisdictions have enacted or are considering enacting laws that impose separate taxes on specified digital services, which may increase our tax obligations in such jurisdictions. Any increase in our tax expense could have a negative effect on our financial condition and results of operations. Moreover, the determination of our provision for income taxes and other tax liabilities requires significant estimates and judgment by management, and the tax treatment of certain transactions is uncertain. Given uncertainty with respect to the impact of the COVID-19 pandemic on our operations, the income tax benefit/expense we record may vary significantly in future periods. Any changes, ambiguity, or uncertainty in taxing jurisdictions' administrative interpretations, decisions, policies and positions, including the position of taxing authorities with respect to revenue generated by reference to certain digital services, could also materially impact our income tax liabilities. Although we believe we will make reasonable estimates and judgments, the ultimate outcome of any particular issue may differ from the amounts previously recorded in our financial statements and any such occurrence could adversely affect our business, results of operations, and financial condition.

Risks Related to this Offering, the Securities Markets and Ownership of Our Class A Common Stock

There has been no prior public trading market for our Class A common stock, and an active trading market for our Class A common stock might not develop.

Before this offering, there has been no public market for shares of our Class A common stock. We cannot assure you that an active trading market for our shares will develop or, that any market will be sustained. We cannot predict the prices at which our Class A common stock will trade. The initial public offering price of our Class A common stock will be determined by negotiations between us, the selling stockholders, and the underwriters, and may not bear any relationship to the price at which our Class A common stock will trade after the completion of this offering or to any other established criteria of the value of our business.

In addition, the market price of our common stock following this offering is likely to be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. Accordingly, we cannot assure you of the liquidity of any trading market, your ability to sell your shares of our common stock when desired or the prices that you may obtain for your shares of our common stock.

The trading price of the shares of our Class A common stock is likely to be volatile, and purchasers of our Class A common stock could incur substantial losses.

Technology stocks historically have experienced high levels of volatility. The trading price of our Class A common stock following this offering may fluctuate substantially. Following the completion of this offering, the market price of our Class A common stock may be higher or lower than the price you pay in the offering, depending on many factors, some of which are beyond our control and may not be related to our operating performance. These fluctuations could cause you to incur substantial losses, including all of your investment in our Class A common stock. Factors that could cause fluctuations in the trading price of our Class A common stock include the following:

n significant volatility in the market price and trading volume of technology companies in general and of companies in the digital advertising industry in particular;

n announcements of new solutions or technologies, commercial relationships, acquisitions, or other events by us or our competitors;

n price and volume fluctuations in the overall stock market from time to time;

n changes in how customers perceive the benefits of our platform and future offerings;

n the public's reaction to our press releases, other public announcements, and filings with the SEC;

n fluctuations in the trading volume of our shares or the size of our public float;

n sales of large blocks of our common stock; actual or anticipated changes or fluctuations in our results of operations or financial projections;

n changes in actual or future expectations of investors or securities analysts;

n litigation involving us, our industry, or both;

n governmental or regulatory actions or audits;

n regulatory developments applicable to our business, including those related to privacy in the United States or globally;

n general economic conditions and trends;

n major catastrophic events in our domestic and foreign markets; and n departures of key employees.

In addition, if the market for technology stocks, the stock of digital advertising companies or the stock market, in general, experiences a loss of investor confidence, the trading price of our Class A common stock could decline for reasons unrelated to our business, results of operations, or financial condition. The trading price of our Class A common stock might also decline in reaction to events that affect other companies in the digital advertising industry even if these events do not directly affect us. In the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been brought against that company. If litigation is instituted against us, we could incur substantial costs and divert management's attention and resources.

The dual class structure of our common stock will have the effect of concentrating voting control with those stockholders who held our capital stock prior to the completion of this offering, including our directors, executive officers, and 5% stockholders who will hold in the aggregate % of the voting power of our capital stock following the completion of this offering, which will limit or preclude your ability to influence corporate matters, including the election of directors and the approval of any change of control transaction.

Our Class B common stock has votes per share, and our Class A common stock has one vote per share. Following this offering, our directors, officers, and holders of more than 5% of our common stock, and their respective affiliates, will hold in the aggregate % of the voting power of our capital stock, assuming an initial public offering price of $ per share, the midpoint of the range on the cover of this prospectus, and assuming the Cash Election, as described in "Description of Capital Stock—Special Conversion Adjustments for the Series D and Series D Prime Convertible Preferred Stock." Because of the voting ratio between our Class B and Class A common stock, the holders of our Class B common stock collectively will continue to control a majority of the combined voting power of our common stock and therefore be able to control all matters submitted to our stockholders for approval until . This concentrated control will limit or preclude your ability to influence corporate matters for the foreseeable future, including the election of directors, amendments of our organizational documents, and any merger, consolidation, sale of all or substantially all of our assets, or other major corporate transaction requiring stockholder approval. The interests of this group of stockholders may not coincide with our interests or the interests of other stockholders. This concentration of ownership may also have the effect of deterring, delaying or preventing a change of control of our company, could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company and might ultimately affect the market price of our common stock. Having a dual-class common stock structure may make our Class A common stock less attractive to some investors, such as funds and investment companies that attempt to track the performance of any indexes that prohibit or limit the inclusion of companies with such structures.

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 transfers effected for estate planning purposes. The conversion of Class B common stock to Class A common stock will have the effect, over time, of increasing the relative voting power of those holders of Class B common stock who retain their shares in the long term. As a result, it is possible that one or more of the persons or entities holding our Class B common stock could gain significant voting control as other holders of Class B common stock sell or otherwise convert their shares into Class A common stock. See "Description of Capital Stock—Anti-Takeover Provisions" for additional information.

If securities or industry analysts do not publish research or publish unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our Class A common stock will, to some extent, depend on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us should downgrade our shares, change their opinion of our business prospects or publish inaccurate or unfavorable research about our business, our share price may decline. If one or more of these analysts who cover us ceases coverage of our company or fails to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

If you purchase shares of our Class A common stock in this offering, your investment will experience immediate dilution.

We expect the initial public offering price of our Class A common stock to be substantially higher than the pro forma net tangible book value per share of our Class A common stock following this offering based on the total value of our tangible assets less our total liabilities. Therefore, if you purchase shares of our Class A common stock in this offering, you will pay a price per share that substantially exceeds our pro forma net tangible book value per share after this offering. Based on an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, you will experience immediate dilution of $ per share, representing the difference between our pro forma as adjusted net tangible book value per share as of September 30, 2020, after giving effect to the issuance of shares of our Class A common stock in this offering. To the extent current or future outstanding equity awards are settled in shares of our capital stock, you will incur further dilution. Furthermore, if the underwriters exercise their option to purchase additional shares or outstanding options are exercised, you could experience further dilution. For a further description of the dilution that you will experience immediately after this offering, see "Dilution."

Sales of substantial amounts of our Class A common stock in the public markets, or the perception that they might occur, could cause the market price of our Class A common stock to decline.

Sales of a substantial number of shares of our Class A common stock into the public market, particularly sales by our directors, executive officers, and principal stockholders, or the perception that these sales might occur, could cause the market price of our Class A common stock to decline and may make it more difficult for you to sell your common stock at a time and price that you deem appropriate.

All of the shares of Class A common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act of 1933, as amended (Securities Act), except for any shares held by our affiliates as defined in Rule 144 under the Securities Act (including any shares that may be purchased by any of our affiliates in this offering). The remaining shares of our common stock are subject to the lock-up agreement or market stand-off agreements described below.

Subject to certain exceptions, we, all of our directors and executive officers, the selling stockholders, and substantially all of the holders of our common stock, or securities exercisable for or convertible into our common stock outstanding immediately prior to this offering, are subject to market stand-off agreements or have agreed not to offer, sell, or agree to sell, directly or indirectly, any shares of common stock without the permission of Jefferies LLC on behalf of the underwriters, for a period of 180 days from the date of this prospectus. When the lock-up period expires, we and our securityholders subject to a lock-up agreement or market stand-off agreement will be able to sell our shares in the public market. In addition, the underwriters may, in their sole discretion, release all or some portion of the shares subject to lock-up agreements prior to the expiration of the lock-up period. See “Shares Eligible for Future Sale” and “Underwriting” for more information. Sales of a substantial number of such shares upon expiration of the lock-up and market stand-off agreements, or the perception that such sales may occur, or early release of these agreements, could cause our market price to fall or make it more difficult for you to sell your Class A common stock at a time and price that you deem appropriate.

In addition, as of September 30, 2020, we had options outstanding that, if fully exercised, would result in the issuance of 8,912,631 shares of Class B common stock. We also granted options to purchase 711,180 shares of our Class B common stock subsequent to September 30, 2020. All of the shares of Class B common stock issuable upon the exercise or settlement of stock options, and the shares reserved for future issuance under our equity incentive plans, will be registered for public resale under the Securities Act. Accordingly, these shares will be able to be freely sold in the public market upon issuance subject to existing lock-up or market standoff agreements and applicable vesting requirements.

Furthermore, assuming an initial public offering price of $ per share, the midpoint of the range on the cover of this prospectus, in the event we elect the Equity Election, as described in “Description of Capital Stock—Special Conversion Adjustments for the Series D and Series D Prime Convertible Preferred Stock,” there will be an additional shares of Class B common stock outstanding, which will be freely tradable, subject to existing lock-up or market standoff agreements and, in certain cases, volume limitations pursuant to Rule 144 under the Securities Act.

Additionally, after this offering, the holders of an aggregate of shares of our Class B common stock, or their transferees, will have rights, subject to some conditions, to require us to file registration statements for the public resale of the Class A common stock issuable upon conversion of such shares or to include such shares in registration statements that we may file for us or other stockholders. If we were to register these shares for resale, they could be freely sold in the public market. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

Defensive measures in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management and limit the market price of our Class A common stock.

Our restated certificate of incorporation and restated bylaws that will be in effect upon completion of this offering contain provisions that could delay or prevent a change in control of our company. These provisions could also make it difficult for stockholders to elect directors who are not nominated by the current members of our board of directors or take other corporate actions, including effecting changes in our management. These provisions include:

n classified board of directors, which could delay the ability of stockholders to change the membership of our board;

n the ability of our board to issue shares of preferred stock without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquirer;

n a prohibition on stockholder action by written consent;

n the requirement that a special meeting of stockholders may be called only by the chairman of the board, our chief executive officer, our lead director, or a majority of our board;

n the requirement for the affirmative vote of holders of at least 66-2/3% of the voting power of all of the then outstanding shares of the voting stock, voting together as a single class, to amend provisions of our restated certificate of incorporation or our restated bylaws;

n the ability of our board to amend the bylaws, which may allow it to take additional actions to prevent an unsolicited takeover and inhibit the ability of an acquirer;

n the requirement that stockholders submitting notice of a nomination or proposal to be considered at an annual meeting of our stockholders must have continuously beneficially owned at least 1% of our outstanding common stock for a period of one year before giving such notice;

n advance notice procedures with which stockholders must comply to nominate candidates to our board or to propose matters to be acted upon at a stockholders’ meeting; and n the 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 common stock, including the election of directors and significant corporate transactions, such as a merger or other sale of our company or its assets.

In addition, our restated certificate of incorporation will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for derivative actions, actions asserting a breach of fiduciary duty, actions asserting a claim against us arising pursuant to the Delaware General Corporation Law, our restated certificate of incorporation or restated bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine.

This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, or other employees, which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provision contained in our restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, results of operations, and financial condition.

In addition, because we are incorporated in Delaware, we are governed by the provisions of the anti-takeover provisions of the Delaware General Corporation Law, which may discourage, delay or prevent a change in control by prohibiting us from engaging in a business combination with an interested stockholder for a period of three years after the person becomes an interested stockholder, even if a change of control would be beneficial to our existing stockholders. Although we believe these provisions collectively provide for an opportunity to obtain greater value for stockholders by requiring potential acquirers to negotiate with our board, they would apply even if an offer rejected by our board was considered beneficial by some stockholders. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board, which is responsible for appointing the members of our management.

We will have broad discretion in the use of proceeds from this offering and may invest or spend the proceeds in ways with which you do not agree and in ways that may not yield a return.

We intend to use the net proceeds that we receive in this offering for working capital and other general corporate purposes, which may include product development, general and administrative matters and capital expenditures. We may also use a portion of the net proceeds for the acquisition of, or investment in, technologies, solutions or businesses that complement our business, although we have no present commitments or agreements to enter into any acquisitions or investments. In the event of a Cash Election, as described under "Description of Capital Stock—Special Conversion Adjustments for the Series D and Series D Prime Convertible Preferred Stock," we may also use a portion of the proceeds to pay amounts owed to holders of our Series D and Series D Prime convertible preferred stock. Consequently, our management will have broad discretion over the specific use of these net proceeds and may do so in a way with which our investors disagree. The failure by our management to apply and invest these funds effectively may not yield a favorable return to our investors and may adversely affect our business and financial condition. Pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value. If we do not use the net proceeds that we receive in this offering effectively, our business, results of operations, and financial condition could be adversely affected.

Because we do not anticipate paying any cash dividends on our common stock in the foreseeable future, capital appreciation, if any, will be your sole source of gains.

We have never declared or paid any dividends on our common stock. We currently intend to retain any earnings to finance the operation and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. Any determination to pay dividends in the future will be at the discretion of our board of directors. In addition, the terms of our existing debt arrangements preclude us from paying dividends and our future debt agreements, if any, may contain similar restrictions. As a result, you may only receive a return on your investment in our Class A common stock if the market price of our Class A common stock increases.

Special Note Regarding Forward-Looking Statements

Special Note Regarding Forward-looking Statements

This prospectus, including the sections entitled "Prospectus Summary," "Risk Factors," "Use of Proceeds," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Business" contains forward-looking statements. The words "believe," "may," "will," "potentially," "estimate," "continue," "anticipate," "intend," "could," "would," "project," "plan," "expect," and similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements. Forward-looking statements contained in this prospectus include, but are not limited to, statements about:

n our future financial and operating results;

n our ability to maintain our growth and profitability;

n our ability to attract and retain publishers;

n our ability to expand the utilization of our buyers;

n our ability to maintain a consistent supply of quality advertising inventory;

n our ability to maintain our competitive technological advantages against competitors in our industry;

n our expectations concerning the advertising industry and, in particular, the market for programmatic ad purchasing;

n our ability to successfully navigate our business through the COVID-19 pandemic;

n our ability to timely and effectively adapt our existing technology;

n our ability to introduce new offerings and bring them to market in a timely manner;

n our ability to maintain, protect, and enhance our brand and intellectual property;

n our ability to continue to expand internationally;

n our plans to use the proceeds from this offering;

n our expectations concerning relationships with third parties;

n our ability to attract and retain qualified employees and key personnel while maintaining our corporate culture;

n future acquisitions of or investments in complementary companies or technologies; and n our ability to comply with evolving legal and industry standards and regulations, particularly concerning data protection and consumer privacy.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in “Risk Factors” and elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties, and assumptions, the forward-looking events and circumstances discussed in this prospectus may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance, or events and circumstances reflected in the forward-looking statements will be achieved or occur. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations, except as required by law.

You should read this prospectus and the documents that we reference in this prospectus and have filed with the Securities and Exchange Commission (SEC), as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance, and circumstances may be materially different from what we expect.

Market and Industry Data

Market and Industry Data

Unless otherwise indicated, information contained in this prospectus concerning our industry and the markets in which we operate, including our general expectations and market position, market opportunity and market size, is based on information from various sources, including eMarketer Inc. (eMarketer) and a report by Magna Global USA, Inc. (Magna) that we commissioned, as well as assumptions that we have made that are based on those data and other similar publicly available sources and on our knowledge of the markets for our products and services. This information involves important assumptions and limitations, and you are cautioned not to give undue weight to such estimates. While we believe the market position, market opportunity and market size information included in this prospectus is generally reliable, information of this sort is inherently imprecise and we have not independently verified market and industry data from third-party sources. In addition, projections, assumptions, and estimates of our future performance and the future performance of the industry in which we operate is necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in “Risk Factors” and elsewhere in this prospectus. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us. The information contained on, or that can be accessed through, eMarketer’s and Magna’s websites are not a part of this prospectus.

The source of, and selected additional information contained in, the independent industry publications related to the information so identified are provided below:

n eMarketer, Total Media Ad Spending Worldwide, 2020-2024 (June 2020);

n eMarketer, Digital Ad Spending Worldwide, 2019-2024 (June 2020);

n eMarketer, Programmatic Ad Spending Worldwide, 2012-2021 (Nov 2019);

n eMarketer, Over-the-Top (OTT) Video Revenues Worldwide, 2013, 2019 & 2023 (Jan 2020);

n eMarketer, Mobile Ad Spending Worldwide, 2020-2024 (June 2020);

n eMarketer, Average Time Spent per Day by Internet Users Worldwide Using the Internet via Mobile vs. Desktop, 2012-2019 (March 2020); and n Report commissioned from Magna Global USA, Inc. (September 2020).

Use of Proceeds

Use of Proceeds

We estimate that the net proceeds from our sale of shares of Class A common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, will be approximately $ million, or $ million if the underwriters’ option to purchase additional shares is exercised in full. We will not receive any proceeds from the sale of shares of our Class A common stock by the selling stockholders, although we will bear the costs, other than the underwriting discounts and commissions, associated with the sale of these shares.

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

The principal purposes of this offering are to create a public market for our Class A common stock, increase our visibility in the marketplace, facilitate an orderly distribution of shares for the selling stockholders, obtain additional capital, and increase our capitalization and financial flexibility. As of the date of this prospectus, we have no specific plans for the use of the net proceeds we receive from this offering. However, we currently intend to use the net proceeds we receive from this offering primarily for working capital and other general corporate purposes, which may include product development, general and administrative matters, and capital expenditures. In the event of a Cash Election, as described under "Description of Capital Stock—Special Conversion Adjustments for the Series D and Series D Prime Convertible Preferred Stock," we may use approximately $ million and $ million of the proceeds to pay amounts owed to holders of our Series D and Series D Prime convertible preferred stock, respectively, based on the assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus. We may also use a portion of the net proceeds for the acquisition of, or investment in, technologies, solutions or businesses that complement our business, although we have no present commitments or agreements to enter into any acquisitions or investments. We will have broad discretion over the uses of the net proceeds of this offering. Pending these uses, we intend to invest the net proceeds from this offering in short-term, investment-grade, interest-bearing securities such as money market accounts, certificates of deposit, commercial paper, and guaranteed obligations of the United States government.

Dividend Policy

Dividend Policy

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any dividends on our capital stock in the foreseeable future. In addition, our loan agreement with Silicon Valley Bank contains restrictions on our ability to pay dividends. Any future determination to declare dividends will be made at the discretion of our board of directors and will depend on our financial condition, operating results, capital requirements, general business conditions, and other factors that our board may deem relevant.

Capitalization

Capitalization

The following table sets forth our cash and cash equivalents and capitalization as of September 30, 2020, on:

n an actual basis;

n a pro forma basis, which reflects (i) the redesignation of our outstanding common stock as Class B common stock in , 2020, (ii) the automatic conversion of all outstanding shares of our convertible preferred stock into 33,443,969 shares of our Class B common stock, effective immediately prior to the completion of this offering, assuming the Cash Election described in "Description of Capital Stock—Special Conversion Adjustments for the Series D and Series D Prime Convertible Preferred Stock," (iii) the reclassification of all of our redeemable common stock, and (iv) the filing and effectiveness of our restated certificate of incorporation; and n a pro forma as adjusted basis, which reflects (i) all adjustments included in the pro forma column, and (ii) the sale of shares of our Class A common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the front cover of this prospectus, after deducting any amounts payable under the Cash Election and the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The information below is illustrative only, and our capitalization following the closing of this offering will be adjusted based on the actual initial public offering price and other terms of the offering determined at the pricing of this offering. You should read this table together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our audited and unaudited consolidated financial statements and related notes included elsewhere in this prospectus.

	As of September 30, 2020		
	Actual	Pro Forma(1)	Pro Forma as Adjusted(2)
	(in thousands, except share and per share data)		
Cash, cash equivalents, and marketable securities	$55,207	$55,207	
Convertible preferred stock, par value of $0.0001 per share, issuable in Series A, B, C, D, and D Prime — 34,000,000 shares authorized and 33,443,969 shares issued and outstanding, actual; no shares authorized, issued and outstanding, pro forma and pro forma as adjusted	61,216	—	
Stockholders' equity:			

Preferred stock, par value $0.0001 per share — no shares authorized, issued and outstanding, actual; shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	—		
Common stock, par value $0.0001 per share — 55,000,000 shares authorized, 11,727,535 shares issued and outstanding, actual; no shares authorized, issued and outstanding, pro forma and pro forma as adjusted	2	5	
Class A common stock, $0.0001 par value per share: no shares authorized, issued and outstanding, actual; shares authorized, no shares issued and outstanding, pro forma; shares authorized, shares issued and outstanding, pro forma as adjusted	—	—	
Class B common stock, $0.0001 par value per share: no shares authorized, issued and outstanding, actual; shares authorized, shares issued and outstanding, pro forma and pro forma as adjusted	—	—	
Treasury stock, at cost	(11,432)	(11,432)	
Additional paid-in capital	34,486	95,699	
Accumulated other comprehensive income	2	2	
Retained earnings	23,866	23,866	
Total stockholders' equity	46,924	108,140	
Total capitalization	$108,140	$108,140	$

(1)The pro forma information presented assumes the Cash Election described in "Description of Capital Stock—Special Conversion Adjustments for the Series D and Series D Prime Convertible Preferred Stock." In the event of an Equity Election, each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, would increase or decrease our pro forma Class B common stock by and shares, respectively. The pro forma shares of Class B common stock outstanding would not be impacted by a hypothetical increase or decrease in the number of shares of our Class A common stock offered.

(2)The pro forma as adjusted information presented is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing, and assumes the Cash Election. Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, would increase or decrease our pro forma as adjusted cash, cash equivalents, and marketable securities, additional paid-in capital, total stockholders' equity and total capitalization by approximately $ million or $ million, respectively, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions. Similarly, each increase (decrease) of 1.0 million shares in the number of shares of our Class A common stock offered by us would increase (decrease) the amount of our pro forma as adjusted cash, cash equivalents, and marketable securities, additional paid-in capital total stockholders' equity and total capitalization by approximately $ million, assuming that the assumed initial public offering price remains the same, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters' option to purchase additional shares is exercised in full, the pro forma as adjusted amount of each of cash, cash equivalents, and marketable securities, additional paid-in capital, total stockholders' equity and total capitalization would increase by approximately $ million, after deducting the estimated underwriting discounts and commissions, and we would have shares of our Class A common stock and shares of our Class B common stock issued and outstanding, pro forma as adjusted.

The number of shares of our Class A and Class B common stock to be outstanding after this offering is based upon no shares of our Class A common stock outstanding and 45,171,504 shares of our Class B common stock outstanding, in each case, as of September 30, 2020, and excludes:

n 8,912,631 shares of Class B common stock issuable upon the exercise of options to purchase shares of our Class B common stock outstanding as of September 30, 2020, with a weighted-average exercise price of $2.22 per share;

n 711,180 shares of Class B common stock issuable upon the exercise of options to purchase shares of our Class B common stock granted after September 30, 2020, with a weighted-average exercise price of $5.29 per share; and n shares of common stock reserved for future grants under our stock-based compensation plans, consisting of (a) 162,093 shares of Class B common stock reserved for future grants under our 2017 Equity Incentive Plan (2017 Plan), as of September 30, 2020, an additional 650,000 shares of Class B common stock reserved for issuance under our 2017 Plan subsequent to September 30, 2020, (b) shares of our Class A common stock that will be reserved for issuance under our 2020 Equity Incentive Plan (2020 Plan), which will become effective on the day immediately prior to the date of this prospectus and (c) shares of Class A common stock reserved for future issuance under our 2020 Employee Stock Purchase Plan (ESPP), which will become effective on the date of this prospectus. Upon completion of this offering, any remaining shares available for issuance under our 2017 Plan will be added to the shares of Class A common stock reserved under our 2020 Plan, and we will cease granting awards under the 2017 Plan. Our 2020 Plan and ESPP also provide for automatic annual increases in the number of shares reserved thereunder, as described in "Executive Compensation—Employee Benefit and Stock Plans."

Dilution

Dilution

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

As September 30, 2020, our pro forma net tangible book value was approximately $ million, or $ per share of common stock. Our pro forma net tangible book value per share represents the amount of our total tangible assets reduced by the amount of our total liabilities and divided by the total number of shares of our common stock outstanding as of September 30, 2020, after giving effect to (i) the redesignation of our outstanding common stock as Class B common stock in 2020, (ii) the automatic conversion of all outstanding shares of our convertible preferred stock into 33,443,969 shares of our Class B common stock, effective immediately before the completion of this offering, assuming the Cash Election at an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, as described in "Description of Capital Stock—Special Conversion Adjustments for the Series D and Series D Prime Convertible Preferred Stock," and (iii) the filing and effectiveness of our restated certificate of incorporation.

After giving effect to our sale in this offering of shares of our Class A common stock, at an assumed initial public offering price of $ per share, the midpoint of the estimated offering price range set forth on the cover page of this prospectus, including estimated amounts payable under the Cash Election, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma net tangible book value as of September 30, 2020 would have been approximately $ million, or $ per share. This represents an immediate increase in pro forma net tangible book value of $ per share to our existing stockholders and an immediate dilution of $ per share to investors purchasing Class A common stock in this offering at the assumed initial public offering price.

The following table illustrates this dilution:

Assumed initial public offering price per share	$
Pro forma net tangible book value per share as of September 30, 2020, before giving effect to this offering	$
Increase in pro forma net tangible book value per share attributable to new investors in this offering	
Pro forma net tangible book value, as adjusted to give effect to this offering	
Dilution in pro forma as adjusted net tangible book value per share to new investors in this offering	

A $1.00 increase or decrease in the assumed initial public offering price of $ per share, the midpoint of the price range reflected on the cover page of this prospectus, would increase or decrease our pro forma net tangible book value, as adjusted to give effect to this offering, by $ per share or $ per share, respectively, the increase or decrease attributable to this offering by $ per share or $ per share, respectively, and the dilution in pro forma as adjusted net tangible book value per share to new investors in this offering by $ per share or $ per share, respectively, assuming the number of shares of Class A common stock offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions payable by us, and assuming a Cash Election, as described under "Description of Capital Stock—Special Conversion Adjustments for the Series D and Series D Prime Convertible Preferred Stock." Similarly, each increase or decrease of 1.0 million shares in the number of shares of Class A common stock offered by us would increase or decrease the pro forma as adjusted net tangible book value by approximately $ per share and the dilution to new investors by $ per share, assuming the assumed initial public offering price remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

In the event of an Equity Election, a $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range reflected on the cover page of this prospectus, would increase or decrease our pro forma net tangible book value, as adjusted to give effect to this offering, by $ per share or $ per share, respectively, the increase or decrease attributable to this offering by $ per share or $ per share, respectively, and the dilution in pro forma as adjusted net tangible book value per share to new investors in this offering by $ per share or $ per share, respectively, assuming the number of shares of Class A common stock offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions payable by us. Similarly, each increase or decrease of 1.0 million shares in the number of shares of Class A common stock offered by us would increase or decrease the pro forma as adjusted net tangible book value by approximately $ per share and the dilution to new investors by $ per share, assuming the assumed initial public offering price remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Sales of shares of Class A common stock by the selling stockholders in this offering will reduce the number of shares of common stock held by existing stockholders to , or approximately % of the total shares of common stock outstanding after this offering, and will increase the number of shares held by new investors to , or approximately % of the total shares of common stock outstanding after this offering.

Except as otherwise indicated, the above discussion and tables assume no exercise of the underwriters' option to purchase additional shares of our Class A common stock. If the underwriters exercise their option in full to purchase additional shares, our existing stockholders would own % and our new investors would own % of the total number of shares of our common stock outstanding after this offering, including the shares to be sold by selling stockholders.

If the underwriters exercise their option to purchase additional shares in full, the pro forma net tangible book value per share of our common stock after giving effect to this offering would be $ per share, and the dilution in net tangible book value per share to investors in this offering would be $ per share.

The following table summarizes, on a pro forma as adjusted basis as of September 30, 2020, after giving effect to the pro forma adjustments described above, the difference between existing stockholders and new investors purchasing shares of Class A common stock in this offering with respect to the number of shares purchased from us, the total consideration paid to us and the average price per share paid or to be paid to us at an assumed offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us:

	Shares Purchased		Total Consideration		
	Number	Percent	Amount	Percent	Average Price Per Share
Existing stockholders		%		$%	$

New public investors		
Total	100 %	100 %

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) total consideration paid by new investors and total consideration paid by all stockholders by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus remains the same and after deducting the estimated underwriting discounts and commissions.

Except as otherwise indicated, the above discussion and tables assume no exercise of the underwriters' option to purchase additional shares of our Class A common stock from us. If the underwriters exercise their option in full to purchase additional shares from us, our existing stockholders would own % and our new investors would own % of the total number of shares of our common stock outstanding upon the completion of this offering.

To the extent that any outstanding options are exercised, investors will experience further dilution.

The number of shares of our Class A and Class B common stock to be outstanding after this offering is based upon no shares of our Class A common stock outstanding and 45,171,504 shares of our Class B common stock outstanding, in each case, as of September 30, 2020, and excludes:

n 8,912,631 shares of Class B common stock issuable upon the exercise of options to purchase shares of our Class B common stock outstanding as of September 30, 2020, with a weighted-average exercise price of $2.22 per share;

n 711,180 shares of Class B common stock issuable upon the exercise of options to purchase shares of our Class B common stock granted after September 30, 2020, with a weighted-average exercise price of $5.29 per share; and n shares of common stock reserved for future grants under our stock-based compensation plans, consisting of (a) 162,093 shares of Class B common stock reserved for future grants under our 2017 Equity Incentive Plan (2017 Plan), as of September 30, 2020, an additional 650,000 shares of Class B common stock reserved for issuance under our 2017 Plan subsequent to September 30, 2020, (b) shares of our Class A common stock that will be reserved for issuance under our 2020 Equity Incentive Plan (2020 Plan), which will become effective on the day immediately prior to the date of this prospectus and (c) shares of Class A common stock reserved for future issuance under our 2020 Employee Stock Purchase Plan (ESPP), which will become effective on the date of this prospectus. Upon completion of this offering, any remaining shares available for issuance under our 2017 Plan will be added to the shares of Class A common stock reserved under our 2020 Plan, and we will cease granting awards under the 2017 Plan. Our 2020 Plan and ESPP also provide for automatic annual increases in the number of shares reserved thereunder, as more fully described in "Executive Compensation—Employee Benefit and Stock Plans."

Selected Consolidated Financial Data

Selected Consolidated Financial Data

The following tables present selected historical consolidated financial data for our business. You should read this information in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes, which are included elsewhere in this prospectus.

We derived the consolidated statements of operations data for the years ended December 31, 2018 and 2019 and the consolidated balance sheet data as of December 31, 2018 and 2019 from our audited consolidated financial statements that are included elsewhere in this prospectus. We derived the selected consolidated statements of operations data for the nine months ended September 30, 2019 and 2020, and the selected consolidated balance sheet data as of September 30, 2020, from the unaudited consolidated financial statements included elsewhere in this prospectus. We have prepared the unaudited consolidated financial statements on the same basis as the audited consolidated financial statements and have included all adjustments, consisting only of normal recurring adjustments, which in our opinion are necessary to state fairly the financial information set forth in those statements. Our historical results are not necessarily indicative of future results, and the results for the nine months ended September 30, 2020 are not necessarily indicative of the results to be expected for the full year or any other period.

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
	(in thousands, except share and per share data)			
Consolidated Statements of Operations Data:				
Revenue	$99,264	$113,871	$79,478	$92,506
Cost of revenue(1)	31,235	36,104	26,781	29,736
Gross profit	68,029	77,767	52,697	62,770
Operating expenses(1):				
Technology and development	12,619	12,453	9,334	9,280
Sales and marketing	33,444	36,498	26,251	30,142
General and administrative	16,998	20,307	14,472	13,799
Total operating expenses	63,061	69,258	50,057	53,221
Operating income	4,968	8,509	2,640	9,549
Total other income, net	662	713	799	343
Income before provision for income taxes	5,630	9,222	3,439	9,892
Provision for income taxes	1,205	2,579	920	2,104

Net income	$4,425	$6,643	$2,519	$7,788
Net income per share attributable to common stockholders(2)				
Basic	$—	$0.04	$—	$0.10
Diluted	$—	$0.04	$—	$0.09
Weighted-average shares used to compute net income per share attributable to common stockholders(2):				
Basic	11,249,579	10,036,983	10,033,313	10,178,598
Diluted	14,157,492	12,169,884	12,511,940	14,752,090
Consolidated Statement of Cash Flow Data:				
Net cash provided by operating activities	$15,595	$35,125	$22,482	$13,792
Net cash used in investing activities	(12,749)	(22,089)	(16,786)	(11,791)
Net cash provided by (used in) financing activities	(7,993)	(1)	(1)	4,361

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(1)Amounts include stock-based compensation before tax benefit as follows:

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
	(in thousands)			
Cost of revenue	$38	$26	$17	$30
Technology and development	554	402	329	377
Sales and marketing	759	684	514	721
General and administrative	2,041	890	671	1,311
Total stock-based compensation expense	$3,392	$2,002	$1,531	$2,439

(2)See Notes 2 and 12 to our consolidated financial statements included elsewhere in this prospectus for an explanation of the calculations of our basic and diluted net income per share attributable to common stockholders and pro forma basic and diluted net income per share attributable to common stockholders as well as the weighted average number of shares used in computation of the per share amounts.

	As of December 31,		As of September 30,
	2018	2019	2020
	(in thousands)		
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$21,215	$34,250	$40,612
Marketable securities	14,294	21,202	14,595
Accounts receivable, net	109,293	117,655	140,526
Total assets	178,223	207,445	240,124
Accounts payable	81,861	99,384	118,532
Total liabilities	93,753	113,909	131,984
Convertible preferred stock	60,820	61,216	61,216
Redeemable common stock	19,025	19,025	—
Total stockholders' equity	4,625	13,295	46,924

Non-GAAP Financial Measures

In addition to our results determined in accordance with U.S. generally accepted accounting principles (GAAP), including, in particular operating income, net cash provided by operating activities, and net income, we believe that Adjusted EBITDA, a non-GAAP measure, is useful in evaluating our operating performance. We define Adjusted EBITDA as net income adjusted for stock-based compensation expense, depreciation and amortization, impairments of long-lived assets, interest income, and provision for income taxes.

The following table presents a reconciliation of Adjusted EBITDA to net income for each of the periods indicated:

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
	(in thousands)			
Net income	$4,425	$6,643	$2,519	$7,788
Add back (deduct):				
Stock-based compensation	3,392	2,002	1,531	2,439
Depreciation and amortization	12,285	12,671	9,340	11,574
Impairment of internal use software	—	702	702	—
Interest income	(877)	(1,290)	(999)	(475)
Provision for income taxes	1,205	2,579	920	2,104
Adjusted EBITDA	$20,430	$23,307	$14,013	$23,430

In addition to operating income and net income, we use Adjusted EBITDA as a measure of operational efficiency. We believe that this non-GAAP financial measure is useful to investors for period to period comparisons of our business and in understanding and evaluating our operating results for the following reasons:

n Adjusted EBITDA is widely used by investors and securities analysts to measure a company's operating performance without regard to items such as stock-based compensation expense, depreciation and amortization, interest expense, provision for income taxes, and certain one-time items such as impairments of long-lived assets, that can vary substantially from company to company depending upon their financing, capital structures and the method by which assets were acquired;

n Our management uses Adjusted EBITDA in conjunction with GAAP financial measures for planning purposes, including the preparation of our annual operating budget, as a measure of operating performance and the effectiveness of our business strategies and in communications with our board of directors concerning our financial performance; and n Adjusted EBITDA provides consistency and comparability with our past financial performance, facilitates period-to-period comparisons of operations, and also facilitates comparisons with other peer companies, many of which use similar non-GAAP financial measures to supplement their GAAP results.

Our use of this non-GAAP financial measures has limitations as an analytical tool, and you should not consider them in isolation or as a substitute for analysis of our financial results as reported under GAAP. Some of these limitations are as follows:

n Adjusted EBITDA does not reflect: (a) changes in, or cash requirements for, our working capital needs; (b) the potentially dilutive impact of stock-based compensation; or (c) tax payments that may represent a reduction in cash available to us;

n Although depreciation and amortization expense are non-cash charges, the assets being depreciated and amortized may have to be replaced in the future, and Adjusted EBITDA does not reflect cash capital expenditure requirements for such replacements or for new capital expenditure requirements;

Because of these and other limitations, you should consider Adjusted EBITDA along with other GAAP-based financial performance measures, including net income and our GAAP financial results.

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

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

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

Overview

PubMatic fuels the endless potential of Internet content creators.

Our company provides a specialized cloud infrastructure platform that enables real-time programmatic advertising transactions. We believe that our purpose-built technology and infrastructure provides superior outcomes for both Internet content creators (publishers) and advertisers (buyers). In September 2020, our platform efficiently processed approximately 134 billion ad impressions daily, each in a fraction of a second.

Our cloud infrastructure platform provides superior monetization for publishers by increasing the value of an impression and providing incremental demand through our deep and growing relationships with buyers. We are aligned with our publisher and app developer partners by being independent. We do not own media and therefore do not have a vested interest in driving ad revenue to specific media properties. Our global platform is omnichannel, supporting a wide array of ad formats and digital device types. In the third quarter of 2020, we served approximately 1,100 publishers and app developers, including many of the leading digital companies such as Verizon Media Group and News Corp. We have demonstrated that we can retain and grow revenues from our publisher customers, as evidenced by our net dollar-based retention rate of 110% for the twelve months ended September 30, 2020 and 109% for 2019.

Building on our early success as a Sell Side Platform (SSP), we have extended our platform to also meet the needs of buyers. We are integrated with the leading Demand Side Platforms (DSPs), such as The Trade Desk and Google DV360, allowing them to execute real-time transactions with our publisher clients. More recently, agencies and advertisers have started consolidating their spend with fewer, larger technology platforms to improve transparency, quality, and control over their advertising dollars. In 2019 and 2020 we entered into agreements directly with some of the largest agencies and advertisers in the world and believe this will continue to drive more ad spend to our platform.

We own and operate our own software and hardware infrastructure around the world, which saves significant costs as compared to companies that rely on public cloud alternatives, partly due to the data-intensive nature of digital advertising. As we have extended our cloud infrastructure to service more ad formats and devices, we have expanded our profit margins and maintained our capital efficiency that is among best-in-class for similar publicly-traded technology companies. We measure capital expenditures (capex) efficiency over a period time to assess the full impact of our capex investments. The numerator is the sum of our revenues over a two year period (i.e. 2018 to 2019) divided by the sum of capital expenditures for the same period. On this measure, we believe we are among the highest among similar publicly-traded technology companies.

We generate revenue from publishers primarily through revenue share agreements, generally one-year contracts that renew automatically for successive one-year periods, unless terminated prior to renewal.

We primarily work with publishers and app developers who allow us direct access to their ad inventory, as well as select channel partners that meet our quality and scale thresholds. We have direct relationships with publishers such as Verizon Media Group and News Corp and app developers such as Zynga and Electronic Arts. Our channel partners aggregate and provide further access to thousands of sites and apps from smaller publishers. We refer to our

publishers, app developers, and channel partners collectively as our publishers.

We help monetize valuable impressions for our clients across a wide array of ad formats and digital device types, including mobile app, mobile web, desktop, display, video, over-the-top (OTT), connected television (CTV), and rich media. In the third quarter of 2020, we served approximately 1,100 publishers and app developers representing over 63,000 individual domains and apps worldwide on our platform across a diverse group of content verticals including news, eCommerce, gaming, media, weather, fashion, technology, and more.

We enter into written service agreements with our DSP buyers that allow them to use our platform to buy ad inventory, but we earn revenue from our publishers. Our platform service agreements with DSPs generally have one-year terms that renew automatically for successive one-year periods, unless terminated prior to renewal. The tenure of each of the top ten DSP buyers on our platform at the end of 2019 was over seven years. We also negotiate Supply Path Optimization (SPO) agreements with agencies and advertisers that encourage these buyers to spend a higher share of their advertising budgets on our platform by providing custom data and workflow integrations, product features, and volume-based business terms. SPO agreements typically have a one-year term and renewal terms are generally discussed one quarter prior to a new term. The effect of these SPO agreements is to increase the volume of ad spend on our platform without corresponding increases in technology costs.

Since our founding, we have developed a large portfolio of buyers, reaching on average approximately 68,000 advertisers per month in 2020 through our application programmatic interfaces.

Our buyer partners include:

n DSPs, which are technology-based firms that programmatically purchase ad impressions on behalf of advertisers, and include firms such as Google's Display & Video 360 platform (DV360) and The Trade Desk;

n Agencies and agency trading desks, which consist of firms that provide advertising-related services to advertisers, such as managing the programmatic purchase of advertising inventory, including Dentsu, Havas, Interpublic Group, Omnicom, Publicis, and WPP; and n Advertisers, who are increasingly taking portions of the media buying process in-house to better control and optimize their digital ad investment and derive superior outcomes.

Our ability to efficiently add and monetize valuable impressions on our platform has led to revenue growth, profitability, and operating cash flow (GAAP net cash provided by operating activities). By focusing on valuable ad impressions, investing in our own specialized cloud software and hardware infrastructure, optimizing platform utilization, and implementing workflow automation, we have achieved strong gross margins. For the nine months ended September 30, 2020 and the year ended December 31, 2019, our gross margin was 68% and 68%, respectively, our Adjusted EBITDA margin (Adjusted EBITDA as a percentage of revenue) was 25% and 20%, and operating cash flow margin (operating cash flows as a percentage of revenue) was 15% and 31%.

For the nine months ended September 30, 2020 and the year ended December 31, 2019, we derived approximately 68% and 69% of our revenue from Americas-based publishers, respectively, 22% and 21% from Europe-based publishers, Middle East and Africa-based (EMEA) publishers, respectively, and 10% and 10% from Asia-Pacific (APAC)-based publishers, respectively. We are focused on expanding outside the United States and expect to increase our proportion of revenue from non-U.S. geographies in the future. We classify publishers by geography based on the billing address of the publisher transacting with us.

In the third quarter of 2020, mobile and video comprised approximately 63% of our revenue. We anticipate mobile to continue increasing as a percentage of our total impressions and revenue in the future. We further expect video (including mobile video) to constitute an increasingly important component of our business.

Covid-19

The COVID-19 pandemic has resulted in a global slowdown of economic activity which is likely to decrease demand for a broad variety of goods and services, including those provided by certain of the advertisers on our platform. This situation could also potentially limit our ad buyers' budgets or disrupt sales channels and advertising and marketing activities generally. The duration of these disruptive effects will continue for an unknown period of time until the virus is contained or economic activity normalizes. With the decline in economic activity, our revenue growth slowed and turned negative in the second quarter of 2020. Although our revenue has subsequently returned to growth, the impact of the pandemic on our future growth and our results of operations is unknown and we are unable to accurately predict the future impact. The extent of the impact of the COVID-19 pandemic on our operational and financial performance will depend on a variety of factors, including the duration and spread of the virus and its impact on our publishers, ad buyers, industry, and employees, all of which are uncertain at this time and cannot be accurately predicted. See "Risk Factors" for further discussion of the adverse impacts of the COVID-19 pandemic on our business.

The table below summarizes the financial highlights of our business:

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
	(in thousands)			
Revenue	$99,264	$113,871	$79,478	$92,506
Operating income	4,968	8,509	2,640	9,549
Net income	4,425	6,643	2,519	7,788
Adjusted EBITDA(1)	20,430	23,307	14,013	23,430
Net cash provided by operating activities	15,595	35,125	22,482	13,792

(1)For a definition of Adjusted EBITDA, an explanation of our management's use of this measure, and a reconciliation of Adjusted EBITDA to net income, see "Selected Consolidated Financial Data—Non-GAAP Financial Measures."

Factors Affecting Our Performance

We believe our growth and financial performance are dependent on many factors, including those described below.

Growing access to valuable ad impressions

Our recent growth has been driven by a variety of factors including increased access to mobile web and mobile app (display and video) impressions and desktop video impressions. Our performance is affected by our ability to maintain and grow our access to valuable ad impressions from current publishers as well as through new relationships with publishers. The number of ad impressions processed on our platform was approximately 5.9 trillion, 6.3 trillion, 7.0 trillion, 8.6 trillion, 9.0 trillion, 10.3 trillion, and 11.8 trillion for each of the three months ended March 31, 2019, June 30, 2019, September 30, 2019, December 31, 2019, March 31, 2020, June 30, 2020, and September 30, 2020, respectively.

Monetizing ad impressions for publishers and buyers

We focus on monetizing digital impressions by coordinating daily over a hundred billion real-time auctions and nearly a trillion bids globally, using our specialized cloud software, machine learning algorithms, and scaled transaction infrastructure. Valuable ad impressions are transparent and data rich, viewable by humans, and verifiable. Each ad impression we auction consists of over 300 independent data parameters, which can yield valuable insights if recorded and analyzed properly. This processing of voluminous data for each ad impression must occur in less than half a second as consumers expect a seamless digital ad experience. By deploying our specialized software and hardware and continuously optimizing our machine learning algorithms, we are able to derive superior outcomes by increasing advertiser return on investment (ROI) and publisher revenue, while increasing the cost efficiency of our platform and our customers' businesses. We continually assess impressions from new and existing publishers through a rigorous validation process. We add or remove impressions from our platform based on an assessment of the projected value of the impressions, which is influenced by the type of publisher and its related consumers, as well as the potential volume of monetizable impressions and ad format types, such as digital video. We continuously create and iterate algorithms that leverage vast datasets flowing through our infrastructure to improve the liquidity in our marketplace. Our ability to drive successful outcomes in the real-time auction process on behalf of our publishers and buyers will affect our operating results.

Identifying valuable ad impressions that we can profitably monetize at scale

We continuously review our available inventory from existing publishers across every format (mobile, desktop, digital video, OTT, CTV, and rich media). The factors we consider to determine which impressions we process include transparency, viewability, and whether or not the impression is human sourced. By consistently applying these criteria, we believe that the ad impressions we process will be valuable and marketable to advertisers. In addition, using a combination of proprietary analysis driven by machine learning algorithms that are continuously updated along with specialized third-party tools, we aim to exclude low value impressions from our platform and, in some cases, may suspend certain publishers, or particular publisher sites and apps, from using our platform if they do not meet our standards. Our confidence in our ability to achieve our quality goals is backed by a fraud-free guarantee to all of our buyers which we introduced in 2017. We believe that this rigorous commitment to quality helps us maintain our reputation as a leader in the programmatic advertising ecosystem. Our financial performance depends in part on how efficiently and effectively we can conduct these activities at scale.

Increasing revenue from publishers and advertising spend from buyers

We leverage our extensive platform capabilities and the subject matter expertise of our team members to grow revenue from our publishers and increase advertising spending from our buyers. Our sales and marketing team includes customer success pods to enhance customer knowledge and implementation of best practices. Once we onboard a new customer, we seek to expand our relationship with existing publishers by establishing multiple header bidding integrations by leveraging our omnichannel capabilities to maximize our access to publishers' ad formats and devices, and expanding into the various properties that a publisher may own around the world. We may also up-sell additional products to publisher customers including our header bidding management, identity, and audience solutions. We automate workflow processes whenever feasible to drive predictable and value-added outcomes for our customers and increase productivity of our organization.

Net dollar-based retention rate is an important indicator of publisher satisfaction and usage of our platform, as well as potential revenue for future periods. We calculate our net dollar-based retention rate at the end of each year. We calculate our net dollar-based retention rate by starting with the revenue from publishers in the last prior year (Prior Period Revenue). We then calculate the revenue from these same publishers in the current year (Current Period Revenue). Current Period Revenue includes any upsells and is net of contraction or attrition, but excludes revenue from new publishers. Our net dollar-based retention rate equals the Current Period Revenue divided by Prior Period Revenue. Our net dollar-based retention rate was 110% for the twelve month period ended September 30, 2020, 109% for 2019, and 71% for 2018. Our growth in the nine month period ended September 30, 2020 and 2019 was primarily attributable to an increase in the number of ad impressions processed from our publishers, upselling additional products, penetration of header bidding for mobile app and digital video, and increased demand from the growth of our buyer relationships primarily through SPO agreements. Our 2018 net dollar-based retention rate reflected our proactive efforts to improve the quality of our available impressions by removing ad impressions and publishers who did not meet the emerging industry standards for ad inventory quality.

We work with DSPs to help them reduce their costs and improve advertiser ROI, which in turn makes us the specialized cloud infrastructure platform of choice for many of our buying partners. As buyers increasingly consolidate their spending with fewer larger technology platforms, we seek to bring an increased proportion of their digital ad spending to our platform through direct deals. We have entered into SPO agreements directly with buyers, advertisers and agencies through various arrangements ranging from custom data and workflow integrations, product features, and volume-based business terms. The effect of these SPO agreements is to increase the volume of ad spend on our platform without corresponding increases in technology costs.

Managing industry dynamics

We operate in the rapidly evolving digital advertising industry. Due to the scale and complexity of the digital advertising ecosystem, direct sales via manual, person-to-person processes are insufficient for delivering a real-time, personalized ad experience, creating the need for programmatic advertising. In turn, advances in programmatic technologies have enabled publishers to auction their ad inventory to more buyers, simultaneously, and in real time through a process referred to as header bidding. Header bidding has also provided advertisers with transparent access to ad impressions. As advertisers keep pace with ongoing changes in the way that consumers view and interact with digital media there will be further innovation and we anticipate that header bidding will be extended into new areas such as OTT/CTV. We believe our focus on publishers and buyers has allowed us to understand their needs and our ongoing innovation has enabled us to quickly adapt to changes in the industry, develop new solutions and do so cost effectively. Our performance depends on our ability to keep pace with industry changes such as header bidding and the evolving needs of our publishers and buyers while continuing our cost efficiency.

Expanding and managing investments

We make software and hardware infrastructure investment decisions to meet expected increases in ad impressions on both a global and regional data center level throughout the calendar year based on the projected quantity, ad format type, and associated data requirements. In parallel, we seek to continuously improve our infrastructure utilization. Our ability to identify and monetize high value impressions allows us to operate more efficiently because the cost of processing low-value impressions and high-value impressions are approximately the same. We believe that increasing utilization of our platform leads to improved outcomes for our customers and more efficient and effective operations for us. To achieve improved utilization, we leverage the data on our platform through extensive application of artificial intelligence technologies, including machine learning and natural language processing. The magnitude and timing of our investments in our software and hardware may lead to fluctuations in our operating results.

Expanding internationally

We plan to continue expanding our international presence and making additional investments in sales and marketing and infrastructure to support our long-term growth and to position ourselves for expected increases in the penetration of programmatic advertising globally. We expect programmatic advertising to grow at different rates in different geographic markets. Our publishers outside of the United States typically have smaller amounts of programmatic inventory, and as a result, our sales and marketing expenses associated with non-U.S. publishers are generally proportionally higher. We are constantly evaluating new markets with a strategy to use our existing infrastructure and adjacent sales offices, or by expanding our infrastructure footprint and placing personnel directly in those markets. Our ability to efficiently expand into new markets will affect our operating results.

Managing Seasonality

The global advertising industry experiences seasonal trends that affect the vast majority of participants in the digital advertising ecosystem. Most notably, advertisers have historically spent relatively more in the fourth quarter of the calendar year to coincide with the holiday shopping season, and relatively less in the first quarter. We expect seasonality trends to continue, and our ability to manage our resources in anticipation of these trends will affect our operating results.

Components of Our Results of Operations

Revenue

We generate revenue from publishers who use our platform. Our platform allows publishers to sell, in real time, customized ad inventory to buyers and provides automated inventory management and monetization tools to publishers across various device types and digital ad formats. We generate revenue primarily through fees charged to our publishers, which are generally a percentage of the value of the advertising impressions that publishers monetize on the platform. We report revenue on a net basis. This represents gross billings to buyers, net of amounts we pay publishers. We record our accounts receivable at the amount of gross billings to buyers, net of allowances, for the amounts we are responsible to collect, and we record our accounts payable at the net amount payable to publishers. Accordingly, both accounts receivable and accounts payable appear large in relation to revenue, which is reported on a net basis.

Our revenue recognition policies are discussed in more detail under "—Critical Accounting Policies and Estimates."

Cost of Revenue

Cost of revenue consists of data center co-location costs, depreciation expense related to hardware supporting our platform, amortization expense related to capitalized internal use software development costs, personnel costs, and allocated facilities costs. Personnel costs include salaries, bonuses, stock-based compensation, and employee benefit costs, and are primarily attributable to our cloud operations group, which maintains our servers, and our client operations group, which is responsible for the integration of new publishers and buyers and providing customer support for existing customers.

Operating Expenses

Technology and Development. Technology and development expenses consist of personnel costs, including salaries, bonuses, stock-based compensation, and employee benefits costs, allocated facilities costs, and professional services. These expenses include costs incurred in the development, implementation and maintenance of internal use software, including platform and related infrastructure. We expend technology and development costs as incurred, except to the extent that such costs are associated with internal use software development that qualifies for capitalization. We expect technology and development expenses to generally increase in absolute dollars in future periods.

Sales and Marketing. Sales and marketing expenses consist of personnel costs, including salaries, bonuses, stock-based compensation, and employee benefits costs, for our employees engaged in sales, sales support, marketing, business development, and customer relationship functions. Sales and marketing expenses also include expenses related to promotional, advertising and marketing activities, allocated facilities costs, travel, and entertainment primarily related to sales activity and professional services. We expect sales and marketing expenses to increase in absolute dollars in future periods.

General and Administrative. General and administrative expenses consist of personnel costs, including salaries, bonuses, stock-based compensation, and employee benefits costs for our executive, finance, legal, human resources, information technology, and other administrative employees. General and administrative expenses also include outside consulting, legal and accounting services, allocated facilities costs, and travel and entertainment primarily related to intra-office travel and conferences.

We expect to invest in corporate infrastructure and incur additional expenses associated with the transition to and operation as a public company, including increased legal and accounting costs, increased investor relations costs, higher insurance premiums, and compliance costs associated with developing the requisite infrastructure required for internal controls. As a result, we expect general and administrative expenses to increase in absolute dollars in future periods.

Total Other Income, Net

Total other income, net consists of interest income and other income (expense), net. Interest income is generated by investing excess cash into money market accounts and marketable securities. Other income (expense), net consists primarily of gains and losses from foreign currency exchange transactions and the change in fair value of our convertible preferred stock warrant liability, which we previously marked-to-market until the warrant's exercise in the third quarter of 2019.

Provision for Income Taxes

The provision for income taxes consists primarily of federal, state, and foreign income taxes. Our income tax provision may be significantly affected by changes to our estimates for tax in jurisdictions in which we operate and other estimates utilized in determining the global effective tax rate. Actual results may also differ from our estimates based on changes in economic conditions. Such changes could have a substantial impact on the income tax provision. We reevaluate the judgments surrounding our estimates and make adjustments, as appropriate, each reporting period.

Our effective tax rate differs from the U.S. federal statutory income tax rate due to state taxes, foreign tax rate differences, technology and development tax credits, and non-deductible stock-based compensation.

Realization of our deferred tax assets is dependent primarily on the generation of future taxable income. In considering the need for a valuation allowance, we consider our historical, as well as future projected, taxable income along with other objectively verifiable evidence. Objectively verifiable evidence includes our realization of tax attributes, assessment of tax credits, and utilization of net operating loss carryforwards during the year.

Results of Operations

The following tables set forth our consolidated results of operations data (in thousands) and such data as a percentage of revenue for the periods presented. The period-to-period comparison of results is not necessarily indicative of results for future periods.

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
Consolidated Statements of Operations:				
Revenue	$99,264	$113,871	$79,478	$92,506
Cost of revenue	31,235	36,104	26,781	29,736
Gross profit	68,029	77,767	52,697	62,770
Operating expenses:				
Technology and development	12,619	12,453	9,334	9,280
Sales and marketing	33,444	36,498	26,251	30,142
General and administrative	16,998	20,307	14,472	13,799
Total operating expenses	63,061	69,258	50,057	53,221
Operating income	4,968	8,509	2,640	9,549
Total other income, net	662	713	799	343
Income before provision for income taxes	5,630	9,222	3,439	9,892
Provision for income taxes	1,205	2,579	920	2,104
Net income	$4,425	$6,643	$2,519	$7,788

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
	(as percentage of revenue)			
Revenue	100 %	100 %	100 %	100 %
Cost of revenue	31	32	34	32
Gross profit	69	68	66	68
Operating expenses:				
Technology and development	13	11	12	10
Sales and marketing	34	32	33	33
General and administrative	17	18	18	15
Total operating expenses	64	61	63	58
Operating income	5	7	3	10
Total other income, net	1	1	1	—
Income before provision for income taxes	6	8	4	10
Provision for income taxes	1	2	1	2
Net income	5 %	6 %	3 %	8 %

Comparison of the Nine Months Ended September 30, 2019 and 2020

Revenue, Cost of Revenue and Gross Profit

	Nine months ended			
	2019	2020	$ Change	% Change
	(dollars in thousands)			
Revenue	$79,478	$92,506	$13,028	16 %
Cost of revenue	26,781	29,736	2,955	11 %
Gross profit	$52,697	$62,770	$10,073	19 %
Gross profit margin	66 %	68 %		

Revenue increased $13.0 million, or 16%, for the nine months ended September 30, 2020 compared to the prior year period. The revenue increase was driven by growth in impressions processed on our platform from both existing and new publishers. For the nine months ended September 30, 2020, we added 261 net new publishers for a total publisher count of 1,101, compared to 184 net new publishers added for the nine months ended September 30, 2019 for a total publisher count of 755. For purposes of our publisher count, we aggregate multiple business accounts from separate divisions, segments or subsidiaries into a single “master” publisher. In addition, in the nine months ended September 30, 2020, we completed a number of SPO initiatives which increased buyer spend on our platform.

Cost of revenue increased $3.0 million during the nine months ended September 30, 2020, compared to the prior year period, primarily due to a $2.5 million increase in depreciation of data center equipment and amortization of internal use software and a $1.4 million increase in personnel costs as headcount increased by 26% in order to support our growing business. These increases were partially offset by a $0.9 million decrease in guaranteed inventory purchases related to a test program that was cancelled in the first quarter of 2019 and the absence of an impairment expense for internal use software during the nine months ended September 30, 2020. During the nine months ended September 30, 2019, a $0.7 million impairment expense was recognized related to internal use software of a discontinued product offering. Overall, our cost of revenue per impression processed in the nine months ended September 30, 2020 declined by 31% compared to the same prior year period.

Technology and Development

	Nine months ended			
	2019	2020	$ Change	% Change
	(dollars in thousands)			
Technology and development	$9,334	$9,280	$(54)	(1)%
Percent of revenue	12 %	10 %		

The decrease in technology and development costs for the nine months ended September 30, 2020, compared to the prior year period, was primarily due to an increase of $1.0 million in the capitalization of internal use software, principally as a result of new product development, a $0.2 million decrease in travel costs, and $0.1 million decrease in facility costs as a result of remote work in connection with the COVID-19 pandemic. This was partially offset by a $0.8 million increase in personnel costs and a $0.5 million increase in professional fees due to outsourced product development. While our technology and development headcount increased 10%, our personnel costs increased 7% as a result of lower personnel costs in India where the majority of the incremental hires were based.

Sales and Marketing

	Nine months ended			
	2019	2020	$ Change	% Change
	(dollars in thousands)			
Sales and marketing	$26,251	$30,142	$3,891	15 %
Percent of revenue	33 %	33 %		

Sales and marketing costs increased for the nine months ended September 30, 2020, compared to the prior year period, primarily due to a $5.0 million increase in personnel costs as headcount increased by 24%. These increased costs were partially offset by reduced spending of $0.6 million on marketing and $0.4 million for travel and entertainment due to the impact of the COVID-19 pandemic.

General and Administrative

	Nine months ended			
	2019	2020	$ Change	% Change
	(dollars in thousands)			
General and administrative	$14,472	$13,799	$(673)	(5)%
Percent of revenue	18 %	15 %		

General and administrative expenses decreased for the nine months ended September 30, 2020, compared to the prior year period, primarily due to a $2.3 million decrease in bad debt expense partially offset by a $1.3 million increase in personnel costs associated with an 11% increase in headcount and higher stock-based compensation costs. In addition, professional services, legal and other service costs increased by $0.5 million.

Total Other Income, net

	Nine months ended			
	2019	2020	$ Change	% Change
	(dollars in thousands)			
Total other income, net	$799	$343	$(456)	(57)%

Total other income, net decreased for the nine months ended September 30, 2020, compared to the prior year period, as a result of lower interest rates and as a result of holding a larger portion of our excess cash in money market investments.

Provision for Income Taxes

	Nine months ended			
	2019	2020	$ Change	% Change
	(dollars in thousands)			
Provision for income taxes	$920	$2,104	$1,184	129 %

The effective income tax rate was 27% for the nine months ended September 30, 2019. The income tax expense for the nine months ended September 30, 2019 differs from the statutory rate due to nondeductible stock-based compensation, a higher tax rate in certain foreign countries where we operate, partially offset by a deduction for foreign-sourced revenue, and federal and state research credits. The effective income tax rate was 21% for the nine months ended September 30, 2020. The decrease in the Company's effective tax rate for the nine months ended September 30, 2020 was primarily due to a lower state income tax rate and larger federal research credits.

Comparison of the Years Ended December 31, 2018 and 2019

Revenue, Cost of Revenue and Gross Profit

	Year Ended December 31,			
	2018	2019	$ Change	% Change
	(dollars in thousands)			
Revenue	$99,264	$113,871	$14,607	15 %
Cost of revenue	31,235	36,104	4,869	16 %
Gross profit	68,029	77,767	9,738	14 %
Gross profit margin	69 %	68 %		

Revenue increased $14.6 million, or 15%, in 2019 driven by growth in impressions processed on our platform from both existing and new publishers. In 2019, we served over 840 publishers worldwide on our platform, including 269 net new publishers in 2019, which represented over 37,000 domains and 7,000 apps in total. For purposes of our publisher count, we aggregate multiple business accounts from separate divisions, segments or subsidiaries into a single "master" publisher. In addition, in 2019 we completed a number of SPO initiatives which increased buyer spend on our platform.

Cost of revenue increased $4.9 million in 2019 primarily due to a $1.6 million increase in personnel costs as headcount increased by 27% in order to support our growing business, a $1.0 million increase in depreciation of data center equipment and amortization of internal use software, a $0.7 million impairment expense that we incurred in the second half of 2019 related to internal use software of a discontinued product offering, a $0.6 million increase in guaranteed inventory purchases related to a test program that was cancelled in the first quarter of 2019. Overall, our cost of revenue per impression processed in 2019 declined by 18% compared to 2018.

Our gross margin of 68% in 2019 was relatively flat compared to 2018, due to greater utilization of our platform offset by investments for capacity expansion.

Technology and Development

	Year Ended December 31,			
	2018	2019	$ Change	% Change
	(dollars in thousands)			
Technology and development	$12,619	$12,453	$(166)	(1)%
Percent of revenue	13 %	11 %		

The decrease in technology and development costs was primarily due to an increase of $1.4 million in the capitalization of internal use software principally as a result of new product development partially offset by a $0.7 million increase in personnel costs and a $0.5 million increase in professional fees due to outsourced product development. While our technology and development headcount increased 27%, our personnel costs only increased 5% as a result of lower personnel costs in India where the majority of the incremental hires were based.

Sales and Marketing

	Year Ended December 31,			
	2018	2019	$ Change	% Change
	(dollars in thousands)			
Sales and marketing	$33,444	$36,498	$3,054	9 %

Percent of revenue	34 %	32 %

Sales and marketing costs increased primarily due to a $2.1 million increase in personnel costs as headcount increased by 18%, travel costs increased by $0.5 million, marketing spend increased by $0.4 million, and facilities costs increased by $0.4 million. The increased costs were partially offset by a $0.5 million decrease in amortization of intangible assets obtained from a prior acquisition that became fully amortized in 2019.

General and Administrative

	Year Ended December 31,			
	2018	2019	$ Change	% Change
	(dollars in thousands)			
General and administrative	$16,998	$20,307	$3,309	19 %
Percent of revenue	17 %	18 %		

General and administrative expense increased primarily due to a $2.8 million increase in bad debt expense primarily related to the bankruptcy of one of our buyers in early 2019 and $0.6 million increase in professional services, legal and other service costs.

Total Other Income, net

	Year Ended December 31,			
	2018	2019	$ Change	% Change
	(dollars in thousands)			
Total other income, net	$662	$713	$51	8 %

The increase in total other income, net was primarily due to a $0.4 million increase in interest income as a result of increased cash and marketable securities balances, partially offset by an increase of $0.2 million in expense recognized on the change in fair value of preferred stock warrant liability that was exercised in 2019.

Provision for Income Taxes

	Year Ended December 31,			
	2018	2019	$ Change	% Change
	(dollars in thousands)			
Provision for income taxes	$1,205	$2,579	$1,374	114 %

The difference between the effective tax rate in 2018 of 21% and the federal statutory income tax rate of 21% was primarily due to increases related to non-deductible stock option expenses and foreign rate differential partially offset by federal and state research credits.

The difference between the effective tax rate in 2019 of 28% and the federal statutory income tax rate of 21% was primarily due to non-deductible stock option expenses, forfeitures of vested non qualifying stock options that had previously been expensed, and the foreign tax rate differential.

Quarterly Results of Operations

The following table sets forth our unaudited quarterly consolidated statements of operations data for each of the eight quarters in the period ended September 30, 2020. The information for each of these quarters has been prepared on a basis consistent with our audited annual consolidated financial statements appearing elsewhere in this prospectus and, in our opinion includes all adjustments, consisting only of normal recurring adjustments necessary for the fair statement of the financial information contained in those statements. The following unaudited consolidated quarterly financial data should be read in conjunction with our annual consolidated financial statements and the related notes included elsewhere in this prospectus. These quarterly results are not necessarily indicative of our operating results for a full year or any future period.

	Three Months Ended							
	Dec	March	June	Sep	Dec	March	June	Sep
	2018	2019	2019	2019	2019	2020	2020	2020
	(unaudited)							
	(dollars in thousands)							
Revenue	$31,581	$23,604	$27,417	$28,457	$34,393	$28,348	$26,361	$37,797
Cost of revenue	7,833	8,797	8,378	9,606	9,323	10,056	9,189	10,491
Gross profit	23,748	14,807	19,039	18,851	25,070	18,292	17,172	27,306
Operating expenses:								
Technology and development	3,058	3,093	3,260	2,981	3,119	2,919	2,971	3,390
Sales and marketing	8,915	8,878	8,930	8,443	10,247	9,995	9,236	10,911
General and administrative	4,359	5,880	4,939	3,653	5,835	4,349	4,236	5,214
Total operating expenses	16,332	17,851	17,129	15,077	19,201	17,263	16,443	19,515
Operating income (loss)	7,416	(3,044)	1,910	3,774	5,869	1,029	729	7,791
Total other income (expense), net	364	270	333	196	(86)	274	8	61
Income (loss) before provision for income taxes	7,780	(2,774)	2,243	3,970	5,783	1,303	737	7,852
Provision for (benefit from) income taxes	1,468	(457)	338	1,039	1,659	399	84	1,621
Net income (loss)	$6,312	$(2,317)	$1,905	$2,931	$4,124	$904	$653	$6,231

	Three Months Ended							
	Dec	March	June	Sep	Dec	March	June	Sep
	2018	2019	2019	2019	2019	2020	2020	2020
	(unaudited)							
	(as a percentage of revenue)							
Revenue	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
Cost of revenue	25 %	37 %	31 %	34 %	27 %	35 %	35 %	28 %
Gross profit	75 %	63 %	69 %	66 %	73 %	65 %	65 %	72 %
Operating expenses:								
Technology and development	10 %	13 %	12 %	10 %	9 %	10 %	11 %	9 %
Sales and marketing	28 %	38 %	33 %	30 %	30 %	35 %	35 %	29 %
General and administrative	14 %	25 %	18 %	13 %	17 %	15 %	16 %	14 %
Total operating expenses	52 %	76 %	63 %	53 %	56 %	60 %	62 %	52 %
Operating income (loss)	23 %	(13)%	6 %	13 %	17 %	5 %	3 %	20 %
Total other income, net	1 %	1 %	1 %	1 %	— %	1 %	— %	— %
Income (loss) before provision for income taxes	24 %	(12)%	7 %	14 %	17 %	6 %	3 %	20 %
Provision for (benefit from) income taxes	5 %	(2)%	1 %	4 %	5 %	1 %	— %	4 %
Net income (loss)	19 %	(10)%	6 %	10 %	12 %	5 %	3 %	16 %

Quarterly Changes in Revenue

Over the periods presented, we have experienced a growth trend in revenue due to increasing numbers of new publishers utilizing our platform, increased ad impressions from our publishers and growth in spending by ad buyers. Our revenue growth trends have been subject to the seasonal factors described in "—Factors Affecting Our Performance-Managing Seasonality." Revenue for the three months ended June 30, 2020 was negatively impacted by the COVID-19 pandemic. The revenue increase for the three months ended September 30, 2020 was partially driven by an increase in political advertising.

Quarterly Changes in Cost of Revenue

Generally, cost of revenue increased sequentially in each of the quarters presented primarily as a result of growth in ad impression capacity and higher personnel costs to support the increase of ad impressions processed on our platform.

Quarterly Changes in Operating Expenses

Operating expenses generally have increased sequentially in the quarters presented primarily due to increases in headcount and other related expenses to support our growth. Sales and marketing expenses increased as we expanded our sales teams to attract new customers and expand relationships with existing customers. The increase in sales and marketing costs in the three months ended December 31, 2019 was due to variable compensation, increased headcount, and higher marketing costs. We intend to continue to make significant investments in our sales and marketing organization. We also intend to invest in technology and development efforts to add new features and enhance the functionality of our existing platform. General and administrative costs increased for the three months ended March 31, 2019 due to bad debt associated with the bankruptcy of one of our ad buyers. General and administrative costs for the three months ended December 31, 2019 were impacted by higher bad debt expenses and variable compensation. While we may experience revenue seasonality which drives quarterly fluctuations in our costs as a percentage of revenue period to period, we generally expect that over the long term, operating expenses as a percentage of revenue will decline due to the leverage inherent in our business model.

Adjusted EBITDA

Set forth below is a reconciliation of Adjusted EBITDA to net loss for the periods presented:

	Three Months Ended							
	Dec	March	June	Sep	Dec	March	June	Sep
	2018	2019	2019	2019	2019	2020	2020	2020
	(unaudited)							
	(dollars in thousands)							
Net income (loss)	$6,312	$(2,317)	$1,905	$2,931	$4,124	$904	$653	$6,231
Add back (deduct):								
Stock-based compensation	432	466	570	496	471	495	500	1,444
Depreciation and amortization	2,914	3,075	3,069	3,196	3,331	3,586	3,810	4,178
Impairment of internal use software	—	—	—	702	—	—	—	—
Interest income	(239)	(320)	(344)	(335)	(291)	(260)	(132)	(83)
Provision for income taxes	1,468	(457)	338	1,039	1,659	399	84	1,621
Adjusted EBITDA	$10,887	$447	$5,538	$8,029	$9,294	$5,124	$4,915	$13,391

(1)Amounts include stock-based compensation before tax benefit as follows:

	Three Months Ended							
	Dec	March	June	Sep	Dec	March	June	Sep
	2018	2019	2019	2019	2019	2020	2020	2020
	(unaudited)							
	(dollars in thousands)							
Cost of revenue	$6	$7	$5	$6	$9	$10	$11	$10

Technology and development	115	106	118	105	74	74	80	222
Sales and marketing	158	170	186	159	169	180	183	358
General and administrative	153	183	261	226	219	231	226	854
Total stock-based compensation expense	$432	$466	$570	$496	$471	$495	$500	$1,444

Liquidity and Capital Resources

We have financed our operations and capital expenditures primarily through utilization of cash generated from operations, as well as borrowings under our credit facilities. As of September 30, 2020, we had cash, cash equivalents, and marketable securities of $55.2 million and net working capital, consisting of current assets less current liabilities, of $73.7 million. As of September 30, 2020, we had retained earnings of $23.9 million.

We believe our existing cash and anticipated net cash provided by operating activities, together with available borrowings under our credit facility, will be sufficient to meet our working capital requirements for at least the next 12 months. However, if our operating performance during the next 12 months is below our expectations, our liquidity and ability to operate our business could be adversely affected. In light of the recent worldwide COVID-19 pandemic, we are closely monitoring the effect that current economic conditions may have on our working capital requirements. To date, the pandemic has not had a material negative impact on our cash flow or liquidity. Our future capital requirements and the adequacy of available funds will depend on many factors, including those set forth under “Risk Factors.”

In the future, we may attempt to raise additional capital through the sale of equity securities or through equity-linked or debt financing arrangements. If we raise additional funds by issuing equity or equity-linked securities, the ownership of our existing stockholders will be diluted. If we raise additional financing by the incurrence of additional indebtedness, we may be subject to increased fixed payment obligations and could also be subject to additional restrictive covenants, such as limitations on our ability to incur additional debt, and other operating restrictions that could adversely impact our ability to conduct our business. Any future indebtedness we incur may result in terms that could be unfavorable to equity investors. We cannot guarantee that we will be able to raise additional capital in the future on favorable terms, or at all. Any inability to raise capital could adversely affect our ability to achieve our business objectives.

Revolving Line of Credit

In February 2011, we entered into a Loan and Security Agreement (Loan Agreement), with Silicon Valley Bank (SVB), which was subsequently amended at various times to provide us with additional borrowing capacity and/or flexibility.

As of September 30, 2020, the amount we can borrow under the Loan Agreement was the lesser of $45.0 million or 80% of eligible accounts receivable less certain reserves, minus the aggregate principal amount of all outstanding advances. Interest accrues on advances under the Loan Agreement at a variable rate equal to the prime rate. For any quarter where the average closing outstanding balance under the Loan Agreement is less than $5 million, a fee for such unused capacity in the amount of 0.30% per annum of the average unused portion is charged and is payable in arrears. As of September 30, 2020, the applicable interest rate under the Loan Agreement was 3.25%. In November 2020, we amended the Loan Agreement to extend its maturity date to March 7, 2021. As of December 31, 2019 and 2018 and September 30, 2020, there were no outstanding borrowings under the Loan Agreement.

Our obligations under the Loan Agreement are secured by substantially all of our assets excluding its intellectual property. The Loan Agreement contains affirmative covenants including financial covenants that, among other things, require us to maintain an adjusted quick ratio of no less than 1.0 to 1.0. The adjusted quick ratio is defined as the ratio of unrestricted cash and cash equivalents at SVB, plus billed accounts receivable to total accounts payable plus all SVB loans outstanding and outstanding letters of credit. The Loan Agreement also restricts us from paying dividends to stockholders without prior consent from SVB. We were in compliance with the covenants as of September 30, 2020.

Cash Flows

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

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
	(in thousands)			
Net cash provided by operating activities	$15,595	$35,125	$22,482	$13,792
Net cash used in investing activities	(12,749)	(22,089)	(16,786)	(11,791)
Net cash provided by (used in) financing activities	(7,993)	(1)	(1)	4,361
Net increase (decrease) in cash and cash equivalents	$(5,147)	$13,035	$5,695	$6,362

Operating Activities

Our cash flows from operating activities are primarily influenced by growth in our operations, increases or decreases in collections from our buyers and related payments to our publishers, as well as our investment in personnel to support the anticipated growth of our business. Cash flows from operating activities have been affected by changes in our working capital, particularly changes in accounts receivable and accounts payable. The timing of cash receipts from buyers and payments to publishers can significantly impact our cash flows from operating activities. In addition, we expect seasonality to impact quarterly cash flows from operating activities.

For the nine months ended September 30, 2019 net cash provided by operating activities of $22.5 million resulted primarily from net income of $2.5 million, adjustments for non-cash expenses of $14.0 million, including $9.3 million for depreciation and amortization, a $2.6 million provision for doubtful accounts and $1.5 million for stock-based compensation, and a decrease in accounts receivable of $17.1 million, partially offset by a decrease in accounts payable of $11.9 million. The changes in working capital were due to normal seasonal trends.

For the nine months ended September 30, 2020, net cash provided by operating activities of $13.8 million resulted from our net income of $7.8 million, adjustments for non-cash expenses of $14.3 million, including $11.6 million for depreciation and amortization and $2.4 million for stock-based compensation and an increase in accounts payable of $18.3 million, offset by an increase in accounts receivable of $23.2 million. The change in accounts receivable was primarily due to the increase in advertising spend through our platform in the third quarter of 2020 compared to the same quarter in 2019 and the timing of cash receipts from clients. The increase in accounts payable was primarily due to the increased payables to publishers from the increase in advertising spend flowing through our platform.

In 2018, net cash provided by operating activities of $15.6 million resulted primarily from net income of $4.4 million adjusted for non-cash items of $15.9 million, including $12.3 million for depreciation and amortization and $3.2 million for stock-based compensation and a $17.6 million increase in accounts payable, partially offset by an increase in accounts receivable of $24.2 million. The increase in accounts receivable was primarily due to the increase in advertising spend through our platform in the fourth quarter of 2018 compared to the same quarter in 2017 and the timing of cash receipts from clients. The change in accounts payable was primarily due to the increase in advertising spend flowing through our platform.

In 2019, net cash provided by operating activities of $35.1 million resulted from our net income of $6.6 million, adjustments for non-cash expenses of $18.9 million, including $12.7 million for depreciation and amortization, a $3.6 million provision for doubtful accounts and $2.0 million for stock-based compensation, and a net increase in accounts payable of $18.5 million, partially offset by an increase in accounts receivable of $11.9 million. The change in accounts payable was primarily due to the increase in advertising spend through our platform payable to publishers and a shift of business to publishers with longer payment terms. The increase in accounts receivable was primarily due to the increase of advertising spend flowing through our platform in the fourth quarter of 2019 compared to the same quarter in 2018.

Investing Activities

Our investing activities primarily included investments in marketable securities, purchases of equipment as we expanded the infrastructure in our third-party data centers, and capitalized internal-use software costs in support of enhancing our platform. Purchases of property and equipment may vary from period-to-period due to the timing of the expansion of our data centers, the addition of headcount, and the development cycles of our software development. As our business grows, we expect our capital expenditures and our investment activity to continue to increase.

For the nine months ending September 30, 2019, we used $16.8 million of cash in investing activities, consisting of $7.1 million in purchases of property and equipment (primarily data center infrastructure), a $5.1 million net increase in investments of marketable securities, $4.1 million investment in capitalized internal use software, and a $0.5 million investment in equity securities of a private company.

For the nine months ending September 30, 2020, we used $11.8 million of cash in investing activities, consisting of $12.9 million in purchases of property and equipment (primarily data center infrastructure), $5.6 million of investments in capitalized internal use software offset by a net decrease in investments of marketable securities of $6.7 million.

In 2018, we used $12.7 million of cash in investing activities, consisting of $5.2 million in purchases of property and equipment (primarily data center infrastructure), $4.5 million of investments in capitalized internal use software, and a net increase in investments of marketable securities of $3.1 million.

In 2019, we used $22.1 million of cash in investing activities, consisting of $9.6 million in purchases of property and equipment (primarily data center infrastructure), a net increase in investments of marketable securities of $6.6 million, $5.4 million of investments in capitalized internal use software and a $0.5 million investment in equity securities of a private company.

Financing Activities

Our financing activities consisted primarily of borrowings and repayments of our indebtedness.

For the nine months ending September 30, 2020, net cash provided by financing activities of $4.4 million was primarily due to the repayment of stockholders' notes receivable and accrued interest totaling $4.3 million.

For the nine months ending September 30, 2019, financing activities were immaterial.

In 2018, net cash used in financing activities of $8.0 million was primarily due to the issuance of stockholders' notes receivable of $4.0 million and the paydown of the $3.0 million outstanding balance on our revolving line of credit.

In 2019, financing activities were immaterial.

Contractual Obligations and Future Cash Requirements

Our principal contractual obligations consist of non-cancelable leases for our various facilities. In certain cases, the terms of the lease agreements provide for rental payments that increase over time.

The following table summarizes our contractual obligations, at December 31, 2019 (in thousands):

	Payments due by period				
	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
Leases	$5,133	$2,515	$2,514	$104	$—
Other contractual obligations(1)	3,820	1,519	2,301	—	—
Total	$8,953	$4,034	$4,815	$104	$—

(1)Other contractual obligations consist primarily of contractual obligations to third-party data center providers.

The following table summarizes our contractual obligations, at September 30, 2020 (in thousands):

	Payments due by period				
	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
Leases	$3,127	$556	2,474	$97	$—
Other contractual obligations(1)	8,092	1,059	7,033	—	—
Total	$11,219	$1,615	$9,507	$97	$—

(1)Other contractual obligations consist primarily of contractual obligations to third-party data center providers.

As of September 30, 2020, we had $2.7 million of long-term income tax liabilities, including interest, related to uncertain tax positions. Because of the high degree of uncertainty regarding the settlement of these liabilities, we are unable to estimate the years in which future cash outflows may occur.

Off-Balance Sheet Arrangements

Through September 30, 2020, we did not have any relationships with unconsolidated organizations or financial partnerships, such as structured finance or special purpose entities that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Quantitative and Qualitative Disclosures about Market Risk

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

Interest Rate Risk

Our cash, cash equivalents, and marketable securities consist of cash, money market funds, commercial paper, and U.S. Treasury and government debt securities. The primary objective of our investment activities is to preserve principal while maximizing income without significantly increasing risk. Because our cash, cash equivalents, and marketable securities have a relatively short maturity, our portfolio's fair value is relatively insensitive to interest rate changes. Our line of credit is at variable interest rates. We had no amounts outstanding under our credit facility as of December 31, 2019 and September 30, 2020. We do not believe that an increase or decrease in interest rates of 100 basis points would have a material effect on our operating results or financial condition. In future periods, we will continue to evaluate our investment policy relative to our overall objectives.

Foreign Currency Risk

Our consolidated results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates. Historically, the majority of our revenue contracts have been denominated in U.S. Dollars. Our expenses are generally denominated in the currencies in which our operations are located, primarily the U.S. Dollar, Indian Rupee and British Pound. To date, we have not entered into any hedging arrangements with respect to foreign currency risk or other derivative instruments. In the event our foreign sales and expenses increase, our operating results may be more greatly affected by foreign currency exchange rate fluctuations, which can affect our operating income. A hypothetical 10% change in the U.S. Dollar to India Rupee exchange rate could result in a change of $0.8 million and $0.6 million in our operating income for the year ended December 31, 2019 and the nine months ended September 30, 2020, respectively. A hypothetical 10% change in the U.S. Dollar to British Pound exchange rate could result in a change of $0.9 million and $0.7 million in our operating income for the year ended December 31, 2019 and the nine months ended September 30, 2020, respectively.

Inflation Risk

We do not believe that inflation has had a material effect on our business, results of operations, or financial condition. If our costs were to become subject to significant inflationary pressures, for example in India, we might not be able to fully offset such higher costs through price increases. Our inability or failure to do so could adversely affect our business, results of operations, and financial condition.

Critical Accounting Policies and Estimates

We prepare our consolidated financial statements in accordance with GAAP. The preparation of the consolidated financial statements requires us to make estimates and assumptions that affect the amounts of assets and liabilities reported, disclosures about contingent assets and liabilities, and reported amounts of revenue and expenses. We evaluate our estimates and assumptions on an ongoing basis using historical experience and other factors, and adjust those estimates and assumptions when facts and circumstances dictate. Actual results could materially differ from these estimates and assumptions.

We believe estimates and assumptions associated with the evaluation of revenue recognition criteria, including the determination of revenue reporting as net versus gross in our revenue arrangements, as well as internal use software development costs, fair values of stock-based awards, and income taxes have the greatest potential impact on our consolidated financial statements. Therefore, we consider these to be our critical accounting policies and estimates.

Revenue Recognition

On January 1, 2019, we adopted Accounting Standards Update 2014-09, Revenue from Contracts with Customers (Topic 606) (ASU 2014-09) using a modified retrospective approach applied to all contracts. The adoption of ASU 2414-09 did not result in a change in timing or amount of revenue recognized.

We recognize revenue through the following steps:

n Identification of a contract with a customer;

n Identification of the performance obligations in the contract;

n Determination of the transaction price;

n Allocation of the transaction price to the performance obligations in the contract; and n Recognition of revenue when or as the performance obligations are satisfied.

We refer to our publishers, app developers, and channel partners collectively as our publishers. We generate revenue through the monetization of publisher ad impressions processed on our platform. Our platform allows publishers to sell, in real time, ad impressions to buyers and provides automated inventory management and monetization tools to publishers across various device types and digital ad formats. We charge publishers a fee, which is typically a percentage of the value of the impressions monetized through our platform.

We maintain agreements with each publisher and buyer in the form of written service agreements, which set out the terms of the relationship, including payment terms (typically ninety days or less) and access to our platform.

We invoice buyers for publisher digital advertising inventory purchased through its platform. We recognize revenue when a bid is won and a buyer purchases inventory on our platform. We estimate and records reductions to revenue for volume discounts based on expected volumes during the incentive term.

The determination as to whether revenue should be reported gross of amounts billed to buyers (gross basis) or net of payments to publishers (net basis) requires significant judgment, and is based on our assessment of whether we are acting as the principal or an agent in the transaction. We have determined that we do not act as the principal in the purchase and sale of digital advertising inventory because we do not control the advertising inventory and do not set the price which is the result of an auction within the marketplace. Based on these and other factors, we report revenue on a net basis.

We generally invoice buyers at the end of each month for the full purchase price of ad impressions monetized in that month. Accounts receivable are recorded at the amount of gross billings for the amounts it is responsible to collect, and accounts payable are recorded at the net amount payable to publishers. Accordingly, both accounts receivable and accounts payable appear large in relation to revenue reported on a net basis.

Internal Use Software Development Costs

We capitalize certain internal use software development costs associated with creating and enhancing internal use software related to our platform and technology infrastructure. These costs include personnel and related employee benefits expenses for employees who are directly associated with and who devote time to software projects, and external direct costs of materials and services consumed in developing or obtaining the software. We expense software development costs that do not meet the criteria for capitalization as incurred and record them in technology and development expenses in the consolidated statements of operations.

Software development activities generally consist of three stages: (i) the planning stage; (ii) the application and infrastructure development stage; and (iii) the post implementation stage. Costs incurred in the planning and post implementation stages of software development, including costs associated with the post configuration training and repairs and maintenance of the developed technologies, are expensed as incurred. We capitalize costs associated with software developed for internal use when both the preliminary project stage is completed and management has authorized further funding for the completion of the project. We capitalize costs incurred in the application and infrastructure development stages, including significant enhancements and upgrades. Capitalization ends once a project is substantially complete and the software and technologies are ready for their intended purpose. We amortize internal use software development costs using a straight-line method over the estimated useful life of two to five years, commencing when the software is ready for its intended use.

Stock-Based Compensation

Stock-based compensation includes stock options and restricted stock awards. We calculate the fair value of stock options on the date of grant using the Black-Scholes option-pricing model for stock options, which is impacted by the fair value of our common stock, as well as changes in assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the fair value of the underlying common stock, the expected common stock price volatility over the term of the option awards, the expected term of the awards, risk-free interest rates, and the expected dividend yield. We determine the fair value of restricted stock awards by the estimated fair value of our common stock at the time of grant.

We recognize stock-based compensation for stock-based awards on a straight-line basis over the period during which an employee is required to provide services in exchange for the award (generally the vesting period). We account for forfeitures as they occur.

We calculated the estimated grant-date fair value of our equity-based awards issued to employees calculated using the Black-Scholes option-pricing model, based on the following assumptions:

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
Fair market value of common stock	$3.04-$3.69	$3.01-$3.18	$3.01-$3.18	$3.20-$5.29
Expected term (in years)	5.0–6.6	5.2-6.6	5.2-6.6	5.2-6.4
Risk-free interest rate	2.6%–3.1%	1.4%–2.6%	1.4%-2.6%	0.2%-1.5%
Expected volatility	52%–54%	52%–54%	52%-54%	51%-56%
Dividend rate	–%	–%	–%	–%

Expected Term - The expected term represents the period that we expect our stock-based awards to be outstanding. For option grants that are considered to be “plain vanilla,” we determine the expected term using the simplified method. The simplified method deems the term to be the average of the time-to-vesting and the contractual life of the options. For other option grants, we estimate expected term using historical data on employee exercises and post-vesting employment termination behavior taking into account the contractual life of the award.

Risk-Free Interest Rate - The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the option’s expected term.

Expected Volatility - Since we do not have a trading history of our common stock, we derived the expected volatility from the average historical stock volatilities of several unrelated public companies within our industry that we consider to be comparable to our business over a period equivalent to the expected term of the stock option grants.

Dividend Rate - We assumed the expected dividend to be zero as we have never paid dividends and have no current plans to do so.

Common Stock Valuations

In the absence of a public trading market, the fair value of our common stock was determined by our board of directors, with input from management, taking into account our most recent valuations provided by management from an independent third-party valuation specialist. Our board intended all options granted to have an exercise price per share not less than the per share fair value of our common stock underlying those options on the date of grant. We determined the valuations of our common stock in accordance with the guidelines outlined in the American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. The assumptions we use in the valuation models were based on future expectations combined with management judgment, and considered numerous objective and subjective factors to determine the fair value of our common stock as of the date of each option grant, including the following factors:

n the prices, rights, preferences, and privileges of our preferred stock relative to our common stock;

n our operating and financial performance;

n current business conditions and projections;

n the hiring of key personnel;

n our stage of development;

n the likelihood of achieving a liquidity event for the shares of common stock underlying these stock options, such as an initial public offering or sale of our company, given prevailing market conditions;

n any adjustment necessary to recognize a lack of marketability of the common stock underlying the granted options;

n the market performance of comparable publicly-traded companies; and n the United States and global capital market conditions.

Based upon the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, the aggregate intrinsic value of options outstanding as of September 30, 2020 was $ million, of which $ million related to vested options and $ million related to unvested options.

In valuing our common stock at various dates in 2020, 2019 and 2018, our board determined the equity value of our business using various valuation methods including combinations of income and market approaches. The income approach estimates value based on the expectation of future cash flows that a company will generate. These future cash flows are discounted to their present values using a discount rate derived from an analysis of the cost of capital of comparable publicly traded companies in our industry or similar lines of business as of each valuation date and are adjusted to reflect the risks inherent in our cash flows.

The market approach estimates value considering an analysis of guideline public companies. The guideline public companies method estimates value by applying a representative revenue multiple from a peer group of companies in similar lines of business to us to our forecasted revenue. To determine our peer group of companies, we considered public software and digital advertising companies and selected those that represent similar, but alternative investment opportunities to an investment in our company. From time to time, we updated the set of comparable companies as new or more relevant information became available.

The equity values implied by the income and market approaches reasonably approximated each other as of each valuation date.

Once we determined an equity value, we used a combination of approaches to allocate the equity value to each of our classes of stock. We used a combination of option pricing method (OPM), and Probability Weighted Expected Return Method (PWERM). The OPM allocates values to each equity class by creating a series of call options on our equity value, with exercise prices based on the liquidation preferences, participation rights, and strike prices of the equity instruments. Using the PWERM, the value of our common stock is estimated based upon a probability-weighted analysis of varying values for our common stock assuming possible future events for our company, such as a strategic sale, an initial public offering or a downside scenario in which we sell at a lower than expected shareholder liquidation value.

Application of this approach involves the use of estimates, judgment and assumptions, such as revenue, expenses, future cash flows, and selection of comparable companies and relevant multiples.

In addition, we also considered an appropriate discount adjustment to recognize the lack of marketability and liquidity due to the fact that stockholders of private companies do not have access to trading markets similar to those enjoyed by stockholders of public companies. The discount for marketability was determined using a protective put option model, in which a put option is used as a proxy for measuring discounts for lack of marketability of securities.

For valuations after the completion of this offering, our board will determine the fair value of each share of underlying common stock based on the closing price of our common stock as reported on the date of grant. Future expense amounts for any particular period could be affected by changes in our assumptions or market conditions.

Income Taxes

Our income tax provision may be significantly affected by changes to our estimates for tax in jurisdictions in which we operate and other estimates utilized in determining the global effective tax rate. Actual results may also differ from our estimate based on changes in economic conditions. Such changes could have a substantial impact on the income tax provision. We evaluate the judgments surrounding our estimates and make adjustments, as appropriate, each reporting period.

Deferred income tax assets and liabilities are determined based upon the net effects of the differences between the consolidated financial statements carrying amounts and the tax basis of assets and liabilities and are measured using the enacted tax rate expected to apply to taxable income in the years in which the differences are expected to be reversed. A valuation allowance is used to reduce some or all of the deferred tax assets if, based upon the weight of available evidence, it is more likely than not that those deferred tax assets will not be realized.

We recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the consolidated financial statements from such positions are then measured based on the largest benefit that has a greater than 50% likelihood of being realized. We recognize interest and penalties accrued related to our uncertain tax positions in our income tax provision in the accompanying consolidated statement of operations.

Recent Accounting Pronouncements

See Note 2 to our consolidated financial statements included elsewhere in this prospectus for recently adopted accounting pronouncements and recently issued accounting pronouncements not yet adopted as of the date of this prospectus.

Business

Business

Our Mission

PubMatic fuels the endless potential of Internet content creators.

Overview

Our company provides a specialized cloud infrastructure platform that enables real-time programmatic advertising transactions. We believe that our purpose-built technology and infrastructure provides superior outcomes for both Internet content creators (publishers) and advertisers (buyers). In September 2020, our platform efficiently processed approximately 134 billion ad impressions daily, each in a fraction of a second.

PubMatic was founded 14 years ago with the vision that data-driven decisions would be the future of advertising and over that time we have invested significantly in developing our platform. By harnessing our massive data asset and leveraging our sophisticated machine learning algorithms, we increase publisher revenue, advertiser return on investment (ROI), and marketplace liquidity, while improving the cost efficiency of our technology platform and our publishers' and buyers' businesses.

Our cloud infrastructure platform provides superior monetization for publishers by increasing the value of an impression and providing incremental demand through our deep and growing relationships with buyers. We are aligned with our publisher and app developer partners by being independent. We do not own media and therefore do not have a vested interest in driving ad revenue to specific media properties. Our global platform is omnichannel, supporting a wide array of ad formats and digital device types. In the third quarter of 2020, we served approximately 1,100 publishers and app developers, including many of the leading digital companies such as Verizon Media Group and News Corp. We have demonstrated that we can retain and grow revenues from our publisher customers, as evidenced by our net dollar-based retention rate of 110% for the twelve months ended September 30, 2020 and 109% for 2019.

Building on our early success as a Sell Side Platform (SSP), we have extended our platform to also meet the needs of buyers. We are integrated with the leading Demand Side Platforms (DSPs), such as The Trade Desk and Google DV360, allowing them to execute real-time transactions with our publisher clients. More recently, agencies and advertisers have started consolidating their spend with fewer, larger technology platforms to improve transparency, quality, and control over their advertising dollars. In 2019 and 2020 we entered into agreements directly with some of the largest agencies and advertisers in the world and believe this will continue to drive more ad spend to our platform.

We believe we are positioned to benefit from several trends in the advertising industry, including the rapid proliferation of digital media, the emergence of new media and advertising formats, and the increasing sophistication of the digital advertising ecosystem. Innovations in how digital advertising is delivered have driven a meaningful increase in the available number of ad impressions to be processed, which occur when an advertisement is shown to an Internet user's device. This growth has driven a corresponding need for scaled, real-time processing of massive volumes of data and efficient infrastructure. These trends are occurring as buyers and consumers seek increased transparency and governments are creating new data and privacy regulations.

We own and operate our own software and hardware infrastructure around the world, which saves significant costs as compared to companies that rely on public cloud alternatives, partly due to the data-intensive nature of digital advertising. As we have extended our cloud infrastructure to service more ad formats and devices, we have expanded our profit margins and maintained our capital efficiency that is among best-in-class for similar publicly-traded

technology companies.

Our culture and our team are two of the most important assets in building and expanding our business. We have been recognized as a “Great Place to Work” by Great Place to Work Institute Inc. and have benefited from strong employee retention rates. We foster deep employee engagement through personal development and learning to create a diverse and inclusive culture focused on rapid innovation, customer focus, and strong team execution.

Global advertising (digital and analog) spending was $647 billion in 2019 and is expected to grow to $841 billion in 2024, according to eMarketer. As advertisers follow audiences online, digital advertising is expected to outpace growth of the overall advertising market. According to eMarketer, global digital ad spend was approximately $325 billion in 2019 and is expected to grow to $526 billion by 2024. We believe that changes in the digital advertising landscape will continue to enhance our market opportunity.

We have achieved significant revenue scale with $99.3 million in revenue in 2018 and $113.9 million in 2019, representing a growth rate of 15%. For the nine months ended September 30, 2019 and 2020, our revenue was $79.5 million and $92.5 million, respectively, representing a growth rate of 16%. We have also achieved profitability while growing our business rapidly, demonstrating the power of our platform, the strength of our relationships in the digital advertising ecosystem, and the operating leverage and efficiency inherent in our business model. We generated net income of $4.4 million and Adjusted EBITDA of $20.4 million in 2018, and net income of $6.6 million and Adjusted EBITDA of $23.3 million in 2019. We generated net income of $2.5 million and Adjusted EBITDA of $14.0 million in the nine months ended September 30, 2019, and net income of $7.8 million and Adjusted EBITDA of $23.4 million in the nine months ended September 30, 2020. We also generated net cash provided by operating activities of $15.6 million in 2018 and $35.1 million in 2019, and $22.5 million and $13.8 million for the nine months ended September 30, 2019 and 2020. Through our efficient use of capital expenditures and rigorous working capital management, 2019 was our sixth straight year of achieving positive net cash provided by operating activities. For a definition of Adjusted EBITDA, an explanation of our management’s use of this measure and reconciliation of Adjusted EBITDA to net income, please refer to “Selected Consolidated Financial Data.”

Our Industry

Digital advertising is the primary business model of the Internet.

Advertising funds the creation of journalism, news, and entertainment, and for billions of consumers around the world, it subsidizes or enables free Internet consumption. Buyers can achieve significantly higher return on investment with online advertisements that are delivered both at scale and on a personalized basis. Publishers can successfully sell their advertising inventory by sharing data and information about their digital audiences on an individualized basis and at scale.

In recent years, the digital advertising ecosystem has become increasingly complex due to a variety of factors. While programmatic header bidding, a core digital advertising technology, has enabled the purchasing and selling of vast amounts of digital advertising inventory, there now exist significant challenges related to the proliferation of media across platforms, transaction speed, increased costs, transparency, and regulatory requirements. To address these issues at scale for both buyers and sellers, specialized software and hardware infrastructure are needed to optimally power these technology-driven transactions.

Rapid Proliferation of Digital Media Across Multiple Platforms

In the past decade, consumers have dramatically increased the amount of time that they spend online and on mobile devices communicating with friends, consuming media, conducting business, and researching and purchasing goods and services. According to eMarketer, consumers accessed the Internet via a mobile device on average 77 minutes per day in 2012. This usage increased to 202 minutes per day in 2019, an increase of 162%. Numerous activities that historically occurred offline continue to shift online, including visiting your doctor (telehealth), staying fit (streaming classes), ordering food (online delivery), and buying cars (online with local delivery), in addition to work and school from home. In order to better reach consumers, every major media format has transitioned or is in the process of transitioning content from traditional or analog means of delivery to digital. The television market transition to over-the-top (OTT) and connected TV (CTV), which is enabling consumers to stream content via the Internet, is the latest transition and represents a significant opportunity for digital advertising. The COVID-19 pandemic has further accelerated digital adoption habits which should lead to further rapid growth in the number of available ad impressions that can be monetized programmatically, as well as increased advertiser budgets seeking to reach these audiences online.

The Rise of Programmatic Header Bidding

Direct sales via manual, person-to-person processes is inadequate to create a real-time advertising marketplace for buyers and sellers. The challenges of scale and complexity of the digital advertising ecosystem require an automated and efficient approach to purchasing ads online, known as programmatic advertising. Programmatic advertising, on an automated basis, enables buyers, advertisers, and/or their ad agencies, to purchase ad impressions on publisher supplied inventory, including websites, apps, TVs, and various other formats to transact within milliseconds in a sophisticated, technology-driven marketplace.

Header bidding, which came to prominence starting in 2016, further increased the complexity of programmatic advertising. Header bidding involves putting software code on a publisher’s website or app allowing it to host a single parallel auction with multiple interested parties simultaneously, rather than the earlier process of sequential auctions for that impression. This innovation has fundamentally transformed programmatic advertising by providing buyers with increased transparency and equal access to ad impressions, which results in greater demand for each ad impression and increased publisher revenue According to Adzerk, header bidding has now been adopted by over 60% of digital publishers in the United States.

Massive Volumes of Data and Increased Costs

Header bidding has led to a significant increase in the number of ad impressions that need to be processed and analyzed in real-time by each participant in the digital advertising ecosystem. As consumers increasingly engage with digital media, and as advertisers bid on a growing array of ad formats and impressions, an immense amount of data is generated. The data includes anonymized consumer information about interests and intent, log files of winning

and losing advertiser bids, and transaction records for billing and payment reconciliation. Technology infrastructure platforms must rapidly process this data while offering a seamless digital ad experience for consumers.

Growing transaction volumes and increasingly complex data processing requirements can lead to rising overall costs for technology vendors. While header bidding increases the number of SSPs processing each ad impression, the underlying number of opportunities to place a personalized ad in front of a consumer does not grow, which creates processing complexity. Similarly, as SSPs process more ad impressions due to header bidding, so must DSPs. Each of these trends created by header bidding can significantly increase costs for technology providers if not properly addressed with superior technology.

Ad Spending Consolidating on Fewer Sell Side Platforms

As advertisers increase the percentage of their overall advertising budgets spent on digital formats, they are increasingly demanding improved transparency and control of their entire digital advertising supply chain. Transparency includes understanding what fees are being paid for every ad transaction, to whom the fees are being paid, and what value is being delivered by every fee recipient. In addition, transparency allows the advertiser to know the type of ad inventory being purchased and the content appearing adjacent to the advertiser's ads to avoid purchasing fraudulent or fake inventory or appearing next to content that reflects poorly on the advertiser's brand. This desire for transparency and control has led to a growing trend for advertisers to establish direct relationships with vendors in the digital advertising ecosystem which have transparent business practices and technical capabilities to meet their objectives. This has resulted in a larger portion of media spend consolidating onto fewer, more transparent technology platforms.

Protecting Consumer Privacy and Regulatory Challenges

There is an increasing awareness of how Internet user data is being leveraged to target ads, resulting in a growing number of privacy laws and regulations being established globally, including the General Data Protection Regulation (GDPR) in the European Union, the California Consumer Privacy Act (CCPA) in California, and the Video Privacy Protection Act in the United States. We believe these trends will continue locally and globally. There have also been a growing number of consumer-focused non-profit organizations and commercial entities advocating for privacy rights. These institutions are enabling Internet consumers to assert their rights over the use of their online data in advertising transactions, a trend which we support.

The digital advertising landscape must continue to adapt to these trends and incorporate awareness of consumer privacy and compliance with regulatory authorities. For example, publishers, and their downstream supply and demand partners, are required to obtain unambiguous consent from EU data subjects to process their personal data. In addition to legal and policy requirements, participants in the digital advertising supply chain were encouraged to agree upon technical specifications to collect and transmit detailed records of consent (or an alternative basis for the processing of personal data) and the purposes of that data processing. This demand resulted in widespread adoption of the Interactive Advertising Bureau (IAB) Transparency & Consent Framework 2.0 (TCF) in August 2020. Prior to the TCF, dueling technical standards resulted in industry-wide confusion following adoption of the GDPR.

Over the years, Apple has greatly limited the use of third-party cookies within its web browser (Safari's Intelligent Tracking Prevention) and recently announced the decision to make the app-based Identifier for Advertisers (IDFA) opt-in by consumers rather than opt-out. Google has also announced its intention to limit the use of third-party cookies potentially starting in 2022 in its Chrome web browser and along with Apple is leading an active industry dialogue to deliver the next wave in privacy compliant advertising solutions. We believe the "Open Internet" outside the "walled gardens" (a colloquial term that refers to closed advertising platforms including Google and Facebook) will shift from targeting by anonymized and invisible third-party cookies or identifiers to known identities based on consumer choice and opt-in. This shift towards significantly more reliable and accurate consumer identity has the potential to significantly increase advertiser ROI and therefore publisher revenue.

Our Market Opportunity

We believe that changes in the digital advertising landscape greatly enhance our market opportunity, namely: increasing impression volumes and data requirements, the growing desirability of Open Internet advertising, increased demand for transparent and privacy-safe solutions, and complex regulatory and commercial requirements.

Global advertising (digital and analog) spending was $647 billion in 2019 and is expected to grow to $841 billion in 2024, according to eMarketer. As advertisers follow audiences online, digital advertising is expected to outpace growth of the overall advertising market. According to eMarketer, global digital ad spend was approximately $325 billion in 2019 and is expected to grow to $526 billion by 2024.

We define our addressable market as global programmatic advertising spending. According to a report we commissioned from Magna, global programmatic ad spending, excluding search, is estimated to be $128 billion in 2020, and to grow to $199 billion by 2025, representing a compound annual growth rate of 9%. By 2025, programmatic ad spending, excluding search, will represent 87% of global digital ad spend. Programmatic spending is growing on mobile, video, and OTT/CTV. According to Magna, mobile programmatic ad spending is expected to grow to $175 billion in 2025, from $102 billion in 2020, representing a compound annual growth rate of 11%. Similarly, the combined opportunities in mobile-app video, (included in mobile programmatic ad spending), OTT, and CTV programmatic ad spending is expected to grow to $165 billion in 2025, from $75 billion in 2020, a compound annual growth rate of 17%. We believe that digital advertising spending is also likely to be resilient during periods of economic weakness. Notably, during the last economic recession, United States digital advertising grew 1% between 2008 and 2010, even as total United States advertising spending declined by 14%.

Our solutions enable advertising on the Open Internet. While walled gardens have grown their market share in recent years, advertisers have become increasingly dissatisfied with their limited ability to access and use their data outside the walled gardens, the lack of control over the user-generated content shown next to their ads, and the poor stewardship of user data. As a result of these concerns, more than 1,000 advertisers on Facebook, including 5 of their top 20 advertisers, announced their intention to pause ad budgets in 2020. In contrast, Open Internet advertising can provide advertisers control over where their ads appear, enable access to high quality, professional content, allow control over their data, and achieve transparency into the cost of media and associated technology fees. As publishers improve their ability to target ads using known consumer identity, the Open Internet offers the potential to further increase advertiser ROI, grow publisher revenue, and expand our market opportunity.

Our Role in the Digital Advertising Ecosystem

Our platform is a key component of powering the digital advertising ecosystem because of the role we play in meeting the needs of ad sellers and ad buyers.

Publishers and App Developers. Publishers and app developers create websites and apps that contain content for consumers along with adjacent viewable space for advertisements. As consumers navigate through these websites and apps individual ad impressions are shown to them. These impressions are typically sold to buyers programmatically in real-time via a third-party technology infrastructure platform or SSP. Publishers and app developers rely on advertising revenue as the key driver for their businesses and rely on the capabilities of these third parties in order to achieve optimal yield for their advertising inventory. In the third quarter of 2020, we served approximately 1,100 publishers and app developers worldwide on our platform, consisting of over 55,000 domains and 8,000 apps.

Sell Side Platforms. Traditionally referred to as Sell Side Platforms, platforms such as ours are designed to monetize inventory for publishers and app developers. Buyers and sellers come together through our marketplace to present, target, and purchase available advertising inventory. Our platform rapidly and efficiently processes significant volumes of ad bid data, providing a seamless digital experience for consumers. Traditionally, SSPs have focused exclusively on the needs of sellers in this process, and have limited their interactions with buyers to the buyer's agent, the Demand Side Platform. As buyers have sought greater control of their advertising supply chains, we have extended the capabilities of our specialized cloud infrastructure platform over the last several years to serve the needs of advertisers and agencies as well.

Demand Side Platforms. Advertisers and agencies often engage Demand Side Platforms, which act as advertising demand aggregators, to execute their digital marketing campaigns across various ad formats. We are integrated with the leading DSPs around the world, such as The Trade Desk and Google DV360, enabling them to execute real-time transactions with our publisher clients. We maintain active integrations with DSPs around the world, some of which are global and omnichannel in nature or more narrowly targeted on specific ad formats or geographic markets.

Advertisers and Agencies. Spending begins with advertisers, who often engage advertising agencies to help plan and execute their advertising campaigns. To better control and optimize their advertising operations, advertisers and agencies are consolidating their spend with fewer, larger technology platforms who can deliver transparency and ensure the highest levels of inventory quality and control. These advertisers and agencies access our platform through DSPs. We believe our purpose-built technology platform and direct relationships with advertisers and agencies will lead to significant consolidation of spend onto our platform.

Our Specialized Cloud Infrastructure Platform

We are a specialized cloud infrastructure provider that enables real-time programmatic advertising transactions in a market characterized by significant data and impression volumes, regulatory complexity, and increased focus on transparency and privacy. Over the past 14 years we have built, enhanced and deployed our technology infrastructure to address these market conditions and provide superior outcomes for both publishers and buyers.

We have deployed our purpose-built infrastructure globally in order to serve our customers with the high-speed transaction capabilities required to provide a seamless digital ad experience for consumers. Our offering is omnichannel and targets a diverse set of publishers touching many ad formats, and digital device types, including mobile app, mobile web, desktop, display, video, connected TV, and rich media.

Real-time Ad Transaction Processing

We have designed our specialized cloud infrastructure for the rapid and efficient processing of real-time, programmatic ad transactions and the aggregation and analysis of the significant data accompanying each transaction. We power our cloud platform by proprietary our software deployed on PubMatic-owned and operated hardware close to our customers around the world. Our technology platform processes each potential ad in a fraction of a second to optimize the consumer ad experience. In aggregate, we process 134 billion ad impressions daily, which generates 1.65 petabytes of data per day.

Sophisticated, Purpose-built Technology that Delivers Superior Outcomes

Since our founding, we have believed that data-driven decisions would be the future of advertising and have accordingly invested in developing our machine learning capabilities. By harnessing our massive data assets and advanced machine learning capabilities, we are able to deliver superior outcomes by increasing advertiser ROI and publisher revenue, while increasing the cost efficiency of our platform and our customers' and partners' businesses. Some examples of the outcomes of our machine learning competencies include:

n Reducing buyers' and our operational costs. Our algorithms determine the optimal traffic to send to each buyer, and then prioritize the DSPs most likely to bid on and win a particular ad impression, which in turn reduces the number of bid requests we send them, leading to reduced costs for buyers and for PubMatic.

n Increasing publisher revenue while maximizing the buyer's probability of winning. Our system dynamically predicts the winning price of an auction and seeks to ensure that a buyer's bid is high enough to clear this price.

We created our own internal machine learning program to train promising engineers to further our machine learning technology and over the last two years have developed over 50 machine learning based software projects through this program. Today, every engineering team at PubMatic has machine learning expertise embedded within it.

Independent and Customer Aligned

We are aligned with our customers, both publishers and buyers, by being an independent infrastructure platform. We do not own media and therefore do not have a vested interest in driving ad revenue to specific media properties. We do not take a position in media or arbitrage media. Our independence and alignment have resulted in a strong level of trust and confidence among publishers and buyers alike that our data-driven software decisions and our recommendations are in their best interests. As evidence of this, each of our top ten buyers by spend have been integrated and buying on our platform for over seven years.

Transparency and Quality for Agencies and Advertisers

We operate on a fundamental principle of transparency, being one of the first digital advertising infrastructure platforms to provide log-level data to buyers and provide transparency on every ad impression. In addition, advertisers utilizing our cloud infrastructure have full control over which publishers, ad formats, and specific ad impressions on which they would like to bid. We are among the first to offer a fraud-free program in 2017 where buyers are credited for any fraudulent inventory they may have purchased on our platform. Our buyers have experienced very low fraud levels with credits of 0.217% of overall ad spending on our platform in the third quarter of 2020. This compares very favorably to a recent Trustworthy Accountability Group (TAG) industry average of fraud at 11% of advertising spending.

Enabling Identity on the Open Internet

As advertising in the Open Internet shifts from targeting by anonymized and invisible third-party cookies that consumers must opt out of, and instead towards known first-party identity based on consumer choice and opt-in, publishers and advertisers must transition to a new identity paradigm. While there are various constituents across the digital advertising industry creating new identity solutions, we have built a comprehensive platform that greatly simplifies the implementation and ongoing management of identity solution providers. Our solution allows for the use of many of the leading identifiers in a scaled and privacy-compliant fashion resulting in increased publisher revenue and buyer ROI.

Scalable, Self-service Platform that Eases the Burden of a Complex Digital Advertising Landscape

Our cloud infrastructure solutions are available via self-serve, including an easy-to-use customer user interface and a set of application programming interfaces that allow our publisher customers to configure new inventory, extend into new geographies or ad formats, review reporting insights, and manage and track payments and billing cycles. Our platform also assists with managing the increasingly complex compliance burdens brought on by new industry guidelines and government regulations. We provide the tools and the mechanisms to help enable publisher inventory to be in compliance with these norms and requirements, maintaining strong data minimization practices, and allocating responsibility for data flows and legal compliance in agreements with vendors, publishers, and buyers.

Our Strengths

Publishers are actively seeking to maximize the value of their ad inventory, and buyers are seeking to increase advertising ROI. We believe that our efficient cloud infrastructure, rapid innovation, and transparent business model provide incentives to ad buyers to consolidate an increasing share of their total digital spend on our platform. At the same time, our direct publisher relationships, omnichannel header bidding capabilities, global scale, and access to incremental advertiser demand through direct relationships with buyers drive superior yield for publishers.

We believe the following strengths provide us with long-term competitive advantages:

Investment in Innovation Enabled by Profitable Business Model

Our business model driven by our technology platform, owned infrastructure, and offshore R&D has led to positive net income since 2016 and positive Adjusted EBITDA for seven consecutive years. We have generated positive net cash provided by operating activities for six consecutive years and average gross margins over 70% for the last eight years. We have consistently achieved among best-in-class margins compared to other similar publicly-traded technology companies. Our structural cost advantages enable us to continuously invest in driving innovation, while delivering both top line revenue growth and profitability.

Flexible Platform and Culture of Rapid Innovation

We built our company and our technology platform to be highly dynamic and to support rapid innovation. Our product and development teams are focused on continuous innovation and enhancement of our products and solutions. We believe that the flexibility of our platform and responsiveness to evolving customer needs and technical requirements enables us to achieve superior outcomes for our customers.

Since our founding, we have invested significantly in a software ideation, development, build, test, and deployment process that allows us to routinely convert a requirement into working software within two weeks or less. Our platform is highly modular, which allows us to innovate and improve individual software components without affecting the rest of the platform. We utilize a microservices architecture to interconnect each module via APIs with defined interfaces for internal and external consumption. We focus on reliability and scalability of each individual module and across our platform to maximize uptime and scale up based on customer demand. In 2019, we released new software across our global infrastructure approximately 317 times, more than once per business day. The result of our flexible platform and culture of rapid innovation is that we are highly responsive to evolving customer needs, which we believe is important in a rapidly evolving digital advertising industry.

Indicative of the flexibility and robustness of our platform, since header bidding's rise in 2016, we have increased the efficiency of our platform dramatically, introduced solutions to make auctions more transparent for advertisers, and expanded our header bidding technology beyond desktop to mobile web, mobile app, digital video, and most recently OTT/CTV.

Highly Efficient Infrastructure

As a result of our long-term, internal development efforts on our technology stack and strategic approach of owning our own hardware, we believe that we have among the lowest cost infrastructures of any specialized cloud infrastructure platform in the advertising market. We own and operate our proprietary software and hardware infrastructure around the world. This approach saves significant costs compared to companies that rely on public cloud alternatives due to the data-intensive nature of digital advertising and the immense volume of ad impressions created by header bidding. Since our inception, we have built and constantly improved upon our infrastructure, and in turn we have developed a deep expertise in continuously optimizing and growing it. As a result, our cost of revenue per impression processed decreased by 18% in 2019 compared to 2018, and by 12% in 2018 compared to 2017. We believe that the capital efficiency and operating expertise requirements that we possess present a significant barrier to entry. Even as we grow the applicability of our

cloud infrastructure to include more ad formats and devices, such as mobile, video, and now OTT/CTV, we have maintained strong capital efficiency as measured by revenue per dollar of capital expenditures. The efficiency of our infrastructure has enabled us to grow our access to first-party data, which generally refers to customer owned audience data, ad impression and bid request data, and advertiser bid response data, further driving superior results across our platform for buyers and sellers.

Since our founding, the vast majority of our technology team, which represents 43% of our workforce, has been based in Pune, India, with an average tenure of 3.4 years as of September 30, 2020. Many of our senior engineers have worked together at PubMatic since the founding of our company. Our mindset and culture of driving efficiency across our business, whether in engineering, sales, marketing, or elsewhere, continuously pushes us to find ways to achieve greater results with less human and capital resources.

Machine Learning and Data Processing

We leverage our artificial intelligence and machine learning capabilities to record, aggregate, analyze, and act on vast amounts of data to help our customers optimize their digital advertising businesses in real-time. In September 2020, our technology platform processed approximately 134 billion ad impressions and 1.65 petabytes of data every day. This data includes first party customer owned audience data, ad impression and bid request data, and advertiser bid response data. We flow all of this data through our machine learning platform in order to run thousands of algorithmic iterations on trillions of data points per month. These capabilities improves long term marketplace liquidity resulting in increased publisher revenue and higher advertiser ROI.

Customer Trust and Alignment

We are aligned with both publishers and buyers, by being an independent and transparent infrastructure provider. We do not own media and therefore do not have a vested interest in driving ad revenue to specific media properties. We do not take a position in media or arbitrage media. We operate with a fundamental principle of transparency and provide detailed insights into fees to our customers. Our customers can therefore be confident that our algorithmic software decisions and our guidance are independent and in their best interests. Our trusted status has enabled us to build direct relationships with publishers, advertisers, agencies, and DSPs. Our ability to meet the demands of both buyers and inventory sellers enables us to produce superior outcomes for all industry participants.

Global, Omnichannel Reach

We are a global business with distributed critical infrastructure and a go-to-market presence in every major advertising market in the world outside of China. Many of our publisher customers have diversified businesses with media properties and audiences across the globe and with a wide variety of ad products including display and video ads across desktop, tablet, mobile, and connected TV devices. Similarly, many of our advertiser and agency customers have brand portfolios that span the globe with a variety of ad campaign requirements – from branding to performance, to combinations thereof. All of these parties actively seek global, omnichannel platform providers that can solve for their needs around the world and across ad formats and devices. By providing global, omnichannel reach of our infrastructure, we are well positioned to help publishers and ad buyers make their advertising businesses more efficient and effective.

Growth Strategy

We believe we are positioned to benefit from tailwinds in the advertising industry, including the rapid proliferation of digital media, the need for purpose-built infrastructure to address the increasing complexity in the digital advertising landscape, and increasing consumer time spent online, all of which have been accelerated by the COVID-19 pandemic. Our growth strategy includes:

Attract New Publishers and Expand our Relationship with Existing Publishers

We constantly seek to acquire new high-quality publishers around the world. New publisher clients may include major media companies, app developers, ecommerce providers, and OTT platforms– any company that monetizes its audience through digital advertising. Once acquired, we seek to expand our relationship with existing publishers by establishing multiple header bidding integrations, leveraging our omnichannel capabilities to maximize our access to publishers' ad formats and devices, and expanding into the various properties that a publisher may own around the world. We may also up-sell additional products to publisher customers including our header bidding management as well as identity and audience solutions. To capitalize on new and existing publisher opportunities, we continue to grow our specialized customer success teams, which are structured around specific ad formats, products and geographies. We have demonstrated that we can retain and grow revenues from our publisher customers, as evidenced by our net dollar-based retention rates of 110% for the twelve month period ended September 30, 2020 and 109% for 2019.

Attract New Buyers and Expand our Relationship with Existing Buyers

We strive to acquire new buyers (including advertisers, agencies and DSPs) through our strong value proposition that includes omni-channel real-time bidding, transparency, our fraud-free program and efficiency. We work with DSPs to help them reduce their costs and improve advertiser ROI, which in turn makes us the specialized cloud infrastructure platform of choice for many of our buying partners. As advertisers and agencies increasingly consolidate their spending with fewer larger technology platforms, we seek to increase the proportion of their digital ad spending on our platform through direct relationships. We have entered into Supply Path Optimization (SPO) agreements directly with both advertisers and agencies through various arrangements ranging from custom data and workflow integrations, product features, and volume-based business terms. The effect of these SPO agreements is to increase the volume of ad spend on our platform without corresponding increases in technology costs. We have expanded and realigned our sales team to focus on advertisers and agencies directly and will continue to hire additional sales headcount to support these efforts.

Efficiently Expand Our Infrastructure Platform to Process More Ad Impressions

The COVID-19 pandemic has further accelerated digital adoption, which should lead to further growth in the number of available ad impressions that can be monetized programmatically as well as advertiser budgets seeking to reach various audiences digitally. We have a track record of cost-effectively expanding the capacity of our infrastructure platform as exemplified by average daily ad impressions having increased approximately three-fold over the last three years, while our costs related to them have increased less than 40%. We expect to continue to invest in both software and hardware infrastructure to continue growing the number of valuable ad impressions we process on our platform.

Improve Liquidity in Our Marketplace

We strive to continuously improve publisher revenue and advertiser ROI by investing in our technology and improving our machine learning capabilities. We leverage our artificial intelligence and machine learning capabilities, alongside our growing publisher and buyer relationships, to improve liquidity in our marketplace. Increasing numbers of ad impressions, increasing advertiser bids, and data proliferation provide us with many opportunities to better match sellers and buyers of ad inventory. We believe that improved matching will lead to growth of our platform and greater publisher and buyer retention.

Develop New Products

As we grow our customer base and process increasing volumes of ad impressions and data, we gain insights into new challenges we can solve on behalf of our customers. We have successfully introduced multiple new products into the market over the past 12 months, including our identity solution (Identity Hub), our header bidding management solution for OTT (OpenWrap OTT), and our audience data platform (Audience Encore). We are constantly focused on creating new products that we believe solve our customers' needs.

Expand Into New Ad Formats

We have demonstrated an ability to extend header bidding into a variety of ad formats – initially desktop display, then mobile web, mobile app, digital video, and most recently with OTT/CTV. As technology and media evolve, additional ad formats may become attractive to us – whether existing in the ecosystem today or entirely new. These may include audio/podcast ads, native ads and digital out of home ads. Each ad format represents an opportunity to further extend our cloud infrastructure, increase our platform utilization, and acquire new customers or expand our relationship with existing customers.

Expand into New Geographies

We decide to enter new advertising markets around the world based on size, growth rate, and other characteristics. For example, in 2018, we entered Indonesia and in 2019 we entered South Korea. We are constantly evaluating new markets with a strategy to use our existing global infrastructure and adjacent sales office, or by expanding our infrastructure footprint and placing personnel directly in those markets.

Our Publishers and App Developers

We primarily work with publishers and app developers who allow us direct access to their ad inventory, as well as select channel partners that meet our quality and scale thresholds. We have direct relationships with publishers such as Verizon Media Group and News Corp and app developers such as Zynga and Electronic Arts. Our channel partners aggregate and provide further access to thousands of sites and apps from smaller publishers. We refer to our publishers, app developers, and channel partners collectively as our publishers.

We help monetize valuable impressions for our clients across a wide array of ad formats and digital device types, including mobile app, mobile web, desktop, display, video, OTT/CTV, and rich media. In the third quarter of 2020, we served approximately 1,100 publishers and app developers representing over 63,000 individual domains and apps worldwide on our platform across a diverse group of content verticals including news, eCommerce, gaming, media, weather, fashion, technology, and more.

We believe our specialized cloud infrastructure platform provides the following benefits:

n Customer alignment. We are aligned with our publishers by being an independent infrastructure provider. We do not own media and therefore do not have a vested interest in driving ad revenue to specific media properties.

n Monetization. Through our infrastructure-based approach, we provide superior monetization for publishers. We achieve this by increasing the value of each impression by enhancing available data and providing incremental demand via our deep relationships with buyers.

n Innovation. Since our inception, we have consistently delivered new capabilities to our publishers, including Identity Hub, OpenWrap OTT, and Audience Encore.

n Global, Omni-channel. Our offering is global, omni-channel and efficient for our publishers to work with, targeting a wide array of ad formats and digital device types, including mobile app, mobile web, desktop, display, video, connected TV, and rich media.

n Compliance. We assist publishers with their regulatory compliance by managing advertising transactions in a transparent manner with our buyers, adopting industry wide technical specifications and business processes that respect consumer choices, and providing guidance on best practices regarding user consents and opt-outs.

We are party to an agreement with Yahoo! Inc., which was assumed by Verizon Media Group upon its acquisition of Yahoo in 2017, under which Verizon Media Group is a publisher customer of ours. The initial term of this agreement ended in December 2016, and it automatically renews for successive one-year terms unless either party provides at least 30 days' prior written notice. Either party may terminate for convenience immediately upon prior written notice. For the years ended December 31, 2018 and 2019 and the nine months ended September 30, 2019 and 2020, Verizon Media Group accounted for 30%, 28%, 29%, and 21%, of our revenue, respectively.

Our Buyers

Buyers on our platform include DSPs, agencies and individual advertisers. We have broad exposure to the ecosystem of buyers, reaching on average approximately 68,000 advertisers per month in 2020. As spending on programmatic increasingly becomes a larger share of overall ad spending, advertisers and agencies are seeking greater control of their digital advertising supply chains. To take advantage of this industry shift, we have entered into Supply Path Optimization (SPO) agreements directly with buyers. As part of these agreements, we are providing advertisers and agencies with benefits ranging from custom data and workflow integrations, product features, and volume-based business terms. As a result of these direct relationships, our existing advertisers and agencies are incentivized to allocate an increasing percentage of their advertising budgets to our platform. We are increasing buyer spend on our platform for the following reasons:

n Buyer Alignment. We do not own media and therefore do not have a vested interest in driving ad revenue to specific media properties. We do not take a position in media or arbitrage media.

n Omni-channel Real Time Bidding. Advertisers and agencies often have a large portfolio of brands requiring a variety of campaign types and support for a wide array of inventory formats and devices. Our omni-channel platform meets these requirements, which is a further driver of efficiency for our buyers.

n Transparent business model. We were one of the first Sell Side Platforms to provide log-level data to buyers and provide fee transparency on every ad impression.

n Inventory quality. We operate one of the most comprehensive processes in the digital advertising ecosystem to enhance inventory quality. We were among the first to offer a fraud-free program in 2017 where our buyers are credited for any fraudulent inventory they may have purchased on our platform.

n Efficiency. We work closely with DSPs to make them more efficient which has led to certain DSPs consolidating their spend on our platform. Our algorithms determine the optimal traffic to send to each buyer, and then prioritize the DSPs most likely to bid on and win a particular ad impression, which reduces the number of bid requests we send them, leading to reduced costs for buyers and for PubMatic.

Two of our largest DSP relationships are with Google and The Trade Desk. We are party to an agreement with Google LLC, under which Google is a buyer on our platform. The initial one-year term of the current agreement ended in May 2019, and it automatically renews for successive one-year terms unless either party provides written notice at least 60 days prior to the end of the initial term or such successive terms. Either party may terminate for convenience upon providing at least 30 days prior written notice. We signed a prior similar agreement with a Google subsidiary in 2012. We are also party to an agreement with The Trade Desk, Inc., under which The Trade Desk is a buyer on our platform. The initial term of the agreement ended in November 2013, and it automatically renews for successive one-year terms. Either party may terminate for convenience upon providing at least 30 days prior written notice.

Our Technology

Overview

We have designed our technology to efficiently process real-time advertising transactions while leveraging data to optimize outcomes for publishers and buyers. We own and operate our software and hardware infrastructure globally, which saves significant infrastructure expenditures as compared to public cloud alternatives. We designed our platform using a flexible, service-oriented architecture in order to facilitate rapid development of new solutions, to meet evolving industry demands, and to support new use cases and new ad formats. Our omni-channel platform supports a wide array of publishers, ad formats and devices, including mobile app, mobile web, desktop, display, video, OTT/CTV, and rich media.

Rapid innovation is a core driver of our business success and our corporate culture. Our technical personnel are located across our global offices in Pune, India, Redwood City, California, and New York, New York. Our agile development process and flexible, service-oriented architecture empower our development teams to routinely convert a requirement into working software within a typical time frame of two weeks or less. In 2019, we released new software across our global infrastructure approximately 317 times, more than once per business day.

We offer our solution as a complete, unified offering for publishers who want a simple, efficient and comprehensive solution. We also offer modular access to our platform via rich APIs and a mobile SDK, for publishers who wish to integrate with or extend the platform, or develop new business models and custom advertising solutions.

Data

Among the central benefits of our software platform is the processing, management and analysis of valuable data assets. The tens of billions of ad impressions and nearly trillion advertiser bids that we process every day generate enormous volumes of data that we harness to drive higher revenue for our publishers and increased ROI for our buyers. This data includes:

n Ad impression and bid request data, which contain parameters such as page URL or app bundle ID, location of the user, operating system of the user's device, device type, ad size and ad location on the page;

n First party customer owned audience data, such as segment data that specifies whether a consumer is a recent shopper for electronics or automobiles; and
n Advertiser bid response data, which is bidding data received from DSPs, agencies, and advertisers.

We have developed proprietary data and analytics offerings that allow publishers to monitor their ad business in near real-time, as well as advanced tools publishers can use to find new business opportunities, optimize their monetization strategy, and help maximize the value of their digital ad business. This data is also used by our machine learning algorithms to enhance our bidding and auctioning process by analyzing large datasets and applying algorithms to drive optimal results.

Artificial Intelligence and Machine Learning

We analyze the data on our platform through extensive application of artificial intelligence technologies, including machine learning and natural language processing. Examples of how we leverage our artificial intelligence and machine learning capabilities to improve outcomes for our customers are:

n Identify valuable ad impressions and predict auction behavior: When our machine learning models predict that an impression will attract high bids, our algorithms adjust pricing guidance to bidders in real time, which can lead to significant inventory yield improvements for publishers and higher win rates for ad buyers.

n Optimize impression selection: Our ability to accurately predict and monetize high value impressions allows us to operate more efficiently, due to the fact that the cost of processing low-value impressions and high-value impressions are approximately the same. Our algorithms, such as impression throttling, deploy a variety of levers to optimize traffic sent to DSPs, agencies, and advertisers.

n Improve our self-service capabilities: Publishers can enter natural language queries, such as “Show me average CPM for yesterday” and the analytics system will generate charts and tables with relevant data for rapid and informative analysis.

We have developed a proprietary machine learning training curriculum called the ML2 Program in order to significantly expand our use of machine learning throughout our technical organization. In the past two years, 237 machine learning training courses have been completed by 107 of our engineers who have then leveraged that learning to solve PubMatic specific problems. In total, we have completed 50 machine learning projects over the last two years.

Programmatic Header Bidding

We are a leading provider of technology solutions that enable and improve header bidding for our customers. We developed an enterprise wrapper, OpenWrap, that was among the first header bidding solutions launched for general availability. OpenWrap was released in April 2016 and enables publishers to holistically manage and configure all header bidding partners through a powerful, synchronized and intuitive user interface. OpenWrap provides a transparent, real-time view into bid activity and volume, monetization and latency metrics which allow publishers to make smarter decisions and drive sustainable monetization. Our cloud infrastructure is interoperable with the other major header bidding software frameworks including open source Prebid, Google’s Open Bidding, Amazon’s Transparent Ad Marketplace, and others. We believe we are thought leaders in the header bidding space and are represented on the boards of Prebid and the IAB Tech Lab.

We have continuously enhanced the capabilities of our OpenWrap solution and our header bidding technology. For example, in 2017, we expanded OpenWrap’s header bidding technology to mobile app developers and introduced the industry’s first hybrid client and server side wrapper. In 2019, we launched the OpenWrap SDK for in-app developers. In 2020, we launched header bidding support for OTT and CTV inventory and announced that our Identity Hub product would support server-to-server integration with OpenWrap.

Regulatory Compliance

A growing set of privacy regulations have introduced complexity regarding the collection, use, and transmission of consumer data to the digital advertising ecosystem. Most notably, the GDPR that took effect in May 2018 and the CCPA that took effect in January 2020, among other global privacy laws and regulations, have created a compliance burden for advertisers, publishers, and their partners to navigate. The advertising industry has developed a number of the technical and policy solutions to create standards for compliance, such as IAB TCF.

We have implemented a number technology innovations, process enhancements, and industry solutions in response to our publishers’ increased obligations. Through the TCF and other frameworks, we can identify and pass user consent parameters, and opt-in or opt-out as applicable, in a bid request. We are also able to evaluate whether such consents apply to our various demand partners, such as DSPs and agencies. Some of the specific measures we have taken include:

n User Consent. Working with publishers and channel partners to ensure appropriate consent is being obtained, recorded, and transmitted as applicable.

n Data Mapping. Undertaking data mapping exercises for the purpose of understanding data flows in how we collect, use, and transmit personal information from our publishers, buyers, and data providers.

n Data Minimization. Establishing mechanisms to collect only the data that is needed and pseudonymizing data wherever possible (including masking IP address or geolocation data as applicable).

n Data Retention. Implementing a short data retention period across our technology platform so that we promptly delete, aggregate, or anonymize consumer data.

n Publisher and Demand Side Agreements. Monitoring and updating our agreements with publishers, DSPs, agencies, and advertisers, as applicable, to address privacy and regulatory compliance.

Inventory Quality

The quality of the inventory made available to advertisers has a significant impact on their ROI. Bad actors promoting botnets, fake ads, ad stuffing and other malignant methodologies reduce the ROI for advertisers and siphon dollars away from quality publishers. We have developed a multi-pronged strategy to create a high-quality marketplace beginning with high quality publisher selection, supported by proprietary and third-party fraud detection software, manual review, timely fraud investigations, and a fraud-free program in which buyers are credited for any fraudulent inventory they may have purchased on our platform. Our buyers have experienced very low fraud levels with credits of 0.217% of overall ad spending on our platform in the third quarter of 2020. This compares very favorably to a recent Trustworthy Accountability Group (TAG) industry average of fraud at 11% of advertising spending.

Ad Quality

Ad quality refers to the quality of the advertisements that run on publishers' sites. We have developed proprietary solutions targeting the reduction of security issues, including malware, redirects, unsafe code, and other similar practices; quality issues, including unsafe creative categories (such as alcohol or drugs) and creative attributes (Inbanner video, Expandables, Text Ads); and performance issues, including network load, number of trackers and memory size.

On an average day, we scan nearly one million new advertisement creatives in near real-time using our Real-Time Ad Scanning (RTAS) system. RTAS connects to proprietary technology and partners' services to extract the nature of creatives. Publishers can configure their preferences for quality attributes using our blocklist manager, creative attribute selection, and keyword blocking. A comprehensive reporting suite is available for publishers to monitor the top performing creatives and review the lost opportunity due to excessive blocking.

Log-level Transparency and Insights

We enable buyers to gain additional transparency and insights to help them inform future ad buying and optimize their supply paths by providing them access to log-level data, which is comprised of various attributes that are relevant to a single ad impression within an auction. Log-level data provides buyers transaction verification data, or how the auction operates and what fees are being charged.

Reporting

Our technology platform provides extensive reporting capabilities to both buyers and publishers via APIs for direct integration into a customer's reporting systems. Publishers are able to review performance, monitor key performance indicators (KPIs), and make adjustments to their set up and optimization. Buyers have access to campaign insight data to facilitate testing and adaptation toward maximizing ROI. Detailed performance by ad format, channels, and ad sizes allows for optimization to achieve maximum performance.

Self-Service

We design and implement self-service workflow solutions to allow publishers to efficiently manage their ad inventory. For example, publishers can update their own price floors, add or remove advertisers from blocklists, add new web sites and mobile apps, manage optimize their header bidding set ups, and leverage identity graphs from multiple ID providers. Ad buyers can configure the attributes for the inventory they desire, setup new or adjust existing Private Marketplace deals, and access extensive reporting on their media buying activities with PubMatic.

Our Team and Culture

Our culture and our team are the most important asset in building and expanding our business. Our team identifies new problems to solve, builds solutions, optimizes and extends our infrastructure, and acquires and serves customers. We believe that strong and diverse customer teams deepen customer relationships, promote innovation, and increase productivity.

Our people strategy revolves around creating employee experiences that foster deep employee engagement built upon personal development & achievement that is supported by continuous feedback, learning, and team building. PubMatic's steadfast focus on driving employee engagement has resulted in increasing employee retention rates (91% annualized employee retention through the first nine months of 2020) and average global tenure (3.4 years as of September 30, 2020). Our workplaces in the United States have been certified a Great Place To Work (2017-2020) and recognized on Fortune's list of Best Workplaces in the Bay Area 2020. Our India office has also been certified by Great Place To Work (2018-2021) as well as named to the list of Great Mid-size Workplaces and Best Workplaces in IT & IT-BPM in 2019 and 2020.

We have achieved these results by delivering custom learning programs and creating opportunities for advancement that align with the dynamic needs of our business. Our practice of open and transparent communication coupled with a performance-based approach to compensation has created a culture in which employees feel empowered in their ability to influence and impact our business and be rewarded for their efforts. The value proposition we offer to our employees is rounded out with strong benefits programs that include paid family leave, health and wellness benefits and company sponsored opportunities to give back to the communities in which they work and live.

We are also committed to being inclusive in our hiring practices, promotion practices, and management practices as a means of ensuring equal opportunity for all employees as we continue to diversify our workforce. The diversity of PubMatic's workforce has been publicly documented since 2017 with our annual Diversity & Inclusion Report. Our Inclusion Action Plan for 2020-2021 consists of five areas that focus on listening, learning, hiring, socio-economic support, and activism. This plan will be executed in part by our newly established Diversity & Inclusion Committee. The plan has a global focus that takes into consideration regional cultural differences to provide interactive employee experiences that drive continuous support for inclusion throughout our organization.

It has always been our goal to attract and retain the best talent in the industry and our inclusive interview process includes finding those candidates that best add to our company mission, values, and cultural principles. These three guiding elements form a social contract between employees as well as set expectations for the common behaviors we can expect from each other and inform how we treat our customers. They are infused in every aspect of our business, from employee experience and workplace culture to marketing strategies and customers success.

Our mission: fuel the endless potential of Internet content creators.

Values:

n We put the customer first.

n We are biased towards action.

n We are leaders and innovators.

n We are committed to integrity.

n We celebrate teamwork.

Cultural Principles:

n We will empower every individual team member and treat each other as partners.

n We will make having fun a priority.

n We will hire and retain the best talent.

n We will communicate internally with honesty, transparency, and authenticity, including positive and negative information.

As of September 30, 2020, we had 518 employees, of whom 195 were located in the United States, 236 in India, and 87 in our other offices around the world.

Technology and Development

We expect to continue investing in our technology in order to support efficient and effective ad monetization, which includes maximizing the yield from existing ad impressions and productively adding new ad impressions processed on our platform. We also intend to continue developing innovative capabilities for our customers.

Our technology and development personnel, based in Pune, India, Redwood City, California, and New York, New York, are highly credentialed—33% of the 189 personnel have advanced degrees. As of September 30, 2020, we had 189 employees engaged in technology and development

Our Competition

The digital advertising ecosystem is competitive and complex due to a variety of factors. While programmatic header bidding has enabled the purchasing and selling of vast amounts of digital advertising inventory, there now exist significant challenges related to the proliferation of media across platforms, transaction speed, increased costs, transparency, and regulatory requirements. To address these issues at scale for both publishers and buyers, we provide specialized software and hardware infrastructure to optimally power technology-driven transactions. We compete with SSPs like Magnite, smaller private SSPs in markets around the world, as well as divisions of larger companies like Google.

Factors that enable us to effectively compete for ad impressions from publishers include:

n Publisher Trust and Alignment.

n Monetization.

n Innovation.

n Global, Omni-channel Scale.

n Regulatory Compliance.

Factors that enable us to effectively compete for ad spending from buyers include:

n Buyer Alignment.

n Omni-channel Real Time Bidding.

n Transparent business model.

n Inventory quality.

n Efficiency.

While there is direct competition as noted above, our cloud infrastructure is interoperable with the major header bidding software frameworks including open source Prebid, Google's Open Bidding, Amazon's Transparent Ad Marketplace, and others. As a result, we are able to gain access to competitors' ad impressions.

We have also demonstrated an ability to extend our header bidding infrastructure into a variety of higher-growth ad formats such as mobile web, mobile app, digital video, and most recently OTT/CTV.

We believe that our specialized cloud infrastructure enables us to compete favorably on the factors described above. In addition, we believe that new market entrants would find it difficult to gain direct access to publishers and ad buyers given their limited scale and would face significant costs to integrate with publishers and ad buyers and comply with growing regulatory requirements around the world.

Sales and Marketing

We primarily deploy a self-service model and focus our sales and marketing efforts on supporting, advising, and training our publishers to optimize their usage of our platform. We employ a nimble in-market sales team with expertise in programmatic advertising to attract premium publishers to our platform. New publishers on our platform work closely with our Customer Success team, which handles on-boarding and providing support throughout the publisher relationship life cycle. We have streamlined the on-boarding process through automation and self-service tools.

We have dedicated teams focused on new publisher acquisition and existing publisher relationship management. Our Customer Success team, which focuses on existing publishers, is organized and specialized by type of ad format and device and is trained to both maximize the number of integrations with each publisher, and deploy of value added solutions that we provide. Similarly, we have teams focused on new business acquisition and existing partner retention

and expansion for advertisers, agencies, and DSPs. These teams focus on onboarding new partners and increasing spend across a variety of ad formats, devices, and geographies.

Our marketing team is focused on achieving thought leadership, educating customers on how to harness programmatic advertising to improve their business, guiding buyers on how to maximize ROI via the PubMatic cloud infrastructure, supporting our sales team, generating new leads and increasing awareness for our brand.

Intellectual Property

The protection of our technology and intellectual property is an important component of our success. We protect our intellectual property rights by relying on federal and state statutory and common law rights, foreign laws where applicable, and contractual restrictions. We seek to control access to our proprietary technology by entering into non-disclosure agreements with third parties and disclosure and invention assignment agreements with our employees and contractors.

We consider our trademarks, patents, copyrights, trade secrets, and other intellectual property rights to be, in the aggregate, material to our business. We currently own two issued U.S. patents, expiring in 2034, relating to online advertising and auction techniques. We also own one issued Japanese patent. We also own trademark registrations and applications for the "PubMatic" name and variants thereof and other product-related marks in the United States and certain foreign countries. We have also registered numerous Internet domain names related to our business. In addition to our intellectual property rights, we also consider the skills and ingenuity of our employees and the functionality and frequent enhancements to our solutions to be contributors to our success in the marketplace. We believe our platform would be difficult, time consuming, and costly to replicate. We protect our competitive technology position through our ability to execute and deliver new functionality quickly, as well as our continuous development of new intellectual property as we innovate.

We intend to pursue additional intellectual property protection to the extent we believe it would be beneficial and cost effective. Despite our efforts to protect our intellectual property rights, they may not be respected in the future or may be invalidated, circumvented, or challenged. In addition, the laws of various foreign countries where our products are distributed may not protect our intellectual property rights to the same extent as laws in the United States.

Privacy and Data

We are subject to laws and regulations governing privacy and the transmission, collection, and use of consumer data. Interest-based advertising, or the use of data to draw inferences about a consumer's interests and deliver relevant advertising to that consumer, has come under increasing scrutiny by legislative, regulatory, and self-regulatory bodies, privacy advocates, academics, and commercial interests in the United States and abroad that focus on data protection and consumer privacy. In particular, much of this scrutiny has focused on the use of cookies and other tracking technologies that collect or aggregate information about consumers' online browsing and mobile app usage activity. Because both our company and our publishers rely upon large volumes of such data collected primarily through cookies and other tracking technologies, it is essential that we monitor legal requirements and other developments in this area, domestically and globally, maintain a robust privacy and security compliance program, and engage in responsible privacy practices, including providing consumers with notice of the types of data we collect, how we collect it, with whom we share it, how we use that data to provide our solutions, and the applicable choices we offer consumers.

We provide notice through our privacy policies and notices, which can be found on our website at www.pubmatic.com. As stated in our privacy policy, we do not collect information, such as names, addresses or telephone phone numbers, for providing our advertising services that can be used directly to reveal the identity of the underlying individual. We take steps not to collect and store such information (although on occasion, our publishers voluntarily share information of their consumers with us and in such circumstances we require the publishers to have obtained all necessary consents for such sharing). Our advertising and reporting rely on information that does not, on its own, directly reveal the identity of the underlying individuals (and we do not attempt to associate this information with other information that can identify such individuals). We typically do collect and store IP addresses, geo-location information, and device identifiers that are considered personal data or personal information under the privacy laws of some jurisdictions or otherwise may be the subject of current or future data privacy legislation or regulation. The definition of personally identifiable information, personal information, or personal data, varies by jurisdiction and continues to evolve in ways that may require us to adapt our practices to avoid violating laws or regulations related to the collection, storage, and use of consumer data. As a result, our technology platform and business practices must be assessed regularly against a continuously evolving legal and regulatory landscape, and we have adopted strong data minimization practices that mitigate our compliance risks.

There are also a number of specific laws and regulations governing the collection and use of certain types of consumer data relevant to our business. For example, the Children's Online Privacy Protection Act (COPPA) imposes restrictions on the collection and use of data provided by children under the age of 13 by child-directed websites or online services, such as apps, directed to children or any website if the collection of such data is known to the website or app operator. We have taken various steps to implement a system in which our publishers are contractually obligated to either flag or notify us in writing of child-directed websites. When websites are flagged, or we receive notice of such websites, we do not collect personal information, as defined by COPPA, including cookie identifiers that can recognize the same consumer across multiple sites over time, or location information more specific than street and city, on such websites or online services.

Additionally, our compliance with our privacy policy and our general consumer data privacy and security practices are subject to review by the Federal Trade Commission, which may bring enforcement actions to challenge allegedly unfair and deceptive trade practices, including the violation of privacy policies and representations or material omissions therein.

Certain State Attorneys General in the United States may also bring enforcement actions based on comparable state laws or federal laws that permit state-level enforcement. In California, for example, the Attorney General may bring enforcement actions for violations of the CCPA, as modified by the Attorney General's recently approved enforcement guidelines. We have registered as a data broker in California with the California Attorney General. When we receive bid requests that include an opt-out signal, we do not sell personal information, as defined by the CCPA. We have also adopted the IAB CCPA Compliance Framework, which includes a technical specification to identify consumer signals to opt-out of sale of their data, and have signed the IAB

Limited Service Provider Agreement that imposes service provider obligations for certain opted-out bid requests. These IAB frameworks are designed to facilitate compliance with the CCPA although the California Attorney General's office has not yet approved such frameworks. The CCPA sets forth high potential liabilities for data privacy violations on a per-record basis, and the industry faces an uncertain compliance burden as our partners and publishers work to become compliant with the law. Adding further complexity in California, voters approved a California ballot initiative, the California Privacy Rights Act (CPRA), which will take effect in January 2023. The CPRA will impose additional data protection obligations on companies doing business in California, including additional consumer rights processes and opt-outs for certain uses of sensitive data and sharing of personal data.

Outside of the United States, our privacy and data practices are subject to regulation by data protection authorities and other regulators in the countries in which we do business. The use and transfer of personal data in member states of the European Union is currently governed under the GDPR, which grants additional rights to consumers about their data, such as deletion and portability, and generally prohibits the transfer of personal data of EU subjects outside of the EU, unless the party exporting the data from the EU implements a compliance mechanism designed to ensure that the receiving party will adequately protect such data. We had relied on the EU-U.S. Privacy Shield framework (Privacy Shield framework), to transfer personal data of EU subjects to the United States, but the Privacy Shield framework was recently declared invalid by Court of Justice of the European Union. (CJEU) on 16 July 2020. In the same judgement, while the CJEU upheld the adequacy of the standard contractual clauses (a standard form of contract approved by the European Commission as an adequate personal data transfer mechanism, and potential alternative to the Privacy Shield framework), it made clear that reliance on them alone may not necessarily be sufficient in all circumstances and cast doubt on their future use. Use of the standard contractual clauses must now be assessed on a case-by-case basis taking into account the legal regime applicable in the destination country, in particular applicable surveillance laws and rights of individuals. The use of standard contractual clauses for the transfer of personal data specifically to the United States remains under review by a number of European data protection supervisory authorities.

The GDPR sets out higher potential liabilities for certain data protection violations, which may result in fines up to the great of €20 million or 4% of an enterprise's global annual revenue. Additionally, when the transition period following Brexit expires at the beginning of 2021, we will also have to comply with the UK GDPR, which will also have the ability to fine up to of €20 million (£17 million) or 4% of global turnover.

Further, the EU is currently in discussions to replace the ePrivacy Directive (commonly called the "Cookie Directive") with the ePrivacy Regulation that governs the use of technologies that collect, access, and store consumer information and may create additional compliance burdens for us in Europe.

Other jurisdictions have enacted legislation that closely tracks the concepts, obligations, and consumer rights described in the GDPR, including Brazil's General Data Protection law and Thailand's Personal Data Protection Act. Some jurisdictions, including Russia and China, have in recent years enacted data localization laws, which require any personal information of citizens of those jurisdictions to be stored and processed on servers located in those jurisdictions. Such laws are gaining momentum and are being enforced by local authorities.

Beyond laws and regulations, we are also members of self-regulatory bodies that impose additional requirements related to the collection, use, and disclosure of consumer data, including the IAB, the Digital Advertising Alliance, and the NAI. Under the requirements of these self-regulatory bodies, in addition to other compliance obligations, we provide consumers with notice via our privacy policies about our use of cookies and other technologies to collect consumer data, our collection and use of consumer data to deliver interest-based advertisements, and consumers' opt-out choices. We also allow consumers to opt-out from the use of data we collect for purposes of interest-based advertising through mechanisms described in our privacy policies available on our website. Some of these self-regulatory bodies have the ability to discipline members or participants, which could result in penalties and cause reputational harm. Additionally, some of these bodies might refer violations of their requirements to the Federal Trade Commission or other regulators.

Legal Proceedings

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. We are not presently a party to any legal proceedings that, in the opinion of our management, would individually or taken together have a material adverse effect on our business, operating results, financial condition, or cash flows. Regardless of outcome, litigation can have an adverse impact on us due to defense and settlement costs, diversion of management resources, negative publicity and reputational harm, and other factors. For additional information, see Note 6 to our consolidated financial statements included elsewhere in this prospectus.

Facilities

Prior to the Covid-19 pandemic, our corporate headquarters were located in Redwood City, California. Since April 2020, all headquarter personnel have been working remotely. We decided to not renew our headquarters lease which expired in August 2020. Beginning in August 2020, we have leased 3,554 rentable square feet to support our general and administrative functions, while our sales and marketing, technology and development, engineering and customer support employees continue to work remotely. We intend to move to a new headquarters in 2021.

Since our founding, we have maintained a presence in Pune, India overseen by one of our founders. We occupy space consisting of approximately 35,300 square feet under a lease which expires in 2021 and which we intend to extend under a renewal agreement until 2023. We use this facility primarily for technology and development, and to a lesser extent general administration and customer support. We also maintain regional offices in New York, London, Tokyo, and Singapore for regional sales and marketing, technology and development, and customer support personnel. We also have sales offices in several locations, including Los Angeles, Munich, Hamburg, Stockholm, Amsterdam, New Delhi, and Sydney. We maintain data center co-location facilities in San Jose, California; San Francisco, California; Clifton, New Jersey; Manassas, Virginia; London, United Kingdom; Amsterdam, The Netherlands; Tokyo, Japan; and Singapore.

We believe that our current facilities are adequate to meet our needs for the immediate future, and that, should it be needed, suitable additional space will be available to accommodate any such expansion of our operations.

Management

Management

Executive Officers and Directors

The following table provides information regarding our executive officers, key employees and directors as of October 31, 2020:

Name	Age	Position(s)
Executive Officers:		
Rajeev K. Goel	42	Chief Executive Officer, Director
Amar K. Goel	44	Chief Growth Officer, Chairman, Director
Steven Pantelick	57	Chief Financial Officer
Mukul Kumar	49	President of Engineering
Thomas C. Chow	42	General Counsel and Secretary
Jeffrey K. Hirsch	62	Chief Commercial Officer
Non-Employee Directors:		
Cathleen Black	76	Director
W. Eric Carlborg	56	Director
Susan Daimler	43	Director
Ashish Gupta	53	Director
Narendra K. Gupta*	72	Director

*Lead independent director

Executive Officers

Rajeev K. Goel is one of our co-founders and has served as our Chief Executive Officer since December 2008. He also has served as a member of our board of directors since September 2006. He served as our General Manager from 2006 to 2008. Before co-founding our company, Mr. Goel served in various technical and business roles, including as a product marketing director at SAP AG, a publicly-traded multinational enterprise software company, from 2005 to 2007. Mr. Goel was a Principal at Diamond Management and Technology Consultants, Inc., an information technology strategy consulting firm, from 2001 to 2005, and a co-founder and Vice President of Technology of Chipshot.com, an online retailer of custom-built golf equipment, from 1996 to 2000. Mr. Goel holds a B.A. in Economics, Political Science, and Spanish from The Johns Hopkins University and an M.S. in Computer and Information Technology from the University of Pennsylvania. We believe that Mr. Goel possesses specific attributes that qualify him to serve as a director, including the historical knowledge, operational expertise, and continuity that he brings to our board as our co-founder and Chief Executive Officer.

Amar K. Goel is our founder and has served as a member of our board of directors and Chairman since 2006. He has served as our Chief Growth Officer since March 2018, and previously supported us in various roles since our founding. He currently works for the company on a part-time basis. Since May 2020, Mr. Goel has also served as a co-founder and Chief Executive Officer of Safeter Inc., a company focused on helping workforces safely return to work amidst the COVID-19 pandemic. Mr. Goel served as our Chief Executive Officer from 2006 to 2008. He served as Chairman of the board of directors of RevX, Inc., an Asia-focused mobile advertising company from 2015 to 2018. Previously, he was the founder of Komli Media, Inc., an Asia-focused digital media platform company that was spun out of our company, where he served as Chairman of the board of directors from 2008 to 2015 and Chief Executive Officer from 2006 to 2011 and again from December 2013 to September 2015. Mr. Goel also served in various sales roles at Microsoft Corporation, a software, services and hardware company, from 2003 to 2006 and as a consultant at McKinsey & Co., a global management consulting firm, from 2000 to 2003. He was the co-founder, President, and Chief Executive Officer of Chipshot.com, an online retailer of custom-built golf equipment, from 1995 to 2000. Mr. Goel holds an A.B. in Economics and an M.S. in Computer Science from Harvard University. We believe that Mr. Goel possesses specific attributes that qualify him to serve as a director, including the perspective and experience he brings as our founder and his operational expertise and experience with software and digital advertising. He is the brother of Rajeev K. Goel.

Steven Pantelick has served as our Chief Financial Officer since 2011. Before joining us, Mr. Pantelick served as the Chief Financial Officer of Aggregate Knowledge Inc., a data management platform company, from 2007 to 2010; the Chief Financial Officer and Vice President of Operations of Kodak Gallery (formerly known as Ofoto Inc.), a technology company focused on imaging solutions and services for consumers, from 2004 to 2007; and as the Chief Financial Officer of SkyPilot Network, a broadband wireless equipment and networking company, from 2002 to 2003. From 1997 to 2001, Mr. Pantelick served in several roles at Blockbuster Inc., a movie and game rental entertainment company, including as Chief Operating Officer of the New Media division, Senior Vice President of U.S. Financial Operations, and Vice President of Worldwide Planning. Prior to Blockbuster, Mr. Pantelick spent seven years with Cadbury Schweppes plc in a variety of finance roles in the United States and Europe. Mr. Pantelick holds an A.B. from Harvard University and an M.B.A. from the Tuck School of Business at Dartmouth.

Mukul Kumar is one of our co-founders and has served as our President, Engineering since 2006. Before co-founding our company, Mr. Kumar was the Director of Engineering at PANTA Systems, Inc., a high -performance computing company, from 2005 to 2006, and Director of Engineering at Veritas (India) Limited, a storage solutions company, from 1997 to 2005. Mr. Kumar holds a B. Tech. in Electrical Engineering from the Indian Institute of

Technology, Kharagpur.

Thomas C. Chow has served as our General Counsel and Secretary since July 2018. Prior to joining us, he served as Senior Counsel, Media & Technology for Snap Inc., a publicly-traded camera and social media company, from November 2017 to July 2018, as General Counsel, Chief Compliance Officer, and Secretary for Exponential Interactive, Inc., an adtech company, from February 2014 to October 2017, as Vice President, General Counsel for Vindicia, Inc., a subscription payments company, from 2011 to 2014, and as Director and Associate General Counsel for TechSoup Global, a technology non-profit organization from 2008 to 2011. Mr. Chow holds a B.A. in Sociology, with honors, from the University of California, Berkeley and a J.D. from the University of California, Hastings College of the Law.

Jeffrey K. Hirsch has served us in various roles, including in his current role as our Chief Commercial Officer, since March 2019, and previously supported us in various other roles, including, as our Head of Global Publisher Development, between January 2017 and February 2019, and our Chief Marketing Officer, between July 2016 and February 2019. Prior to joining us, he served as Chief Marketing Officer for SundaySky, Inc., a personalized video technology company, from June 2015 to June 2016, as President for Digital Remedy, a digital media execution and technology company, from July 2013 to May 2015, as Chief Executive Officer of Underdog Media, LLC, from 2011 to 2013, as Chief Executive Officer for Audience Science, Inc., a global data technology company, from 2008 to 2011, and Chief Revenue Officer for Audience Science, Inc. from 2006 to 2008. Mr. Hirsch holds a B.A. in Experimental Psychology from the University of California, Santa Barbara.

Non-Employee Directors

Cathleen Black has served as a member of our board of directors since May 2014. Ms. Black served as chancellor of the New York City Department of Education in 2011, as President of Hearst Corporation, a multinational mass media group, from 1995 to 2010, and as President and Chief Executive Officer of Newspaper Association of America, a newspaper trade association, from 1991 to 1996. Ms. Black has previously served on the boards of directors of International Business Machines Corporation, a publicly-traded multinational technology and consulting corporation, from 1996 to 2010 and The Coca Cola Company, a publicly-traded multinational beverage company, from 1990 to 2010. Ms. Black holds a B.A. in English from Trinity College. We believe that Ms. Black possesses specific attributes that qualify her to serve as a director, including her background in media and business management.

W. Eric Carlborg has served as a member of our board of directors since May 2012. Mr. Carlborg has served as an investment professional and a partner at August Capital, a venture capital firm, since 2010. Before August Capital, Mr. Carlborg served in various executive and financial positions, including: partner at Continental Investors LLC, an investment company; managing director of investment banking with Merrill Lynch & Co., a financial services company; Chief Financial Officer at Provide Commerce, Inc., an online provider of high quality gifts, and Einstein/Noah Bagel Corp., a wholly owned subsidiary of Einstein Noah Restaurant Group, Inc., a food service company; and Chief Strategy Officer at Go2Net, Inc., a provider of Internet products and services. Mr. Carlborg previously served as a member of the board of directors of Blue Nile, Inc., an online retailer of fine jewelry and zulily, inc, an online daily deal company. Mr. Carlborg holds a B.A. in Economics from the University of Illinois and an M.B.A. from the University of Chicago's Booth School of Business. We believe that Mr. Carlborg possesses specific attributes that qualify him to serve as a director, including his background in accounting and financial management and his deep understanding of our financial statements and our business.

Susan Daimler has served as a member of our board of directors since November 2020. Ms. Daimler has served as an executive at the Zillow Group, Inc., a publicly-traded real estate technology company, since October 2012. Ms. Daimler joined Zillow after its acquisition of Buyfolio, Inc. a co-shopping platform for real estate agents and home buyers, which she co-founded in 2009. Prior to Buyfolio, Ms. Daimler also co-founded the travel website SeatGuru, which was acquired by Expedia Group Inc. in 2007. She currently serves on the Board of Trustees at The Johns Hopkins University and previously served as the chairperson of the school's Advisory Board to the Dean of Arts & Sciences. She earned a Bachelor of Arts in English from Johns Hopkins University. We believe that Ms. Daimler possesses specific attributes that qualify her to serve as a director, including her extensive business operating experience.

Ashish Gupta has served as a member of our board of directors since 2010. Mr. Gupta has been director and Senior Managing Director at Helion Advisors, or Helion Investment Partners, a venture capital advisory firm, since 2006. Before Helion Advisors, Mr. Gupta served in various investment and technical positions, including as: a venture partner at Woodside Fund, a venture capital firm, from 2002 to 2006; Director of Engineering at Amazon.com, Inc., an ecommerce company, from 1998 to 2000; and Vice President of Engineering at Junglee Corp., a database technology company that was acquired by Amazon.com, Inc. from 1996 to 1998. Mr. Gupta serves as a member of the board of directors of InfoEdge (India) Limited, a publicly-traded Indian online classified ads company. He holds a B. Tech. in Computer Science from the Indian Institute of Technology, Kanpur, and a Ph.D. in Computer Science from Stanford University. We believe that Mr. Gupta possesses specific attributes that qualify him to serve as a director, including his extensive experience working with leading technology companies as well as his substantial experience as an investment and technology professional.

Narendra (Naren) K. Gupta has served as a member of our board of directors since February 2011. Mr. Gupta co-founded and has served as Managing Director of Nexus Venture Partners, a US/India venture capital fund, since 2006. Mr. Gupta founded Integrated Systems Inc., a provider of products for embedded software development, in 1980, and served as its President, CEO, and Chairman at various times until 2000. Mr. Gupta served as a member of the board of directors of Red Hat Inc., an open source software company, from 2005 to 2019, and as the chairman of its board of directors from 2017 to 2019. Previously, he served on the boards of Wind River Systems, Inc., a provider of device software optimization solutions and Tibco Software Inc., an enterprise software company. He also serves as a member of the Board of Trustees of the California Institute of Technology, or Caltech. Mr. Gupta holds a B. Tech. in Engineering from the Indian Institute of Technology, Delhi, an M.S. in Engineering from Caltech, and a Ph.D. in Engineering from Stanford University. We believe that Mr. Gupta possesses specific attributes that qualify him to serve as a director, including his experience as a current and former executive and board member of a number of technology-related private and public companies, as an investor in global companies, as well as his science and technology expertise.

Governance

Appointment of Officers

Our executive officers are appointed by, and serve at the discretion of, our board of directors. Amar K. Goel and Rajeev K. Goel are brothers. Otherwise, there are no family relationships between any of our directors or executive officers.

Board Composition

Our board of directors currently consists of six members. Five of our directors are independent within the meaning of the independent director guidelines of the Nasdaq Global Market (Nasdaq). Pursuant to a voting agreement, as amended through May 19, 2014, and our eighth amended and restated certificate of incorporation, Ms. Black, Rajeev K. Goel, Amar K. Goel, Narendra Gupta, Ashish Gupta, and Mr. Carlborg have been designated to serve as members of our board of directors. Rajeev K. Goel and Amar K. Goel were elected by the holders of our common stock, Narendra Gupta and Ashish Gupta were elected by the holders of our Series A convertible preferred stock, Series B convertible preferred stock and Series C convertible preferred stock voting together as a separate class, Mr. Carlborg was elected by the holders of our Series D convertible preferred, and Ms. Black was elected by the holders of our common stock and preferred stock, voting together as a single class.

The voting agreement and the provisions of our eighth amended and restated certificate of incorporation by which all of our current directors were elected will terminate upon, and no contractual obligations regarding the election of our directors will remain, following the completion of this offering. Each of our current directors will continue to serve until the election and qualification of his or her successor, or his or her earlier death, resignation, or removal.

Classified Board of Directors

Upon the completion of this offering, our board of directors will consist of seven members and be divided into three classes of directors that will serve staggered three-year terms. At each annual meeting of stockholders, a class of directors will be elected for a three-year term to succeed the same class whose term is then expiring. As a result, only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Our directors will be divided among the three classes as follows:

n the Class I directors will be and , and their terms will expire at the first annual meeting of stockholders to be held after the completion of this offering;

n the Class II directors will be and , and their terms will expire at the second annual meeting of stockholders to be held after the completion of this offering; and n the Class III directors will be and , and their terms will expire at the third annual meeting of stockholders to be held after the completion of this offering.

Each director's term continues until the election and qualification of his or her successor, or his or her earlier death, resignation, or removal. Our restated certificate of incorporation and restated bylaws, as we expect them to be in effect upon the completion of this offering, will authorize only our board of directors to fill vacancies on our board of directors. Any increase or decrease in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. This classification of our board of directors may have the effect of delaying or preventing changes in control of our company. See "Description of Capital Stock—Anti-Takeover Provisions—Restated Certificate of Incorporation and Restated Bylaw Provisions."

Director Independence

In connection with this offering, we have applied to list our Class A common stock on Nasdaq. Under the rules of Nasdaq, independent directors must comprise a majority of a listed company's board of directors within a specified period after the completion of this offering. In addition, the rules of Nasdaq require that, subject to specified exceptions, each member of a listed company's audit, compensation, and nominating and corporate governance committees be independent. Under the rules of Nasdaq, a director will only qualify as an "independent director" if, in the opinion of that company's board, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Additionally, compensation committee members must not have a relationship with us that is material to the director's ability to be independent from management in connection with the duties of a compensation committee member.

Audit committee members must also satisfy the independence criteria set forth in Rule 10A-3 under the Exchange Act. In order to be considered independent for purposes of Rule 10A-3, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors or any other committee: accept, directly or indirectly, any consulting, advisory or other compensatory fee from the listed company or any of its subsidiaries; or be an affiliated person of the listed company or any of its subsidiaries. We intend to satisfy the audit committee independence requirements of Rule 10A-3 as of the completion of this offering.

Our board of directors has undertaken a review of the independence of each director and considered whether each director has a material relationship with us that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. As a result of this review, our board of directors determined that Ms. Black, Mr. Carlborg, Ms. Daimler, Ashish Gupta, and Narendra Gupta are "independent directors" as defined under the applicable rules and regulations of the SEC and the listing requirements and rules of Nasdaq. In making these determinations, our board of directors reviewed and discussed information provided by the directors and by us with regard to each director's business and personal activities and relationships as they may relate to us and our management, including the beneficial ownership of our common stock by each non-employee director and the transactions involving them described in the section entitled "Certain Relationships and Related Person Transactions."

Committees of the Board of Directors

Our board of directors has an audit committee, a compensation committee, and a nominating and corporate governance committee, each of which, pursuant to its respective charter, will have the composition and responsibilities described below upon the completion of this offering. Following the completion of this offering, copies of the charters for each committee will be available on the investor relations portion of our website. Members serve on these committees until their resignation or until otherwise determined by our board of directors.

Our corporate governance principles, which our board of directors has established in connection with this offering, provide that when the Chairperson and Chief Executive Officer positions are held by the same person or by directors that are not independent, a lead independent director shall be designated. Because neither our Chairman Amar K. Goel nor our Chief Executive Officer Rajeev K. Goel is independent, our board of directors appointed Narendra Gupta to serve as our lead independent director. As lead independent director, Mr. Gupta will, among other responsibilities, preside over executive sessions of our independent directors, serve as a liaison between the Chairman and the independent directors, and perform such functions and responsibilities as our board of directors may otherwise determine and delegate.

Audit Committee

Our audit committee is composed of Mr. Carlborg, Mr. Gupta and Ms. Black. Mr. Carlborg is the chairman of our audit committee. The members of our audit committee meet the independence requirements under Nasdaq and SEC rules. Each member of our audit committee is financially literate. In addition, our board of directors has determined that Mr. Carlborg is an "audit committee financial expert" as that term is defined in Item 407(d)(5)(ii) of Regulation S-K promulgated under the Securities Act. This designation does not, however, impose on him any supplemental duties, obligations or liabilities beyond those that are generally applicable to the other members of our audit committee and board of directors. Our audit committee's principal functions are to assist our board of directors in its oversight of:

n selecting a firm to serve as our independent registered public accounting firm to audit our financial statements;

n ensuring the independence of the independent registered public accounting firm;

n discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and that firm, our interim and year-end operating results;

n establishing procedures for employees to anonymously submit concerns about questionable accounting or audit matters;

n considering the adequacy of our internal controls and internal audit function;

n reviewing related-party transactions that are material or otherwise implicate disclosure requirements; and n approving, or as permitted, pre-approving all audit and non-audit services to be performed by the independent registered public accounting firm.

Compensation Committee

Our compensation committee is composed of Ms. Black, Ms. Daimler and Mr. Gupta. Ms. Black is the chairman of our compensation committee. The members of our compensation committee meet the independence requirements under Nasdaq and SEC rules. Each member of this committee is also a "non-employee director" within the meaning of Rule 16b-3 under the Exchange Act and an "outside director" within the meaning of Section 162(m) of the Internal Revenue Code of 1984, as amended (the Code). Our compensation committee is responsible for, among other things:

n reviewing and approving, or recommending that our board of directors approve, the compensation of our executive officers;

n reviewing and recommending to our board of directors the compensation of our directors;

n reviewing and recommending to our board of directors the terms of any compensatory agreements with our executive officers;

n administering our stock and equity incentive plans;

n reviewing and approving, or making recommendations to our board of directors with respect to, incentive compensation and equity plans; and n establishing our overall compensation philosophy.

Nominating and Governance Committee

Our nominating and governance committee is composed of Ms. Daimler and Mr. Gupta, who serves as the chairman of the committee. Our nominating and governance committee's principal functions include:

n identifying and recommending candidates for membership on our board of directors;

n reviewing and recommending to our board of directors any changes to our corporate governance principles;

n reviewing proposed waivers of the code of conduct for directors and executive officers;

n overseeing the process of evaluating the performance of our board of directors; and n advising our board of directors on corporate governance matters.

Compensation Committee Interlocks and Insider Participation

None of the members of the compensation committee is currently, or has been at any time, one of our officers or employees. None of our executive officers has served as a member of the board of directors, or as a member of the compensation or similar committee, of any entity that has one or more executive officers who served on our board of directors or compensation committee during 2019.

Director Compensation

Directors who are also our employees do not receive cash or equity compensation for service on our board of directors in addition to the compensation payable for their service as our employees. The following table presents the total compensation for each person who served as a non-employee member of our board of directors in 2019. Other than as set forth in the table, we did not make any equity awards or non-equity awards to or pay any other compensation to the non-employee members of our board of directors in 2019.

Name	Fees Earned or Paid in Cash	Option Awards		Total
Cathleen Black	$25,000	$50,629	(1)(2)	$75,629

W. Eric Carlborg	–	–	–
Ashish Gupta	–	–	–
Narendra Gupta	–	–	–

(1)Represents the aggregate grant date fair value of 75,000 options received pursuant to an August 16, 2016 grant under our 2006 Stock Option Plan, as computed in accordance with Financial Accounting Standard Board Accounting Standards Codification Topic 718 (ASC 718) and recorded as stock-based compensation in our financial statements. The options vested in four equal installments on each of July 1, 2017, July 1, 2018, July 1, 2019, and July 1, 2020. The assumptions used in calculating the dollar amount recognized for financial statement reporting purposes of the option awards reported in this column are set forth in Note 11 to our consolidated financial statements included in this prospectus. This dollar amount reflects the accounting cost for these option awards and does not necessarily correspond to the actual economic value of the awards.

(2)As of December 31, 2019, Ms. Black had an aggregate of 75,000 option awards outstanding.

Directors who are employees do not receive any fees or equity awards for their service on our board of directors or any committee. Our non-employee directors currently receive an annual cash fee of $25,000. In connection with this offering, our board of directors expects to approve an annual non-employee director compensation policy, which will take effect following the completion of this offering.

Executive Compensation

Executive Compensation

The following tables and accompanying narrative set forth information about the 2019 compensation provided to our principal executive officer and the two most highly-compensated executive officers (other than our principal executive officer) who were serving as executive officers as of December 31, 2019. These executive officers were Rajeev K. Goel, our Chief Executive Officer, Amar K. Goel, our Chief Growth Officer, and Steven Pantelick, our Chief Financial Officer, and we refer to them in this section as our “named executive officers.”

2019 Summary Compensation Table

The following table presents summary information regarding the total compensation for services rendered in all capacities that was awarded to, earned by, and paid to our named executive officers during the year ended December 31, 2019.

Name and Principal Position	Salary ($)	Bonus(1) ($)	Option Awards(2) ($)	Non-Equity Incentive Plan Compensation(3)	All Other Compensation ($)	Total ($)
Rajeev K. Goel, Chief Executive Officer	450,000	313,188	409,242	450,000	–	1,622,430
Amar K. Goel, Chief Growth Officer Former President	305,882	153,682	155,254	214,118	–	828,936
Steven Pantelick, Chief Financial Officer	400,000	156,594	245,391	225,000	–	1,026,985

(1)The amounts in this column represent bonuses earned by exceeding the target performance measures established under our 2019 Executive Bonus Plan. For more information see "–Non-Equity Incentive Plan Compensation–Executive Bonus Plan."

(2)The amounts set forth in this column represent the aggregate grant date fair value of the stock options awarded to the named executive officer during 2019 in accordance with Financial Accounting Standard Board Accounting Standards Codification Topic 718 (ASC 718) and recorded as stock-based compensation in our financial statements. The assumptions used in calculating the dollar amounts recognized for financial statement reporting purposes of the option awards reported in this column are set forth in Note 11 to our consolidated financial statements included in this prospectus. These dollar amounts reflect the accounting cost for these option awards and do not necessarily correspond to the actual economic value of the awards.

(3)The amounts reported represent the amounts earned based upon achievement of certain performance goals under our executive bonus program. These payments are described in greater detail under "–Non-Equity Incentive Plan Compensation–Executive Bonus Plan."

Equity Compensation

From time to time, we grant equity awards in the form of stock options to our named executive officers, which are generally subject to vesting based on each named executive officer’s continued service with us. Each of our named executive officers currently holds outstanding options to purchase shares of our Class B common stock that were granted under our 2006 Stock Option Plan and 2017 Equity Incentive Plan, as set forth in the table below for “2019 Outstanding Equity Awards at Fiscal Year-End.”

In May 2019, we granted Rajeev K. Goel, Amar K. Goel, and Steven Pantelick options to purchase 250,000 shares, 95,000 shares, and 150,000 shares of our common stock, respectively, in each case at an exercise price of $2.97 per share, under our 2017 Equity Incentive Plan. The shares subject to these options vest monthly, in equal installments, over the 48-month period following the grant, subject to the optionee's continued service through each vesting date.

The options are subject to vesting acceleration upon a change of control as described under the caption "Executive Compensation—Potential Payments upon Termination or Change of Control."

Non-Equity Incentive Plan Compensation

Executive Bonus Plan

During 2019, each of our named executive officers earned cash bonuses based on his participation in our 2019 Executive Bonus Plan (Executive Bonus Plan). Under the Executive Bonus Plan, our named executive officers were eligible to receive bonuses based on the achievement of individual performance targets and our overall performance as measured by gross revenue associated with publisher accounts, revenue gross profit, and adjusted net income. Total cash bonus awards for 2019 were targeted at $450,000 for Rajeev K. Goel, $214,118 for Amar K. Goel, and $225,000 for Steven Pantelick. In February 2020, our compensation committee determined, based upon our achievement in excess of certain target financial metrics set forth in the Executive Bonus Plan, to approve total cash bonus awards of $763,188 for Rajeev K. Goel, $367,800 for Amar K. Goel, and $381,594 for Steven Pantelick.

Employment Agreements

We intend to enter into new employment agreements with certain senior management personnel in connection with this offering, including our named executive officers. We expect that each of these agreements will provide for at-will employment and include each officer's base salary, a discretionary annual incentive bonus opportunity, and standard employee benefit plan participation. We also expect these agreements, or a separate related policy, to provide for severance benefits upon termination of employment or a change in control of our company.

Potential Payments upon Termination or Change of Control

Our named executive officers' employment agreements provide for benefits described below upon either a termination by us of the executive officer's employment without "cause" or a voluntary resignation by the executive officer from his employment that qualifies as a "constructive termination" (each as defined in their employment agreements). We refer to either of these terminations as a "qualifying termination." These benefits depend on whether such termination occurs during the two-year period following an acquisition or other change of control and are contingent upon the executive officer executing a customary release of claims.

If the qualifying termination of a named executive officer occurs during the two-year period following a change of control, the named executive officer will be entitled to receive: a lump sum payment equal to the sum of half of his annual base salary, plus a prorated portion of his annual target bonus (calculated based on the achievement of bonus targets as of the qualifying termination date and based on the number of days worked during the bonus period), plus six months of COBRA premiums; and accelerated vesting and immediate exercisability of 100% of all stock options awards.

If the termination of a named executive officer occurs outside of the two-year period following a change of control, the named executive officer will be entitled to receive a lump sum payment equal to the sum of half of his annual base salary, plus a prorated portion of his annual target bonus (calculated based on the achievement of bonus targets as of the qualifying termination date and based on the number of days worked during the bonus period), plus six months of COBRA premiums.

2019 Outstanding Equity Awards at Fiscal Year-End

The following table presents, for each of our named executive officers, information regarding outstanding stock options held as of December 31, 2019.

		Option Awards				
Name	Grant Date	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price ($)	Option Expiration Date	Vesting Commencement Date
Rajeev K. Goel	07/08/2016(1)	1,250,000	—	1.11	07/07/2026	08/01/2016
	05/02/2017(2) (3)	283,333	116,667	2.15	05/01/2027	02/01/2017
	03/14/2018(2) (3)	167,708	182,292	3.89	03/13/2028	01/01/2018
	05/21/2019(2) (3)	57,292	192,708	2.97	05/20/2029	01/01/2019
Amar K. Goel	05/02/2017(2) (3)	106,250	43,750	2.15	05/01/2027	02/01/2017
	03/14/2018(2) (3)	126,979	138,021	3.89	03/13/2028	01/01/2018

	05/21/2019(2) (3)	21,771	73,229	2.97	05/20/2029	01/01/2019
Steven Pantelick	12/13/2011(1)	532,344	—	1.50	12/12/2021	11/07/2011
	07/08/2016(1)	50,000	—	1.11	07/07/2026	08/01/2016
	05/02/2017(2) (3)	123,958	51,042	2.15	05/01/2027	02/01/2017
	03/14/2018(2) (3)	95,833	104,167	3.89	03/13/2028	01/01/2018
	05/21/2019(2) (3)	34,375	115,625	2.97	05/20/2029	01/01/2019

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(1)Granted under our 2006 Stock Option Plan.

(2)Granted under our 2017 Equity Incentive Plan.

(3)Of the total award, 1/48th of the shares of Class B common stock underlying the stock option vest monthly beginning on the one-month anniversary of the vesting commencement date, subject to the optionee's continued service through the applicable vesting date.

Employee Benefit and Stock Plans

2006 Stock Option Plan

Our 2006 Stock Option Plan (2006 Plan) was adopted by our board of directors and stockholders in November 2006, and was last amended in June 2014. In connection with the adoption of the 2017 Equity Incentive Plan, the 2006 Plan was terminated, and accordingly, no further grants will be made under the 2006 Plan. However, any outstanding awards granted under the 2006 Plan will remain outstanding, subject to the terms of the 2006 Plan and the applicable award agreements, until such awards are exercised or otherwise terminate or expire by their terms. The 2006 Plan provided for the grant of both incentive stock options (ISOs), which qualify for favorable tax treatment to their recipients under Section 422 of the Code, and nonstatutory stock options (NSOs), as well as for the issuance of shares of restricted stock. In the event of a merger or consolidation, the 2006 Plan provides that stock options may be continued, assumed, substituted, cashed out, or fully accelerated and then canceled upon the consummation of the merger or consolidation. Our board of directors, in its sole discretion, may provide in any award agreement for the accelerated vesting of awards.

As of September 30, 2020, options to purchase 3,468,094 shares of our Class B common stock remained outstanding and no shares of restricted stock had been granted and remained outstanding under the 2006 Plan. The options outstanding as of September 30, 2020 had a weighted-average exercise price of $1.30 per share.

Options and granted under the 2006 Plan have terms similar to those described below with respect to options and restricted stock awards granted under our 2017 Equity Incentive Plan.

2017 Equity Incentive Plan

Our 2017 Equity Incentive Plan (2017 Plan) was adopted by our compensation committee in February 2017 and by our stockholders in August 2017, and was most recently amended in October 2020. The 2017 Plan provides for the grant of both ISOs and NSOs, as well as for the issuance of shares of restricted stock and grants of restricted stock units or stock appreciation rights. We may grant ISOs only to our employees. We may grant NSOs, restricted stock units and restricted stock awards to our employees, directors and consultants. The exercise price of each stock option will generally be at least equal to the fair market value of our Class B common stock on the date of grant. If, at the time of the option grant, the optionee directly or by attribution owns stock and possesses more than 10% of the total combined voting power of all classes of our stock, or 10% stockholder, the exercise price must be at least 110% of the fair market value of our Class B common stock on the date of grant, as determined by our board of directors. The maximum permitted term of options and restricted stock units granted under our 2017 Plan is ten years, except that the maximum permitted term of incentive stock options granted to 10% stockholders is five years. In the event of a merger or consolidation, the 2017 Plan provides that stock options and restricted stock units may be continued, assumed, substituted, cashed out or canceled for no consideration upon the consummation of the merger or consolidation. Our compensation committee, in its sole discretion, may provide in any award agreement for the accelerated vesting of awards.

As of September 30, 2020, options to purchase 5,444,537 shares of our Class B common stock remained outstanding, and no restricted stock units, stock appreciation rights, or shares of restricted stock had been granted and remained outstanding under the 2017 Plan. The options outstanding as of September 30, 2020 had a weighted-average exercise price of $2.81 per share. We will cease issuing awards under our 2017 Plan upon the implementation of our 2020 Equity Incentive Plan. As a result, we will not grant any additional awards under the 2017 Plan following the date of this prospectus, and the 2017 Plan will terminate at that time. However, any outstanding awards granted under the 2017 Plan will remain outstanding, subject to the terms of our 2017 Plan and award agreements, until any such outstanding options are exercised or the awards terminate or expire by their terms. Options, restricted stock units, and restricted stock awards granted under the 2017 Plan have terms similar to those described below with respect to options, restricted stock units, and restricted stock awards to be granted under our 2020 Equity Incentive Plan.

2020 Equity Incentive Plan

In 2020, our board of directors adopted our 2020 Equity Incentive Plan (2020 Plan), that will become effective on the date immediately prior to the date of the effectiveness of the registration of which this prospectus forms a part and will serve as the successor to our 2017 Plan. Our 2020 Plan authorizes the award of stock options, RSAs, SARs, RSUs, performance awards, and stock bonus awards. We have initially reserved shares of our Class A common stock, plus any reserved shares not issued or subject to outstanding grants under the 2017 Plan on the effective date of the 2020 Plan, for issuance pursuant to

awards granted under our 2020 Plan. The number of shares reserved for issuance under our 2020 Plan will increase automatically on January 1 of each of 2021 through 2030 by the number of shares equal to the lesser of % of the aggregate number of outstanding shares of our Class A common and Class B common stock as of the immediately preceding December 31, or a number as may be determined by our board of directors.

In addition, the following shares will again be available for issuance pursuant to awards granted under our 2020 Plan:

n shares subject to options or SARs granted under our 2020 Plan that cease to be subject to the option or SAR for any reason other than exercise of the option or SAR;

n shares subject to awards granted under our 2020 Plan that are subsequently forfeited or repurchased by us at the original issue price;

n shares subject to awards granted under our 2020 Plan that otherwise terminate without such shares being issued;

n shares subject to awards granted under our 2020 Plan that are surrendered, cancelled or exchanged for cash or a different award (or combination thereof);

n shares issuable upon the exercise of options granted under our 2017 Plan that cease to be subject to such options, by forfeiture after the effective date of the 2020 Plan;

n shares subject to awards granted under our 2017 Plan that are forfeited or repurchased by us at the original price after the termination of the 2017 Plan; and n shares subject to awards under our 2017 Plan or our 2020 Plan that are used to pay the exercise price of an option or withheld to satisfy the tax withholding obligations related to any award.

Administration. Our 2020 Plan is expected to be administered by our compensation committee, all of the members of which are outside directors as defined under applicable federal tax laws, or by our board of directors acting in place of our compensation committee. Subject to the terms and conditions of the 2020 Plan, the compensation committee will have the authority, among other things, to select the persons to whom awards may be granted, construe and interpret our 2020 Plan as well as to determine the terms of such awards and prescribe, amend and rescind the rules and regulations relating to the plan or any award granted thereunder. The 2020 Plan provides that the board or compensation committee may delegate its authority, including the authority to grant awards, to one or more executive officers to the extent permitted by applicable law, provided that awards granted to non-employee directors may only be determined by our board of directors.

Eligibility. Our 2020 Plan provides for the grant of awards to our employees, directors, consultants, independent contractors and advisors. No non-employee director may receive awards under our 2020 Plan that, when combined with cash compensation received for service as a non-employee director, exceeds $ in a calendar year or $ in the calendar year of his or her initial services as a non-employee director with us.

Options. The 2020 Plan provides for the grant of both incentive stock options intended to qualify under Section 422 of the Code, and non-statutory stock options to purchase shares of our Class A common stock. Incentive stock options may only be granted to employees, including officers and directors who are also employees. The exercise price of stock options granted under the 2020 Plan must be at least equal to the fair market value of our Class A common stock on the date of grant. Incentive stock options granted to an individual who holds, directly or by attribution, more than ten percent of the total combined voting power of all classes of our capital stock must have an exercise price of at least 110% the fair market value of our Class A common stock on the date of grant. Subject to stock splits, dividends, recapitalizations or similar events, no more than shares may be issued pursuant to the exercise of incentive stock options granted under the 2020 Plan.

Options may vest based on service or achievement of performance conditions. Our compensation committee may provide for options to be exercised only as they vest or to be immediately exercisable, with any shares issued on exercise being subject to our right of repurchase that lapses as the shares vest. In the event of a participant's termination of service, an option is generally exercisable, to the extent vested, for a period of 3 months in the case of a termination other than for cause or 12 months in the case of a termination due to the participant’s death or disability, or such longer or shorter time as the administrator may provide, but in any event no later than the expiration date of the stock option. Stock options generally terminate upon a participant’s termination of employment for cause. The maximum term of options granted under our 2020 Plan is ten years from the date of grant, except that the maximum permitted term of incentive stock options granted to an individual who holds, directly or by attribution, more than ten percent of the total combined voting power of all classes of our capital stock is five years from the date of grant.

Restricted Stock Awards. An RSA is an offer by us to grant or sell shares of our Class A common stock subject to restrictions, which may lapse based on the satisfaction of service or achievement of performance conditions. The price, if any, of an RSA will be determined by the compensation committee. Holders of RSAs will have the right to vote and any dividends or stock distributions paid pursuant to unvested RSAs will be accrued and paid when the restrictions on such shares lapse. Unless otherwise determined by the compensation committee at the time of award, vesting will cease on the date the participant no longer provides services to us and unvested shares will be forfeited to or repurchased by us.

Stock Appreciation Rights. An SAR provides for a payment, in cash or shares of our Class A common stock (up to a specified maximum number of shares, if determined by our compensation committee), to the holder based upon the difference between the fair market value of our Class A common stock on the date of exercise and a predetermined exercise price, multiplied by the number of shares. The exercise price of a SAR must be at least the fair market value of a share of our Class A common stock on the date of grant. SARs may vest based on service or achievement of performance conditions, and may not have a term that is longer than ten years from the date of grant.

Restricted Stock Units. RSUs represent the right to receive shares of our Class A common stock at a specified date in the future, and may be subject to vesting based on service or achievement of performance conditions. Payment of earned RSUs will be made following vesting as provided in the applicable award agreement, and may be settled in cash, shares of our Class A common stock or a combination of both. No RSU may have a term that is longer than ten years from the date of grant.

Performance Awards. Performance awards granted pursuant to the 2020 Plan may be in the form of a cash bonus, or an award of performance shares or performance units denominated in shares of our Class A common stock, that may be settled in cash, property or by issuance of those shares subject to the satisfaction of achievement of specified performance conditions.

Stock Bonus Awards. A stock bonus award provides for payment in the form of cash, shares of our Class A common stock or a combination thereof, based on the fair market value of shares subject to such award as determined by our compensation committee. The awards may be granted as consideration for services already rendered, or at the discretion of the compensation committee, may be subject to vesting restrictions based on continued service or performance conditions.

Dividend Equivalents Rights. Dividend equivalent rights may be granted at the discretion of our compensation committee, and represent the right to receive the value of dividends, if any, paid by us in respect of the number of shares of our Class A common stock underlying an award. Dividend equivalent rights will be subject to the same vesting or performance conditions as the underlying award and will be paid only at such time as the underlying award has become fully vested. Dividend equivalent rights may be settled in cash, shares or other property, or a combination of thereof as determined by the compensation committee.

Change of Control. Our 2020 Plan provides that, in the event of a corporate transaction, as defined in the 2020 Plan, outstanding awards under our 2020 Plan shall be subject to the agreement evidencing the corporate transaction, any or all outstanding awards may be (a) continued by us, if we are the successor entity; or (b) assumed or substituted by the successor corporation, or a parent or subsidiary of the successor corporation, for substantially equivalent awards (including, but not limited to, a payment in cash or the right to acquire the same consideration paid to the stockholders of the company pursuant to the corporate transaction), in each case after taking into account appropriate adjustments for the number and kind of shares and exercise prices.

The successor corporation may also issue, as replacement of outstanding shares of the company held by a participant, substantially similar shares or other property subject to repurchase restrictions no less favorable to the participant. In the event such successor corporation refuses to assume, substitute or replace any award, then each such award shall become fully vested and, as applicable, exercisable and any rights of repurchase or forfeiture restrictions thereon shall lapse, immediately prior to the consummation of the corporate transaction. If an award vests in lieu of assumption or substitution in connection with a corporate transaction as provided above, the board or committee will notify the holder of such award in writing or electronically that such award will be exercisable for a period of time determined by the board or compensation committee in its sole discretion, and such award will terminate upon the expiration of such period without consideration. Any determinations by the board or compensation committee need not treat all outstanding awards in an identical manner, and shall be final and binding on each applicable participant.

Adjustment. In the event of a change in the number of outstanding shares of our Class A common stock without consideration by reason of a stock dividend, extraordinary dividend or distribution, recapitalization, stock split, reverse stock split, subdivision, combination, consolidation reclassification, spin-off or similar change in our capital structure, appropriate proportional adjustments will be made to the number of shares reserved for issuance under our 2020 Plan; the exercise prices, number and class of shares subject to outstanding options or SARs; the number and class of shares subject to other outstanding awards; and any applicable maximum award limits with respect to incentive stock options.

Exchange, Repricing and Buyout of Awards. The board or compensation committee may, without prior stockholder approval, (i) reduce the exercise price of outstanding options or SARs without the consent of any participant and (ii) pay cash or issue new awards in exchange for the surrender and cancellation of any, or all, outstanding awards, subject to the consent of any affected participant to the extent required by the terms of the 2020 Plan.

Director Compensation Limits. No non-employee director may receive awards under our 2020 Plan with a grant date value that when combined with cash compensation received for his or her service as a director, exceed $ in a calendar year or $ in the calendar year of his or her initial services as a non-employee director on our board of directors.

Clawback; Transferability. All awards will be subject to clawback or recoupment pursuant to any compensation clawback or recoupment policy adopted by our board of directors (or a committee thereof) or required by law during the term of service of the award holder, to the extent set forth in such policy or applicable agreement. Except in limited circumstances, awards granted under our 2020 Plan may generally not be transferred in any manner prior to vesting other than by will or by the laws of descent and distribution.

Sub-Plans. Subject to the terms of the 2020 Plan, the plan administrator may establish a sub-plan under the 2020 Plan and/or modify the terms of awards granted to participants outside of the United States to comply with any the laws or regulations applicable to any such jurisdiction.

Amendment and Termination. Our board of directors may amend our 2020 Plan at any time, subject to stockholder approval as may be required. Our 2020 Plan will terminate ten years from the date our board of directors adopts the plan, unless it is terminated earlier by our board of directors. No termination or amendment of the 2020 Plan may adversely affect any then-outstanding award without the consent of the affected participant, except as is necessary to comply with applicable laws or as otherwise provided by the terms of the 2020 Plan.

2020 Employee Stock Purchase Plan

In 2020, our board of directors adopted and our stockholders approved our 2020 Employee Stock Purchase Plan (ESPP), that will become effective upon the effectiveness of the registration statement of which this prospectus forms a part in order to enable eligible employees to purchase shares of our Class A common stock with accumulated payroll deductions. Our ESPP is intended to qualify under Section 423 of the Code, provided that the administrator may adopt sub-plans under the ESPP designed to be outside of the scope of Section 423 for participants who are non-U.S. residents.

Shares Available. We have initially reserved shares of our Class A common stock for sale under our ESPP. The aggregate number of shares reserved for sale under our ESPP will increase automatically on January 1st of each of the first ten calendar years after the first offering date under the ESPP by the number of shares equal to the lesser of % of the total outstanding shares of our Class A common stock and Class B common stock as of the immediately preceding

December 31 (rounded to the nearest whole share) or a number of shares as may be determined by our board of directors in any particular year. The aggregate number of shares issued over the term of our ESPP, subject to stock-splits, recapitalizations or similar events, may not exceed shares of our Class A common stock.

Administration. Our compensation committee will administer our ESPP subject to the terms and conditions of the ESPP. Among other things, the compensation committee will have the authority to determine eligibility for participation in the ESPP, designate separate offerings under the plan, and construe, interpret and apply the terms of the plan.

Eligibility. Employees eligible to participate in any offering pursuant to the ESPP generally include any employee that is employed by us (including certain employees of subsidiaries if so designated in the future) at the beginning of each offering period. However, our compensation committee may determine that employees who have been employed for less than 2 years, are customarily employed for 20 hours or less per week or for five months or less in a calendar year, or certain highly-compensated employees, as determined in accordance with applicable tax laws, are not eligible to participate in the ESPP. In addition, any employee who owns (or is deemed to own as a result of attribution) 5% or more of the total combined voting power or value of all classes of our capital stock, or the capital stock of one of our qualifying subsidiaries, or who will own such amount as a result of participation in the ESPP, will not be eligible to participate in the ESPP. The compensation committee may impose additional restrictions on eligibility from time to time subject to compliance with applicable law.

Offerings. Under our ESPP, eligible employees will be offered the option to purchase shares of our Class A common stock at a discount over a series of offering periods. Each offering period may itself consist of one or more purchase periods. No offering period may be longer than 27 months.

Participation. Participating employees will be able to purchase the offered shares of our Class A common stock by accumulating funds through payroll deductions. Participants may select a rate of payroll deduction between 1% and 15% of their compensation. However, a participant may not purchase more than shares during any one purchase period, and may not subscribe for more than $25,000 in fair market value of shares of our Class A common stock (determined as of the date the offering period commences) in any calendar year in which the offering is in effect. Our compensation committee, in its discretion, may set a lower maximum amount of shares which may be purchased.

The purchase price for shares of our common stock purchased under the ESPP will be 85% of the lesser of the fair market value of our Class A common stock on (i) the first trading day of the applicable offering period or (ii) the last trading day of each purchase period in the applicable offering period.

Once an employee becomes a participant in an offering period, the participant will be automatically enrolled in each subsequent offering period at the same contribution level. A participant may reduce his or her contribution in accordance with procedures set forth by the compensation committee and may withdraw from participation in the ESPP at any time prior the end of an offering period, or such other time as may be specified by the compensation committee. Upon withdrawal, the accumulated payroll deductions will be returned to the participant without interest.

Adjustments upon Recapitalization. If the number of outstanding shares of our Class A common stock is changed by stock dividend, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification or similar change in our capital structure without consideration, then our compensation committee will proportionately adjust the number of shares of Class A common stock and class of shares that are available under the ESPP, the purchase price and number of shares any participant has elected to purchase as well as the maximum number of shares which may be purchased by each participant.

Corporate Transaction. If we experience a corporate transaction (as defined in the ESPP), any offering period that commenced prior to the closing of the proposed corporate transaction will be shortened and terminated on a new purchase date. The new purchase date will occur on or prior to the closing of the proposed corporate transaction, and our ESPP will then terminate on the closing of the proposed corporate transaction.

Transferability. A participant may not assign, transfer, pledge or otherwise dispose of payroll deductions credited to his or her account, or any rights with regard to an election to purchase shares pursuant to the ESPP other than by will or the laws of descent or distribution.

Amendment; Termination. The compensation committee may amend, suspend or terminate the ESPP at any time without stockholder consent, except to the extent such amendment would increase the number of shares available for issuance under the ESPP, change the class or designation of employees eligible for participation in the plan or otherwise as required by law. If the ESPP is terminated, the compensation committee may elect to terminate all outstanding offering periods immediately, upon the next purchase date (which may be sooner that originally scheduled) or upon the last day of such offering period. If any offering period is terminated prior to its scheduled completion, all payroll deduction amounts credited to participants which have not been used to purchase shares will be returned to participants as soon as administratively practicable. Our ESPP will continue until the earlier to occur of (a) termination of the ESPP by the Board, (b) issuance of all of the shares reserved for issuance under the ESPP or (c) the tenth anniversary of the first purchase date under the ESPP.

401(k) Plan

We sponsor a broad-based 401(k) plan intended to provide eligible U.S. employees with an opportunity to defer eligible compensation up to certain annual limits. As a tax-qualified retirement plan, contributions (if any) made by us are deductible by us when made, and contributions and earnings on those amounts are generally not taxable to the employees until withdrawn or distributed from the 401(k) plan. Our named executive officers are eligible to participate in our employee benefit plans, including our 401(k) plan, on the same basis as our other employees.

Limitations on Liability and Indemnification Matters

Our restated certificate of incorporation that will become effective in connection with this offering contains provisions that will limit the liability of our directors for monetary damages to the fullest extent permitted by the Delaware General Corporation Law (DGCL). Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

n any breach of the director's duty of loyalty to us or our stockholders;

n any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;

n unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the DGCL; or n any transaction from which the director derived an improper personal benefit.

Our restated certificate of incorporation and our restated bylaws, that will become effective in connection with this offering will require us to indemnify our directors and officers to the maximum extent not prohibited by the DGCL and allow us to indemnify other employees and agents as set forth in the DGCL. Subject to certain limitations, our restated bylaws will also require us to advance expenses incurred by our directors and officers for the defense of any action for which indemnification is required or permitted, subject to very limited exceptions.

We have entered, and intend to continue to enter, into separate indemnification agreements with our directors, officers, and certain of our other employees. These agreements, among other things, require us to indemnify our directors, officers, key employees, and some large stockholders for certain expenses, including attorneys' fees, judgments, fines, and settlement amounts actually and reasonably incurred by such director, officer or key employee in any action or proceeding arising out of their service to us or any of our subsidiaries or any other company or enterprise to which the person provides services at our request. Subject to certain limitations, our indemnification agreements also require us to advance expenses incurred by our directors, officers, and key employees for the defense of any action for which indemnification is required or permitted.

We believe that these provisions in our restated certificate of incorporation and indemnification agreements are necessary to attract and retain qualified persons such as directors, officers, and key employees. We also maintain directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our restated certificate of incorporation and restated bylaws may discourage stockholders from bringing a lawsuit against our directors and officers for breaches of their fiduciary duties. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions.

At present, we are not aware of any pending litigation or proceeding arising out of any indemnitee's service to us or any of our subsidiaries or any other company or enterprise to which the person provides services at our request, involving any person who is or was one of our directors, officers, employees or other agents or is or was serving at our request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, for which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, executive officers or persons controlling us, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Certain Relationships and Related Person Transactions

Certain Relationships and Related Person Transactions

We describe below transactions and series of similar transactions since January 1, 2017, to which we were a party or will be a party, in which the amounts involved exceeded or will exceed $0.1 million and any of our directors, executive officers or beneficial holders of more than 5% of any class of our capital stock had or will have a direct or indirect material interest. Other than as described below, there have not been, nor are there any currently proposed, transactions or series of similar transactions to which we have been or will be a party other than compensation arrangements, which are described where required under "Executive Compensation."

Transactions with Directors and Officers

The Goel Family Trust Promissory Note, Stock Pledge Agreement and Put Option Agreement

On August 30, 2018, we entered into a secured non-recourse promissory note and stock pledge agreement with The Goel Family Trust dated September 25, 2012 (The Goel Family Trust), a trust controlled by Rajeev K. Goel, our co-founder and Chief Executive Officer, and a put option agreement with Mr. Goel (collectively, the Goel Family Trust Transaction Documents). Pursuant to The Goel Family Trust Transaction Documents, we purchased from The Goel Family Trust a promissory note in the principal amount of $3.0 million. This promissory note is due on August 30, 2021, bears interest at the rate of 2.42% per annum and is secured by the stock pledge agreement. The stock pledge agreement provides, among other things that 1,200,000 shares of our common stock held by The Goel Family Trust are pledged to us to secure the payment and performance of the obligations of The Goel Family Trust under the promissory note. The put option agreement provides, among other things, that if Mr. Goel repays the promissory note with shares subject to the pledge agreement and incurs income and/or capital gains tax obligations resulting from the surrender and cancellation of such shares, then Mr. Goel shall have the right to cause us to purchase the minimum number of shares of our common stock necessary to cover such tax obligation at a price equal to the fair market value of such shares on the date of sale. The Goel Family Trust repaid the promissory note on September 25, 2020.

The Blue Rock Trust Promissory Note, Stock Pledge Agreement and Put Option Agreement

On August 30, 2018, we entered into a secured non-recourse promissory note and stock pledge agreement with the Blue Rock Trust, N/A (the Blue Rock Trust), a trust controlled by Amar K. Goel, our founder and Chairman, and a put option agreement with Mr. Goel (collectively, the Blue Rock Trust Transaction Documents). Pursuant to the Blue Rock Trust Transaction Documents, we purchased from the Blue Rock Trust a promissory note in the principal amount of $1.0 million. This promissory note is due on August 30, 2021, bears interest at the rate of 2.42% per annum and is secured by the stock pledge agreement. The stock pledge agreement provides, among other things that 400,000 shares of our common stock held by the Blue Rock Trust are pledged to us to secure the payment and performance of the obligations of the Blue Rock Trust under the promissory note. The put option agreement provides, among other things, that if Mr. Goel repays the promissory note with shares subject to the pledge agreement and incurs income and/or capital

gains tax obligations resulting from the surrender and cancellation of such shares, then Mr. Goel shall have the right to cause us to purchase the minimum number of shares of our common stock necessary to cover such tax obligation at a price equal to the fair market value of such shares on the date of sale. The Blue Rock Trust repaid the promissory note on August 31, 2020.

Repurchase of Shares from Mukul Kumar

On November 20, 2018, we entered into a stock repurchase agreement with Mukul Kumar, one of our executive officers, pursuant to which we repurchased 70,000 shares of our common stock at an aggregate purchase price of approximately $0.3 million, or $3.89 per share.

Investors' Rights Agreement

In October 2020, we amended and restated our certificate of incorporation to amend the conversion ratio of our existing Series D and Series D Prime convertible preferred stock such that we will issue additional shares of Class B common stock to the holders thereof if the initial public offering price per share is less than $10.1845, with respect to the Series D convertible preferred stock, and $12.0543 with respect to the Series D Prime convertible preferred stock. In exchange therefor, our preferred stockholders, including entities with which certain of our directors are affiliated, agreed to eliminate the minimum share price requirement for an initial public offering to trigger the automatic conversion of preferred stock into shares of Class B common stock.

In connection with this adjustment, we entered into a Sixth Amended and Restated Investors' Rights Agreement with certain holders of our convertible preferred stock, including entities with which certain of our directors are affiliated, pursuant to which we have the option to pay the holders of Series D convertible preferred stock and/or Series D Prime convertible preferred stock, as applicable, a per share amount in cash in lieu of issuing additional shares of Class B common stock pursuant to the adjusted conversion ratio described in the previous paragraph, or a mix of cash and stock, in the sole discretion of our Board, not including any director appointed by the holders of the Series D and Series D Prime convertible preferred stock. For a detailed description of the adjustments to the conversion ratio applicable to the Series D and Series D Prime convertible preferred stock and our cash payment option, see "Description of Capital Stock– Special Conversion Adjustments for Series D and Series D Prime Convertible Preferred Stock."

Indemnification Agreements

We have entered or will enter into indemnification agreements with each of our directors and executive officers. The indemnification agreements and our restated bylaws will require us to indemnify our directors to the fullest extent not prohibited by Delaware General Corporation Law. Subject to very limited exceptions, our restated bylaws will also require us to advance expenses incurred by our directors and officers. For more information regarding these agreements, see "Executive Compensation—Limitations on Liability and Indemnification Matters."

Policies and Procedures for Related-Person Transactions

We intend to adopt a written related-person transactions policy, effective upon completion of this offering, under which we will be prohibited from entering into any transaction or series of transaction where amounts involved will exceed $0.1 million or that we otherwise determine to be a material transaction with any of our executive officers, directors, nominees for election as a director, beneficial owners of more than 5% of any series of our common stock, and any members of the immediate family of the foregoing persons without the review and approval of our audit committee, or a committee composed solely of independent directors in the event it is inappropriate for our audit committee to review such transaction due to a conflict of interest. We expect the policy to provide that any request for us to enter into any such transaction with any related person will be presented to our audit committee for review, consideration, and approval. In approving or rejecting any such proposal, we expect that our audit committee will consider the relevant facts and circumstances available and deemed relevant to the audit committee, including, but not limited to, whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related person's interest in the transaction.

Although historically we have not had a written policy for the review and approval of transactions with related persons, our board of directors has reviewed and approved any transaction where a director or officer had a financial interest, including the transactions described above. Before approving such a transaction, the material facts as to a director's or officer's relationship or interest as to the agreement or transaction were disclosed to our board of directors. Our board of directors would take this information into account when evaluating the transaction and in determining whether such transaction was fair to us and in the best interest of all of our stockholders.

Principal and Selling Stockholders

Principal and Selling Stockholders

The following table sets forth certain information with respect to the beneficial ownership of our common stock as of October 31, 2020, and as adjusted to reflect the sale of Class A common stock in this offering, for:

n each of our directors;

n each of our named executive officers;

n all of our current directors and executive officers as a group;

n each person, or group of affiliated persons, who beneficially owned more than 5% of our common stock; and n each selling stockholder.

We have determined beneficial ownership in accordance with the rules of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Except as indicated by the footnotes below, we believe, based on information furnished to us, that the persons and entities named in the table below have sole voting and sole investment power with respect to all shares of common stock that they beneficially owned, subject to applicable community property laws.

Applicable percentage ownership is based on no shares of Class A common stock and 45,184,913 shares of our Class B common stock outstanding as of October 31, 2020 and (i) assumes the conversion of all outstanding shares of convertible preferred stock into an aggregate of 33,443,969 shares of our Class B common stock and (ii) gives effect to the Cash Election described in "Description of Capital Stock—Special Conversion Adjustments for the Series D and Series D Prime Convertible Preferred Stock". Percentage ownership of our common stock after this also assumes the sale by us and the selling stockholders of shares of Class A common stock in this offering. For purposes of the table below, we have assumed that shares of Class A common stock will be issued by us in this offering. In computing the number of shares of common stock beneficially owned by a person and the percentage ownership of that person, we deemed to be outstanding all shares of common stock subject to options held by that person or entity that are currently exercisable or that will become exercisable within 60 days of October 31, 2020. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o PubMatic, Inc., 3 Lagoon Drive, Suite 180, Redwood City, California 94065.

	Class B Shares Beneficially Owned Before this Offering			Shares Beneficially Owned After this Offering				
				Class A		Class B		
Name of Beneficial Owner	Shares	%	% Total Voting Power Before this Offering(1)	Shares	%	Shares	%	% Total Voting Power After this Offering(1)
Directors and Named Executive Officers:								
Rajeev K. Goel(2)	5,216,980	11.0	11.0	—	—			
Amar K. Goel(3)	5,798,662	12.7	12.7	—	—			
Steven Pantelick(4)	1,013,593	2.2	2.2	—	—			
Cathleen Black(5)	89,577	*	*	—	—			
W. Eric Carlborg(6)	7,173,750	15.9	15.9	—	—			
Ashish Gupta(7)	8,502,661	18.8	18.8	—	—			
Narendra Gupta(8)	11,624,843	25.7	25.7	—	—			
All executive officers and directors as a group (10 persons)(9)	40,484,085	81.3	81.3	—	—			
Other 5% Stockholders:								
Nexus India Capital I, LP(8)	11,624,843	25.7	25.7	—	—			
Helion Venture Partners, LLC(7)	8,502,661	18.8	18.8	—	—			
August Capital V Special Opportunities, L.P.(6)	7,173,750	15.9	15.9	—	—			
Entities affiliated with Draper Fisher Jurvetson(10)	4,129,829	9.1	9.1	—	—			
Other Selling Stockholders:								

———————

*Represents beneficial ownership of less than one percent.

(1)Percentage of total voting power represents voting power with respect to all shares of our Class A and Class B common stock, as a single class. The holders of our Class B common stock are entitled to votes per share, and holders of our Class A common stock are entitled to one vote per share. See the section titled "Description of Capital Stock—Common Stock" for additional information about the voting rights of our Class A and Class B common stock.

(2)Consists of (i) 1,208,877 shares held by Rajeev K. Goel and Ruchi Goel, Trustees of the Goel Family Trust dated September 25, 2012, (ii) 354,562 shares held by Rajeev K. Goel, Trustee of the Rajeev Kumar Goel 2016 Annuity Trust A dated November 10, 2016, (iii) 354,562 shares held by Rajeev Kumar Goel, Trustee of the Ruchi Goel 2016 Annuity Trust A dated November 10, 2016, (iv) 400,000 shares held by the Goel Heritage Trust, (v) 290,630 shares held by Mr. Goel as custodian for the benefit of his child under the California Uniform Transfers to Minors Act, (vi) 290,630 shares held by Mr. Goel as custodian for the benefit of his child under the California Uniform Transfers to Minors Act, and (vii) 2,317,719 shares subject to options held by Mr. Goel that are exercisable within 60 days of October 31, 2020, of which 171,886 shares are unvested but early exercisable within 60 days of October 31, 2020.

(3)Consists of (i) 1,000,000 shares held by the Marais Irrevocable Trust, (ii) 1,000,000 shares held by the Tuscan Irrevocable Trust, (iii) 1,321,304 shares held by the RAJN Trust, (iv) 1,639,986 shares held by the Birchwood Trust, (v) 259,962 shares held by Amar K. Goel as custodian for the benefit of his child under the California Uniform Transfers to Minors Act, (vi) 183,452 shares held by Amar K. Goel as custodian for the benefit of his child under the California Uniform Transfers to Minors Act, and (vii) 393,958 shares subject to options held by Mr. Goel that are exercisable within 60 days of October 31, 2020.

(4)Consists of 1,013,593 shares subject to options held by Mr. Pantelick that are exercisable within 60 days of October 31, 2020.

(5)Consists of 14,577 shares held by Ms. Black, and 75,000 shares subject to options held by Ms. Black that are exercisable within 60 days of October 31, 2020.

(6)Consists of 7,173,750 shares held by August Capital V Special Opportunities, L.P., as nominee for August Capital V Special Opportunities, L.P., August Capital Strategic Partners V, L.P. and related individuals (collectively, the August Capital Funds). August Capital Management V, L.L.C. is the general partner of the August Capital Funds and may be deemed to have sole voting power and sole investment power over the shares held by the August Capital Funds. Howard Hartenbaum and David M. Hornik, members of our board of directors, are the members of August Capital Management V, L.L.C. and may be deemed to share voting and investment power with respect to the shares held by the August Capital Funds. The address for the August Capital Funds is PMB #456, 660 4th Street, San Francisco, California 94107.

(7)Consists of 8,502,661 shares held by Helion Venture Partners, LLC (HVP LLC). The general partner of HVP LLC is Helion Investment Management LLC (HIM LLC), of which KS Holdings Global Ltd. (KS Holdings), SA Holdings Global Ltd. (SA Holdings), and the Gupta Goyal Revocable Trust (Goyal Trust) are members. Kanwaljit Singh has sole voting and investment power with respect to the shares held by KS Holdings, and Sanjeev Aggarwal has sole voting and investment power with respect to the shares held by SA Holdings. Ashish Gupta, a member of our board of directors, and Nita Goyal share voting and investment power with respect to the shares held by the Goyal Trust. Accordingly, Kanwaljit Singh, Sanjeev Aggarwal, Ashish Gupta, and Nita Goyal may be deemed to share voting and investment power over these shares. The address for HVP LLC is IQ EQ Fund Services (Mauritius) Ltd., 33 Edith Cavell Street, Port Louis 11324.

(8)Consists of 11,624,843 shares held by Nexus India Capital I, L.P., a Cayman Islands exempted limited partnership (Nexus Capital). The sole general partner of Nexus Capital is Nexus India Management I, L.P., a Cayman Islands exempted limited partnership (Nexus Management), and the sole general partner of Nexus Management is Nexus India Master Management I, Ltd., a Cayman Islands exempted company (Nexus Master). Narendra Gupta, a member of our board of directors, holds sole voting, and investment power in Nexus Master, and thus may be deemed to hold sole voting and investment power over these shares. The address for each of the Nexus entities is 3000 Sand Hill Road, Building 1, Suite 260, Menlo Park, CA 94025.

(9)Consists of (i) 35,874,796 shares and (ii) 4,609,289 shares subject to options held by executive officers and directors as a group.

(10)Consists of (i) 3,716,846 shares held by Draper Fisher Jurvetson Fund VIII, L.P. (Fund VIII), (ii) 321,329 shares held by Draper Associates, L.P. (DALP), (iii) 82,597 shares held by Draper Fisher Jurvetson Partners VIII, LLC (Partners VIII), (iv) 4,909 shares held by Draper Associates Riskmasters Fund II, LLC (DARF II), and (v) 4,148 shares held by Draper Associates Riskmasters Fund III, LLC (DARF III). Timothy C. Draper and John H.N. Fisher are Managing Directors of the general partner entities of Fund VIII that directly hold shares and as such, they may be deemed to have voting and investment power with respect to such shares. Partners VIII invests lockstep alongside Fund VIII. The Managing Members of Partners VIII are Timothy C. Draper and John H.N. Fisher. DALP invests lockstep alongside Fund VIII. The General Partner of DALP is Draper Management Company, LLC (DMC). The Managing Member of DMC is Timothy C. Draper. DARF II and DARF III invest lockstep alongside Fund VIII. The Managing Member of DARF II and DARF III is Timothy C. Draper. The address for the Draper Fischer Jurvetson entities is 2882 Sand Hill Road, Suite 150 Menlo Park, CA 94025. The address for DALP, DARF II and DARF III is 55 East 3rd Avenue, San Mateo, CA 94401.

Description of Capital Stock

Description of Capital Stock

The following description summarizes the most important terms of our capital stock, as they will be in effect following this offering. Because it is only a summary, it does not contain all the information that may be important to you. We expect to adopt a restated certificate of incorporation and restated bylaws that will become effective immediately prior to the completion of this offering, and this description summarizes provisions that are expected to be included in these documents. For a complete description, you should refer to our restated certificate of incorporation and restated bylaws, which are included as exhibits to the registration statement of which this prospectus forms a part, and to the applicable provisions of Delaware law.

Upon the completion of this offering, our authorized capital stock will consist of shares of Class A common stock, $0.0001 par value per share, shares of Class B common stock, $0.0001 par value per share, and shares of undesignated preferred stock, $0.0001 par value per share.

Pursuant to the provisions of our eighth amended and restated certificate of incorporation all of our outstanding convertible preferred stock will automatically convert stock into common stock, effective upon the completion of this offering. Assuming the conversion of all outstanding shares of our convertible preferred stock into shares of our Class B common stock, which will occur immediately prior to the completion of this offering, as of September 30, 2020, there were no shares of our Class A common stock outstanding, 45,171,504 shares of our Class B common stock outstanding, held by approximately 226 stockholders of record, and no shares of our convertible preferred stock outstanding.

Common Stock

Dividend Rights

Subject to preferences that may apply to any shares of convertible preferred stock outstanding at the time, the holders of our common stock are entitled to receive dividends out of funds legally available if our board of directors, in its discretion, determines to issue dividends and then only at the times and in the amounts that our board of directors may determine. See “Dividend Policy” above.

Voting Rights

Holders of our Class A common stock are entitled to one vote for each share of Class A common stock held on all matters submitted to a vote of stockholders and holders of our Class B common stock are entitled to votes for each share of Class B common stock held on all matters submitted to a vote of stockholders. Holders of shares of our Class A common stock and Class B common stock vote together as a single class on all matters (including the election of directors) submitted to a vote of stockholders, unless otherwise required by Delaware law or our restated certificate of incorporation. Delaware law could require either holders of our Class A common stock or Class B common stock to vote separately as a single class in the following circumstances:

n if we were to seek to amend our restated certificate of incorporation to increase or decrease the par value of a class of our capital stock, then that class would be required to vote separately to approve the proposed amendment; and n if we were to seek to amend our restated certificate of incorporation in a manner that alters or changes the powers, preferences, or special rights of a class of our capital stock in a manner that affected its holders adversely, then that class would be required to vote separately to approve the proposed amendment.

We have not provided for cumulative voting for the election of directors in our restated certificate of incorporation. Accordingly, holders of a majority of the shares of our common stock will be able to elect all of our directors. Our restated certificate of incorporation establishes a classified board of directors, to be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms.

No Preemptive or Similar Rights

Our common stock is not entitled to preemptive rights, and is not subject to redemption or sinking fund provisions.

Right to Receive Liquidation Distributions

Upon our liquidation, dissolution or winding-up, the assets legally available for distribution to our stockholders would be distributable ratably among the holders of our common stock and any participating convertible preferred stock outstanding at that time, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights of and the payment of liquidation preferences, if any, on any outstanding shares of convertible preferred stock.

Conversion

Each outstanding share of Class B common stock is convertible at any time at the option of the holder into one share of Class A common stock. In addition, each share of Class B common stock will convert automatically into one share of Class A common stock upon any transfer, whether or not for value, which occurs after the closing of this offering, except for certain permitted transfers described in our restated certificate of incorporation, including transfers to family members, trusts solely for the benefit of the stockholder or their family members, and partnerships, corporations, and other entities exclusively owned by the stockholder or their family members. Once converted or transferred and converted into Class A common stock, the Class B common stock will not be reissued.

All the outstanding shares of Class B common stock will convert automatically into shares of Class A common stock upon . Following such conversion, each share of Class A common stock will have one vote per share and the rights of the holders of all outstanding common stock will be identical. Once converted into Class A common stock, the Class B common stock may not be reissued.

Preferred Stock

Pursuant to the provisions of our restated certificate of incorporation, all of our outstanding convertible preferred stock will automatically convert into one share of Class B common stock, with such conversion to be effective immediately before the completion of this offering. As a result, we will have no shares of preferred stock outstanding immediately following the completion of this offering.

Following the completion of this offering, our board of directors will be authorized, subject to limitations prescribed by the Delaware General Corporation Law, to issue preferred stock in one or more series, to establish from time to time the number of shares to be included in each series and to fix the designation, powers, preferences, and rights of the shares of each series and any of its qualifications, limitations or restrictions, in each case without further vote or action by our stockholders. Our board of directors may increase or decrease the number of shares of any series of preferred stock, but not below the number of shares of that series then outstanding, without any further vote or action by our stockholders. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring, or preventing a change in control of our company and might adversely affect the market price of our Class A common stock and the voting and other rights of the holders of our common stock. We have no current plan to issue any shares of preferred stock.

Special Conversion Adjustments for the Series D and Series D Prime Convertible Preferred Stock

If the initial public offering price of our Class A common stock is below a certain price, the number of shares of our Class B common stock to be issued upon conversion of our Series D and Series D Prime convertible preferred stock (Series D and Series D Prime, respectively) will increase to greater than one-for-one.

If the initial public offering price per share for our Class A common stock is below $10.1845, which is 2.5 times the Series D original issue price per share, or below $12.0543, which is 2.5 times the Series D Prime original issue price per share(with respect to each of the Series D and Series D Prime, the Conversion Threshold Price), then the conversion ratio of each of the Series D and Series D Prime will increase. In the event of such an increase, our Board of Directors, will have the option at its discretion, (i) to issue additional shares of our Class B common stock upon the conversion of such preferred shares based on the formula described below (Equity Election), (ii) to pay cash equal to the difference between the Conversion Threshold Price and the initial public offering price (Cash Election), or (iii) to issue additional shares of Class B common stock and to pay cash which, in the aggregate, would total the difference between the applicable Conversion Threshold Price and the initial public offering price.

In the event of an Equity Election, at the assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, we would issue an additional shares of Class B common stock to the holders of Series D and Series D Prime. Each $1.00 increase or decrease in the assumed initial public offering price would increase or decrease the number of shares issued to such holders by and shares, respectively.

In the event of a Cash Election, at the assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, we would pay approximately $ million in cash to the holders of Series D and Series D Prime. Each $1.00 increase or decrease in the assumed initial public offering price would increase or decrease the amount payable to such by approximately $ million and $ million, respectively.

Series D Convertible Preferred Stock

If the initial public offering price per share of Class A common stock is less than $10.1845 but more than $6.1107, the Series D conversion ratio will be adjusted to equal the quotient obtained by dividing (i) $10.1845 by (ii) the initial public offering price. If the initial public offering price per share is less than $6.1107, then the adjusted Series D conversion ratio will be adjusted to equal $1.667, which is equal to $10.1845 divided by $6.1107. Based on an assumed initial offering public price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and assuming that we elect to pay the adjustment in stock instead of cash as described in "Capitalization—Special Conversion Adjustments for Series D and Series D Prime Convertible Preferred Stock" above, our Series D would convert to common stock at a ratio of one-for- .

Series D Prime Convertible Preferred Stock

If the initial public offering price per share of Class A common stock is less than $12.0543 but more than $7.2326, the Series D conversion ratio will be adjusted to equal the quotient obtained by dividing (i) $12.0543 by (ii) the initial public offering price. If the initial public offering price per share is less than $7.2326, then the adjusted Series D conversion ratio will be adjusted to equal $1.667, which is equal to $12.0543 divided by $7.2326. Based on an assumed initial offering public price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, and assuming that we elect to pay the adjustment in stock instead of cash as described in "Capitalization—Special Conversion Adjustments for Series D and Series D Prime Convertible Preferred Stock" above, our Series D Prime stock would convert to common stock at a ratio of one-for- .

Options

As of September 30, 2020, we had outstanding options to purchase an aggregate of 8,912,631 shares of our Class B common stock, with a weighted-average exercise price of $2.22 per share.

Registration Rights

Following the completion of this offering, the holders of an aggregate of shares of our Class B common stock or their permitted transferees will be entitled to rights with respect to the registration of these shares under the Securities Act. These rights are provided under the terms of an amended and restated investors' rights agreement between us and the holders of these shares, which was entered into in connection with our convertible preferred stock financings, and include demand registration rights, Form S-3 registration rights and piggyback registration rights. In any registration made pursuant to such amended and restated investors' rights agreement, all fees, costs, and expenses of underwritten registrations will be borne by us and all selling expenses, including estimated underwriting discounts, selling commissions, and stock transfer taxes, will be borne by the holders of the shares being registered.

The registration rights terminate five years following the completion of this offering or, with respect to any particular stockholder, at the time that stockholder can sell all of its shares during any 90-day period pursuant to Rule 144 of the Securities Act.

Demand Registration Rights

The holders of an aggregate of shares of our common stock, or their permitted transferees, are entitled to demand registration rights. Under the terms of the amended and restated investors' rights agreement, we will be required, upon the written request of holders of at least a majority of the shares that are entitled to registration rights under the amended and restated investors' rights agreement, to register, as soon as practicable, all or a portion of these shares for public resale, if the aggregate price to the public of the shares offered is at least $5.0 million. We are required to effect only two registrations pursuant to this provision of the amended and restated investors' rights agreement. We may postpone the filing of a registration statement up to two times for up to 90 days in a 12-month period if our board of directors determines that the filing would be materially detrimental to us. We are not required to effect a demand registration under certain additional circumstances specified in the amended and restated investors' rights agreement, including at any time earlier than 180 days after the effective date of this offering.

Form S-3 Registration Rights

The holders of an aggregate of shares of our common stock or their permitted transferees are also entitled to Form S-3 registration rights. The holders representing at least 10 percent of the then-outstanding shares having registration rights can request that we register all or part of their shares on Form S-3 if we are eligible to file a registration statement on Form S-3 and if the aggregate price to the public of the shares offered is at least $1.0 million. The holders may only require us to effect at most two registration statements on Form S-3 in any 12-month period. We may postpone the filing of a registration statement on Form S-3 no more than twice during any 12-month period, each for a period of not more than 90 days if our board of directors determines that the filing would be materially detrimental to us.

Piggyback Registration Rights

If we register any of our securities for public sale, holders of an aggregate of shares of our common stock or their permitted transferees having registration rights will have the right to include their shares in the registration statement. However, this right does not apply to a registration relating to employee benefit plans, a registration relating to a corporate reorganization or a registration related to the offer and sale of debt securities. The underwriters of any

underwritten offering will have the right to limit the number of shares registered by these holders if they determine that marketing factors require limitation, in which case the number of shares to be registered will be apportioned, first, to the company for its own account and second, pro rata among these holders, according to the total amount of securities entitled to be included by each holder. However, the number of shares to be registered by these holders cannot be reduced below 30% of the total shares covered by the registration statement, other than in the initial public offering.

Anti-Takeover Provisions

The provisions of the Delaware General Corporation Law (DGCL), our restated certificate of incorporation, and our restated bylaws, as we expect they will be in effect upon the completion of this offering, could have the effect of delaying, deferring or discouraging another person from acquiring control of our company. These provisions, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids and encourage persons seeking to acquire control of our company to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

Section 203 of the Delaware General Corporation Law

We are subject to the provisions of Section 203 of the DGCL regulating corporate takeovers. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

n before the stockholder became interested, our board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

n upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans in some instances, but not the outstanding voting stock owned by the interested stockholder; or n at or after the time the stockholder became interested, the business combination was approved by our board of directors and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

n any merger or consolidation involving the corporation and the interested stockholder;

n any sale, transfer, lease, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;

n subject to exceptions, any transaction that results in the issuance of transfer by the corporation of any stock of the corporation to the interested stockholder;

n subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; and n the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Restated Certificate of Incorporation and Restated Bylaw Provisions

Our restated certificate of incorporation and our restated bylaws will include a number of provisions that may have the effect of deterring hostile takeovers, or delaying or preventing changes in control of our management team or changes in our board of directors or our governance or policy, including the following:

n Dual Class Common Stock. As described above in the section titled "–Common Stock–Voting Rights," our restated certificate of incorporation will provide for a dual class common stock structure pursuant to which holders of our Class B common stock will have the ability to control the outcome of matters requiring stockholder approval, even if they own significantly less than a majority of the shares of our outstanding 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. Current investors, executives, and employees will have the ability to exercise significant influence over those matters.

n Board Vacancies. Our restated bylaws and certificate of incorporation will authorize generally only our board of directors to fill vacant directorships resulting from any cause or created by the expansion of our board of directors. In addition, the number of directors constituting our board of directors may be set only by resolution adopted by a majority vote of our entire board of directors. These provisions prevent a stockholder from increasing the size of our board of directors and gaining control of our board of directors by filling the resulting vacancies with its own nominees.

n Classified Board. Our restated certificate of incorporation and restated bylaws will provide that our board of directors is classified into three classes of directors. The existence of a classified board of directors could delay a successful tender offeror from obtaining majority control of our board of directors, and the prospect of that delay might deter a potential offeror.

n Stockholder Action. Our restated certificate of incorporation will provide that our stockholders may not take action by written consent, but may only take action at annual or special meetings of our stockholders. Stockholders will not be permitted to cumulate their votes for the election of directors. Our restated bylaws will further provide that special meetings of our stockholders may be called only by a majority of our entire board of directors. We also

anticipate that our restated bylaws will limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

n Holding Requirements for Stockholder Proposals and Director Nominations. Our restated bylaws will require continuous, beneficial ownership of 1% of our common stock for one year for stockholders seeking to bring business before our annual meeting of stockholders or to nominate candidates for election as directors at our annual meeting of stockholders. These provisions may delay or preclude our stockholders from bringing matters before our annual meeting of stockholders and from making nominations for directors at our annual meeting of stockholders.

n Advance Notice Requirements for Stockholder Proposals and Director Nominations. Our restated bylaws will provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders or to nominate candidates for election as directors at our annual meeting of stockholders. Our restated bylaws also will specify certain requirements regarding the form and content of a stockholder's notice. These provisions may preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders.

n Amendment to Certificate of Incorporation and Bylaws. Certain amendments to our restated certificate of incorporation will require approval by the holders of at least two-thirds of our outstanding common stock. An amendment to our bylaws will require the approval of a majority of our entire board of directors or approval by the holders of at least two-thirds of our outstanding common stock.

n Issuance of Undesignated Preferred Stock. We anticipate that after the filing of our restated certificate of incorporation, our board of directors will have the authority, without further action by the stockholders, to issue up to shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by the board of directors. The existence of authorized but unissued shares of preferred stock enables our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise.

Choice of Forum

Our restated certificate of incorporation will provide that, to the fullest extent permitted by law, the Court of Chancery of the State of Delaware will be the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the DGCL, our restated certificate of incorporation or our restated bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. Our restated bylaws will provide that the federal district courts of the United States of America will, to the fullest extent permitted by law, be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, which we refer to as a Federal Forum Provision. Our decision to adopt a Federal Forum Provision followed a decision by the Supreme Court of the State of Delaware holding that such provisions are facially valid under Delaware law. While there can be no assurance that federal courts or state courts will follow the holding of the Delaware Supreme Court or determine that the Federal Forum Provision should be enforced in a particular case, application of the Federal Forum Provision means that suits brought by our stockholders to enforce any duty or liability created by the Securities Act must be brought in federal court and cannot be brought in state court. While neither the exclusive forum provision nor the Federal Forum Provision applies to suits brought to enforce any duty or liability created by the Exchange Act, Section 27 of the Exchange Act creates exclusive federal jurisdiction over all claims brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. Accordingly, actions by our stockholders to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder also must be brought in federal court. Our stockholders will not be deemed to have waived our compliance with the federal securities laws and the regulations promulgated thereunder. Any person or entity purchasing or otherwise acquiring or holding any interest in any of our securities shall be deemed to have notice of and consented to our exclusive forum provisions, including the Federal Forum Provision. These provisions may limit a stockholder's ability to bring a claim in a judicial forum of their choosing for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers, and other employees.

Transfer Agent and Registrar

Upon the completion of this offering, the transfer agent and registrar for our Class A common stock will be Computershare Trust Company, N.A. The transfer agent's address is 480 Washington Blvd Jersey City, NJ 07310, and its telephone number is (800) 962-4284.

Exchange Listing

We have applied to list our Class A common stock on the Nasdaq Global Market under the symbol "PUBM."

Shares Eligible For Future Sale

Shares Eligible for Future Sale

Before this offering, there has been no public market for our Class A common stock, and we cannot predict the effect, if any, that market sales of shares of our Class A common stock or the availability of shares of our Class A common stock for sale will have on the market price of our Class A common stock prevailing from time to time. Nevertheless, sales of substantial amounts of our Class A common stock, including shares issued upon exercise of outstanding options, in the public market following this offering could adversely affect market prices prevailing from time to time and could impair our ability to raise capital through the sale of our equity securities.

Upon the completion of this offering, based on the 45,171,504 shares of our capital stock outstanding as of September 30, 2020, we will have a total of shares of our Class A common stock outstanding and shares of our Class B common stock outstanding. Of these outstanding shares, all of the shares of Class A common stock sold in this offering will be freely tradable, except that any shares purchased in this offering by our affiliates, as that term is defined in Rule

144 under the Securities Act, only would be able to be sold in compliance with the Rule 144 limitations described below. Shares of our Class B common stock are convertible into an equivalent number of shares of our Class A common stock and generally convert into shares of our Class A common stock upon transfer.

The remaining outstanding shares of our common stock will be deemed "restricted securities" as defined in Rule 144. Restricted securities may be sold in the public market only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rule 144 or Rule 701 promulgated under the Securities Act, which rules are summarized below. In addition, holders of substantially all of our outstanding equity securities have entered into market standoff agreements with us or lock-up agreements with the underwriters under which they have agreed, subject to specific exceptions, not to sell any of our stock for at least 180 days following the date of this prospectus, as described below. Subject to the provisions of Rule 144 or Rule 701, shares will be available for sale in the public market as follows:

n Beginning on the date of this prospectus, all of the shares sold in this offering will be immediately available for sale in the public market; and n Beginning 181 days after the date of this prospectus, additional shares will become eligible for sale in the public market, of which shares will be held by affiliates and subject to the volume and other restrictions of Rule 144, as described below.

Lock-Up/Market Standoff Agreements

All of our directors, officers, selling stockholders, and holders of substantially all of our outstanding equity securities are subject to lock-up agreements or market standoff provisions that prohibit them from offering for sale, selling, contracting to sell, granting any option for the sale of, transferring or otherwise disposing of (whether by actual disposition or effective economic disposition due to cash settlement or otherwise) any shares of our common stock or securities convertible into or exercisable or exchangeable for any shares of our common stock, or establishing or increasing a put equivalent position or liquidating or decreasing a call equivalent position with respect to such securities, or publicly disclosing the intention to effect any such transaction, for a period of 180 days following the date of this prospectus without the prior written consent of Jefferies LLC. These agreements are subject to certain customary exceptions. See "Underwriting."

Rule 144

In general, under Rule 144 as currently in effect, once we have been subject to public company reporting requirements for at least 90 days, a person who is not deemed to have been one of our affiliates for purposes of the Securities Act at any time during the 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than our affiliates, is entitled to sell those shares without complying with the manner of sale, volume limitation or notice provisions of Rule 144, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than our affiliates, then that person would be entitled to sell those shares without complying with any of the requirements of Rule 144.

In general, under Rule 144, as currently in effect, our affiliates or persons selling shares on behalf of our affiliates are entitled to sell upon expiration of the lock-up and market standoff agreements described above, within any three-month period, a number of shares that does not exceed the greater of:

n 1% of the number of shares of our Class A common stock then outstanding, which will equal approximately shares immediately after this offering; or n the average weekly trading volume of our Class A common stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to that sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us. Notwithstanding the availability of Rule 144, the holders of substantially all of our restricted securities have entered into lock-up agreements as referenced above and their restricted securities will become eligible for sale (subject to the above limitations under Rule 144) upon the expiration of the restrictions set forth in those agreements.

Rule 701

Rule 701 generally allows a stockholder who purchased shares of our common stock pursuant to a written compensatory plan or contract and who is not deemed to have been an affiliate of our company during the immediately preceding 90 days to sell these shares in reliance upon Rule 144, but without being required to comply with the public information, holding period, volume limitation or notice provisions of Rule 144. Rule 701 also permits affiliates of our company to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. All holders of Rule 701 shares, however, are required by that rule to wait until 90 days after the date of this prospectus before selling those shares pursuant to Rule 701.

Stock Options

As soon as practicable after the completion of this offering, we intend to file one or more registration statements on Form S-8 under the Securities Act covering all of the shares of our Class B common stock subject to outstanding options and restricted stock units and the shares of Class A common stock reserved for issuance under our equity incentive plans. In addition, we intend to file a registration statement on Form S-8 or such other form as may be required under the Securities Act for the resale of shares of our common stock issued upon the exercise of options that were not granted under Rule 701. We expect to file this registration statement as soon as permitted under the Securities Act. However, the shares registered on Form S-8 may be subject to the volume limitations and the manner of sale, notice, and public information requirements of Rule 144 and will not be eligible for resale until expiration of the lock-up and market standoff agreements to which they are subject.

Registration Rights

We have granted demand, piggyback, and Form S-3 registration rights to certain of our stockholders to sell our common stock. Registration of the sale of these shares under the Securities Act would result in these shares becoming freely tradable without restriction under the Securities Act immediately upon the effectiveness of the registration, except for shares purchased by affiliates. For a further description of these rights, see "Description of Capital Stock—Registration Rights."

Material U.S. Federal Tax Consequences to Non-U.S. Holders Of Our Class A Common Stock

Material U.s. Federal Tax Consequences to Non-u.s. Holders of Our Class a Common Stock

The following summary describes the material U.S. federal income tax consequences of the ownership and disposition of our Class A common stock acquired in this offering by Non-U.S. Holders (as defined below). This discussion does not address all aspects of U.S. federal income taxes, does not discuss the potential application of the alternative minimum tax or the Medicare contribution tax on net investment income, and does not deal with state or local taxes, U.S. federal gift or estate tax laws (except to the limited extent provided below), or any non-U.S. tax consequences that may be relevant to Non-U.S. Holders in light of their particular circumstances.

Special rules different from those described below may apply to certain Non-U.S. Holders that are subject to special treatment under the Internal Revenue Code of 1986, as amended (the Code), such as:

n insurance companies, banks, and other financial institutions;

n tax-exempt organizations (including private foundations) and tax-qualified retirement plans;

n persons required for U.S. federal income tax purposes to conform the timing of income accruals to their financial statements under Section 451(b) of the Code;

n "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds;

n persons subject to special tax accounting rules as a result of any item of gross income with respect to our Class A common stock being taken into account in an applicable financial statement;

n non-U.S. governments and international organizations;

n broker-dealers and traders in securities;

n U.S. expatriates and certain former citizens or long-term residents of the United States;

n persons that own, or are deemed to own, more than five percent of our Class A common stock;

n "controlled foreign corporations," "passive foreign investment companies," and corporations that accumulate earnings to avoid U.S. federal income tax;

n persons that hold our Class A common stock as part of a "straddle," "hedge," "conversion transaction," "synthetic security," or integrated investment or other risk reduction strategy;

n persons who do not hold our Class A common stock as a capital asset within the meaning of Section 1221 of the Code (generally, for investment purposes); and n partnerships and other pass-through entities, and investors in such pass-through entities (regardless of their places of organization or formation).

Such Non-U.S. Holders are urged to consult their own tax advisors to determine the U.S. federal, state, local, and other tax consequences that may be relevant to them.

Furthermore, the discussion below is based upon the provisions of the Code, Treasury regulations, rulings, and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked, or modified, possibly retroactively, and are subject to differing interpretations which could result in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the Internal Revenue Service, or IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions or that the IRS will not take a contrary position regarding the tax consequences described herein, or that any such contrary position would not be sustained by a court.

PERSONS CONSIDERING THE PURCHASE OF OUR CLASS A COMMON STOCK PURSUANT TO THIS OFFERING SHOULD CONSULT THEIR OWN TAX ADVISORS CONCERNING THE U.S. FEDERAL INCOME TAX CONSEQUENCES OF ACQUIRING, OWNING, AND DISPOSING OF OUR CLASS A COMMON STOCK IN LIGHT OF THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER THE LAWS OF ANY OTHER TAXING JURISDICTION, INCLUDING ANY STATE, LOCAL, OR NON-U.S. TAX CONSEQUENCES OR ANY U.S. FEDERAL NON-INCOME TAX CONSEQUENCES, AND THE POSSIBLE APPLICATION OF TAX TREATIES.

For the purposes of this discussion, a "Non-U.S. Holder" is a beneficial owner of Class A common stock that is not a U.S. Holder or a partnership for U.S. federal income tax purposes. A "U.S. Holder" means a beneficial owner of our Class A common stock that is, for U.S. federal income tax purposes, (1) an individual who is a citizen or resident of the United States, (2) a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes), created or organized in or under the laws of the United States, any state thereof, or the District of Columbia, (3) an estate the income of which is subject to U.S. federal income taxation regardless of its source, or (4) a trust if it (i) is subject to the primary supervision of a court within the United States and one or more United States persons (within the meaning of Section 7701(a)(30) of the Code) have the authority to control all substantial decisions of the trust or (ii) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a United States person.

If you are an individual non-U.S. citizen, you may, be deemed to be a resident alien (as opposed to a nonresident alien) by virtue of being present in the United States for at least 31 days in the calendar year and for an aggregate of at least 183 days during a three-year period ending in the current calendar year. Generally, for this purpose, all the days present in the current year, one-third of the days present in the immediately preceding year, and one-sixth of the days present in the second preceding year, are counted.

Resident aliens are generally subject to U.S. federal income tax as if they were U.S. citizens. Individuals who are uncertain of their status as resident or nonresident aliens for U.S. federal income tax purposes are urged to consult their own tax advisors regarding the U.S. federal income tax consequences of the ownership or disposition of our Class A common stock.

Distributions

We do not anticipate paying any dividends on our capital stock in the foreseeable future. If we do make distributions on our Class A common stock, however, such distributions made to a Non-U.S. Holder of our Class A common stock will constitute dividends for U.S. tax purposes to the extent paid out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles). Distributions in excess of our current and accumulated earnings and profits will constitute a return of capital that is applied against and reduces, but not below zero, a Non-U.S. Holder's adjusted tax basis in our Class A common stock. Any remaining excess will be treated as gain realized on the sale or exchange of our Class A common stock as described below under "—Gain on Disposition of Our Class A Common Stock."

Any distribution on our Class A common stock that is treated as a dividend paid to a Non-U.S. Holder that is not effectively connected with the holder's conduct of a trade or business in the United States will generally be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and the Non-U.S. Holder's country of residence. To obtain a reduced rate of withholding under a treaty, a Non-U.S. Holder generally will be required to provide the applicable withholding agent with a properly executed IRS Form W-8BEN, IRS Form W-8BEN-E, or other appropriate form, certifying the Non-U.S. Holder's entitlement to benefits under that treaty. Such form must be provided prior to the payment of dividends and must be updated periodically. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. The holder's agent will then be required to provide certification to the applicable withholding agent, either directly or through other intermediaries. If you are eligible for a reduced rate of U.S. withholding tax under an income tax treaty, you should consult with your own tax advisor to determine if you are able to obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

We generally are not required to withhold tax on dividends paid to a Non-U.S. Holder that are effectively connected with the holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment that the holder maintains in the United States) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to the applicable withholding agent. In general, such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular graduated rates applicable to U.S. persons. A corporate Non-U.S. Holder receiving effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments.

See also the section below titled "—Foreign Accounts" for additional withholding rules that may apply to dividends paid to certain foreign financial institutions or non-financial foreign entities.

Gain on Disposition of Our Class A Common Stock

Subject to the discussions below under the sections titled "—Backup Withholding and Information Reporting" and "—Foreign Accounts," a Non-U.S. Holder generally will not be subject to U.S. federal income or withholding tax with respect to gain realized on a sale or other disposition of our Class A common stock unless (1) the gain is effectively connected with a trade or business of the holder in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment that the holder maintains in the United States), (2) the Non-U.S. Holder is a nonresident alien individual and is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are met, or (3) we are or have been a "United States real property holding corporation" within the meaning of Code Section 897(c)(2) at any time within the shorter of the five-year period preceding such disposition or the holder's holding period in the Class A common stock.

If you are a Non-U.S. Holder, gain described in (1) above will be subject to tax on the net gain derived from the sale at the regular U.S. federal income tax rates applicable to U.S. persons. If you are a corporate Non-U.S. Holder, gain described in (1) above may also be subject to the additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. If you are an individual Non-U.S. Holder described in (2) above, you will be required to pay a flat 30% tax on the gain derived from the sale, which gain may be offset by U.S. source capital losses (even though you are not considered a resident of the United States), provided you have timely filed U.S. federal income tax returns with respect to such losses. With respect to (3) above, in general, we would be a United States real property holding corporation if United States real property interests (as defined in the Code and the Treasury Regulations) comprised (by fair market value) at least half of our assets. We believe that we are not, and do not anticipate becoming, a United States real property holding corporation. However, there can be no assurance that we will not become a United States real property holding corporation in the future. Even if we are treated as a United States real property holding corporation, gain realized by a Non-U.S. Holder on a disposition of our Class A common stock will not be subject to U.S. federal income tax so long as (1) the Non-U.S. Holder owned, directly, indirectly, or constructively, no more than five percent of our Class A common stock at all times within the shorter of (i) the five-year period preceding the disposition or (ii) the holder's holding period and (2) our Class A common stock is regularly traded on an established securities market for purposes of the relevant rules. There can be no assurance that our Class A common stock will qualify as regularly traded on an established securities market.

U.S. Federal Estate Tax

The estates of nonresident alien individuals generally are subject to U.S. federal estate tax on property with a U.S. situs. Because we are a U.S. corporation, our Class A common stock will be U.S. situs property and, therefore, will be included in the taxable estate of a nonresident alien decedent, unless an applicable estate tax treaty between the United States and the decedent's country of residence provides otherwise. The terms "resident" and "nonresident" are defined differently for U.S. federal estate tax purposes than for U.S. federal income tax purposes. Investors are urged to consult their own tax advisors regarding the U.S. federal estate tax consequences of the ownership or disposition of our Class A common stock.

Backup Withholding and Information Reporting

Generally, we or an applicable withholding agent must report information to the IRS with respect to any dividends we pay on our Class A common stock, including the amount of any such dividends, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the holder to whom any such dividends are paid. Pursuant to tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the recipient's country of residence.

Dividends paid by us (or our paying agents) to a Non-U.S. Holder may also be subject to U.S. backup withholding. U.S. backup withholding generally will not apply to a Non-U.S. Holder who provides a properly executed IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, or otherwise establishes an exemption, provided that the applicable withholding agent does not have actual knowledge or reason to know the holder is a U.S. person.

Under current U.S. federal income tax law, U.S. information reporting and backup withholding requirements generally will apply to the proceeds of a disposition of our Class A common stock effected by or through a U.S. office of any broker, U.S. or non-U.S., unless the Non-U.S. Holder provides a properly executed IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, or otherwise meets documentary evidence requirements for establishing non-U.S. person status or otherwise establishes an exemption. Generally, U.S. information reporting and backup withholding requirements will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is effected outside the United States through a non-U.S. office of a non-U.S. broker. Information reporting and backup withholding requirements may, however, apply to a payment of disposition proceeds if the broker has actual knowledge, or reason to know, that the holder is, in fact, a U.S. person. For information reporting purposes only, certain U.S. related brokers may be treated in a manner similar to U.S. brokers.

Backup withholding is not an additional tax. If backup withholding is applied to you, you should consult with your own tax advisor to determine whether you have overpaid your U.S. federal income tax, and whether you are able to obtain a tax refund or credit of the overpaid amount.

Foreign Accounts

In addition, U.S. federal withholding taxes may apply under the Foreign Account Tax Compliance Act (FATCA), on certain types of payments, including dividends on our Class A common stock, made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on our Class A common stock or gross proceeds from the disposition of our Class A common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (1) the foreign financial institution agrees to undertake certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. The 30% federal withholding tax described in this paragraph cannot be reduced under an income tax treaty with the United States. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States-owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules. Under proposed Treasury Regulations (the preamble to which specifies that taxpayers are permitted to rely on such proposed Treasury Regulations pending finalization), no withholding would apply with respect to payments of gross proceeds with respect to the disposition of our class A common stock.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our Class A common stock.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF ACQUIRING, OWNING, AND DISPOSING OF OUR CLASS A COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAW, AS WELL AS TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL, NON-U.S. OR U.S. FEDERAL NON-INCOME TAX LAWS SUCH AS ESTATE AND GIFT TAX, AND THE POSSIBLE APPLICATION OF TAX TREATIES.

Underwriting

Underwriting

Subject to the terms and conditions set forth in the underwriting agreement, dated , 2020, among us, the selling shareholders, and Jefferies LLC and RBC Capital Markets, LLC, as the representatives of the underwriters named below and the joint book-running managers of this offering, we and the selling shareholders have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us and the selling shareholders, the respective number of shares of common stock shown opposite its name below:

Underwriter	Number of Shares
Jefferies LLC	
RBC Capital Markets, LLC	
JMP Securities LLC	
KeyBanc Capital Markets Inc.	
Oppenheimer & Co. Inc.	
Raymond James & Associates, Inc.	
Total	

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the shares of common stock if any of them are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated. We and the selling shareholder have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have advised us that, following the completion of this offering, they currently intend to make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the shares of common stock subject to their acceptance of the shares of common stock from us and the selling shareholders and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part. In addition, the underwriters have advised us that they do not intend to confirm sales to any account over which they exercise discretionary authority.

Commission and Expenses

The underwriters have advised us that they propose to offer the shares of common stock to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers, which may include the underwriters, at that price less a concession not in excess of $ per share of common stock. The underwriters may allow, and certain dealers may reallow, a discount from the concession not in excess of $ per share of common stock to certain brokers and dealers. After the offering, the initial public offering price, concession, and reallowance to dealers may be reduced by the representatives. No such reduction will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus.

The following table shows the public offering price, the underwriting discounts and commissions that we and the selling shareholders are to pay the underwriters, and the proceeds, before expenses, to us and the selling shareholders in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Per Share		Total	
	Without Option to Purchase Additional Shares	With Option to Purchase Additional Shares	Without Option to Purchase Additional Shares	With Option to Purchase Additional Shares
Public offering price		$$		$$
Underwriting discounts and commissions paid by us		$$		$$
Proceeds to us, before expenses		$$		$$
Underwriting discounts and commissions paid by the selling shareholders		$$		$$
Proceeds to the selling shareholders, before expenses		$$		$$

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately $ .We estimate expenses payable by the selling shareholders in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately $.

Determination of Offering Price

Prior to this offering, there has not been a public market for our common stock. Consequently, the initial public offering price for our common stock will be determined by negotiations between us and the representatives. Among the factors to be considered in these negotiations will be prevailing market conditions, our financial information, market valuations of other companies that we and the underwriters believe to be comparable to us, estimates of our business potential, the present state of our development, and other factors deemed relevant.

We offer no assurances that the initial public offering price will correspond to the price at which the common stock will trade in the public market subsequent to the offering or that an active trading market for the common stock will develop and continue after the offering.

Listing

We have applied to list our Class A common stock on the Nasdaq Global Market under the trading symbol "PUBM."

Stamp Taxes

If you purchase shares of common stock offered in this prospectus, you may be required to pay stamp taxes and other charges under the laws and practices of the country of purchase, in addition to the offering price listed on the cover page of this prospectus.

Option to Purchase Additional Shares

We and the selling shareholder have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase, from time to time, in whole or in part, up to an aggregate of shares from us and shares from the selling shareholders at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter's initial purchase commitment as indicated in the table above. This option may be exercised only if the underwriters sell more shares than the total number set forth on the cover page of this prospectus.

No Sales of Similar Securities

We, our officers, directors, and holders of all or substantially all our outstanding capital stock and other securities have agreed, subject to specified exceptions, not to directly or indirectly:

n sell, offer, contract or grant any option to sell (including any short sale), pledge, transfer, establish an open "put equivalent position" within the meaning of Rule 16a-l(h) under the Securities Exchange Act of 1934, as amended, or n otherwise dispose of any shares of common stock, options or warrants to acquire shares of common stock, or securities exchangeable or exercisable for or convertible into shares of common stock currently or hereafter owned either of record or beneficially, or n publicly announce an intention to do any of the foregoing for a period of 180 days after the date of this prospectus without the prior written consent of Jefferies LLC.

This restriction terminates after the close of trading of the common stock on and including the 180th day after the date of this prospectus.

Jefferies LLC may, in its sole discretion and at any time or from time to time before the termination of the 180-day period release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and any of our shareholders who will execute a lock-up agreement, providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

The underwriters have advised us that they, pursuant to Regulation M under the Securities Exchange Act of 1934, as amended, certain persons participating in the offering may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the common stock at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either "covered" short sales or "naked" short sales.

"Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares of our common stock in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares of our common stock or purchasing shares of our common stock in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option to purchase additional shares.

"Naked" short sales are sales in excess of the option to purchase additional shares of our common stock. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares of common stock on behalf of the underwriters for the purpose of fixing or maintaining the price of the common stock. A syndicate covering transaction is the bid for or the purchase of shares of common stock on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriter's purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common stock originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

None of we, the selling shareholders nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

The underwriters may also engage in passive market making transactions in our common stock on the Nasdaq Global Market in accordance with Rule 103 of Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded.

Electronic Distribution

A prospectus in electronic format may be made available by e-mail or on the web sites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' web sites, and any information contained in any other web site maintained by any of the underwriters is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Other Activities and Relationships

The underwriter and certain of its affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial, and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing, and brokerage activities. The underwriter and certain of its affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriter, and certain of its affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the common stock offered hereby. Any such short positions could adversely affect future trading prices of the common stock offered hereby. The underwriters and certain of their respective affiliates may also communicate independent investment recommendations, market color or trading ideas, and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities, and instruments.

Selling Restrictions

Canada

(A) Resale Restrictions The distribution of shares of our common stock in Canada is being made only in the provinces of Ontario, Quebec, Alberta and British Columbia on a private placement basis exempt from the requirement that we and the selling shareholders prepare and file a prospectus with the securities regulatory authorities in each province where trades of these securities are made. Any resale of the shares of our common stock in Canada must be made under applicable securities laws which may vary depending on the relevant jurisdiction, and which may require resales to be made under available statutory exemptions or under a discretionary exemption granted by the applicable Canadian securities regulatory authority. Purchasers are advised to seek legal advice prior to any resale of the securities.

(B) Representations of Canadian Purchasers By purchasing shares of our common stock in Canada and accepting delivery of a purchase confirmation, a purchaser is representing to us and the selling shareholders and the dealer from whom the purchase confirmation is received that:

n the purchaser is entitled under applicable provincial securities laws to purchase the shares of our common stock without the benefit of a prospectus qualified under those securities laws as it is an “accredited investor” as defined under National Instrument 45-106 – Prospectus Exemptions;

n the purchaser is a “permitted client” as defined in National Instrument 31-103 - Registration Requirements, Exemptions, and Ongoing Registrant Obligations;

n where required by law, the purchaser is purchasing as principal and not as agent; and n the purchaser has reviewed the text above under Resale Restrictions.

(C) Conflicts of Interest Canadian purchasers are hereby notified that each of the underwriters is relying on the exemption set out in section 3A.3 or 3A.4, if applicable, of National Instrument 33-105 – Underwriting Conflicts from having to provide certain conflict of interest disclosure in this document.

(D) Statutory Rights of Action Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if the prospectus (including any amendment thereto) such as this document contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser of these securities in Canada should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory for particulars of these rights or consult with a legal advisor.

(E) Enforcement of Legal Rights All of our directors and officers as well as the experts named herein and the Selling Shareholders may be located outside of Canada and, as a result, it may not be possible for Canadian purchasers to effect service of process within Canada upon us or those persons. All or a substantial portion of our assets and the assets of those persons may be located outside of Canada and, as a result, it may not be possible to satisfy a judgment against us or those persons in Canada or to enforce a judgment obtained in Canadian courts against us or those persons outside of Canada.

(F) Taxation and Eligibility for Investment Canadian purchasers of shares of our common stock should consult their own legal and tax advisors with respect to the tax consequences of an investment in the shares of our common stock in their particular circumstances and about the eligibility of the shares of our common stock for investment by the purchaser under relevant Canadian legislation.

Australia

This prospectus is not a disclosure document for the purposes of Australia’s Corporations Act 2001 (Cth) of Australia, or Corporations Act, has not been lodged with the Australian Securities & Investments Commission and is only directed to the categories of exempt persons set out below. Accordingly, if you receive this prospectus in Australia:

You confirm and warrant that you are either:

n a “sophisticated investor” under section 708(8)(a) or (b) of the Corporations Act;

n a “sophisticated investor” under section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant’s certificate to the Company which complies with the requirements of section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made;

n a person associated with the Company under Section 708(12) of the Corporations Act;

n a “professional investor” within the meaning of section 708(11)(a) or (b) of the Corporations Act; or n to the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor, associated person or professional investor under the Corporations Act any offer made to you under this prospectus is void and incapable of acceptance.

You warrant and agree that you will not offer any of the securities issued to you pursuant to this prospectus for resale in Australia within 12 months of those securities being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under section 708 of the Corporations Act.

European Economic Area and United Kingdom

In relation to each member state of the European Economic Area and the United Kingdom (each, a Relevant State), an offer to the public of any securities which are the subject of the offering contemplated by this prospectus may not be made in that Relevant State except that an offer to the public in that Relevant State of any securities may be made at any time under the following exemptions under the Prospectus Regulation:

(a)to any legal entity which is a "qualified investor" as defined in the Prospectus Regulation;

(b)to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Regulation), as permitted under the Prospectus Regulation, subject to obtaining the prior consent of the underwriters or the underwriters nominated by us for any such offer; or (c)in any other circumstances falling within Article 1(4) of the Prospectus Regulation, provided that no such offer of securities shall require us or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression "offer to the public" in relation to any securities in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe the securities, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129.

Hong Kong

No securities have been offered or sold, and no securities may be offered or sold, in Hong Kong, by means of any document, other than to persons whose ordinary business is to buy or sell shares or debentures, whether as principal or agent; or to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (SFO) and any rules made under that Ordinance; or in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong (CO) or which do not constitute an offer or invitation to the public for the purpose of the CO or the SFO. No document, invitation or advertisement relating to the securities has been issued or may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under that Ordinance.

This prospectus has not been registered with the Registrar of Companies in Hong Kong. Accordingly, this prospectus may not be issued, circulated or distributed in Hong Kong, and the securities may not be offered for subscription to members of the public in Hong Kong. Each person acquiring the securities will be required, and is deemed by the acquisition of the securities, to confirm that he is aware of the restriction on offers of the securities described in this prospectus and the relevant offering documents and that he is not acquiring, and has not been offered any securities in circumstances that contravene any such restrictions.

Israel

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, or the Securities Law, and has not been filed with or approved by the Israel Securities Authority. In Israel, this prospectus is being distributed only to, and is directed only at, and any offer of the shares of our common stock is directed only at, (i) a limited number of persons in accordance with the Israeli Securities Law, and (ii) investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and "qualified individuals," each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case, purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors are required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

Japan

The offering has not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948 of Japan, as amended) (FIEL), and the underwriters will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEL and any other applicable laws, regulations, and ministerial guidelines of Japan.

Singapore

This prospectus has not been and will not be lodged or registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares of our common stock may not be circulated or distributed, nor may the shares of our common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the SFA), (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares of our common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a)a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or (b)a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of our common stock pursuant to an offer made under Section 275 of the SFA except:

(i)to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(ii)where no consideration is or will be given for the transfer;

(iii)where the transfer is by operation of law;

(iv)as specified in Section 276(7) of the SFA; or (v)as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Switzerland

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (SIX) or on any other stock exchange or regulated trading facility in Switzerland. This prospectus has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this prospectus nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this prospectus nor any other offering or marketing material relating to the offering, the Company or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this prospectus will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (CISA). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of securities.

United Kingdom

This prospectus is only being distributed to, and is only directed at, persons in the United Kingdom that are qualified investors within the meaning of the Prospectus Regulation that are also (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the Order) and/or (ii) high net worth entities falling within Article 49(2)(a) to (d) of the Order and other persons to whom it may lawfully be communicated (each such person being referred to as a "relevant person").

This prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

Legal Matters

Legal Matters

The validity of the shares of our Class A common stock offered by this prospectus will be passed upon for us by Fenwick & West LLP, Mountain View, California. Certain legal matters relating to the offering will be passed upon for the underwriters by Latham & Watkins LLP, Menlo Park, California.

Experts

Experts

The consolidated financial statements as of December 31, 2018 and 2019 and for each of the two years in the period ended December 31, 2019, included in this prospectus have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report appearing herein. Such consolidated financial statements have been so included in reliance upon the report of such firm given upon their authority as an expert in accounting and auditing.

Additional Information

Additional Information

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of Class A common stock offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits filed therewith. For further information about us and the Class A common stock offered hereby, reference is made to the registration

statement and the exhibits filed therewith. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and in each instance we refer you to the copy of such contract or other document filed as an exhibit to the registration statement. The SEC also maintains a website that contains reports, proxy and information statements, and other information regarding registrants that file electronically with the SEC. The address of the website is www.sec.gov.

We currently do not file periodic reports with the SEC. Upon completion of this offering, we will be required to file periodic reports, proxy statements, and other information with the SEC pursuant to the Exchange Act. These reports, proxy statements, and other information will be available for review at the SEC's website referred to above. We also maintain a website at www.pubmatic.com. Upon completion of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on our website is not a part of this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only.

Index to Consolidated Financial Statements

Pubmatic, Inc. and Subsidiaries

Index to Consolidated Financial Statements

	Page
Report of Independent Registered Public Accounting Firm	F-1
Consolidated Balance Sheets	F-2
Consolidated Statements of Operations	F-4
Consolidated Statements of Comprehensive Income	F-5
Consolidated Statements of Convertible Preferred Stock, Redeemable Common Stock and Stockholders' Equity	F-6
Consolidated Statements of Cash Flows	F-8
Notes to Consolidated Financial Statements	F-10

Report of Independent Registered Public Accounting Firm

Report of Independent Registered Public Accounting Firm

To the stockholders and the Board of Directors of PubMatic, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of PubMatic, Inc. and subsidiaries (the "Company") as of December 31, 2018 and 2019, the related consolidated statements of operations, comprehensive income, convertible preferred stock, redeemable common stock and stockholders' equity, and cash flows for each of the two years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2019, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ DELOITTE & TOUCHE LLP San Jose, California September 16, 2020 We have served as the Company's auditor since 2012.

Consolidated Balance Sheets

Pubmatic, Inc. and Subsidiaries

Consolidated Balance Sheets

(In thousands, except par values and share data)

	December 31, 2018	December 31, 2019	September 30, 2020	Pro forma September 30, 2020
			(unaudited)	
ASSETS				
Current Assets				
Cash and cash equivalents	$21,215	$34,250	$40,612	
Marketable securities	14,294	21,202	14,595	
Accounts receivable - net	109,293	117,655	140,526	
Prepaid expenses and other current assets	5,104	4,534	7,503	
Total Current Assets	149,906	177,641	203,236	
Property, equipment and software - net	18,766	20,331	27,544	
Intangible assets - net	337	—	—	
Goodwill	6,250	6,250	6,250	
Deferred income tax asset	2,332	2,139	2,047	
Other assets, non-current	632	1,084	1,047	
TOTAL ASSETS	$178,223	$207,445	$240,124	
LIABILITIES, CONVERTIBLE PREFERRED STOCK, REDEEMABLE COMMON STOCK, AND STOCKHOLDERS' EQUITY				
Current Liabilities				
Accounts payable	$81,861	$99,384	$118,532	
Accrued liabilities	8,595	11,120	11,018	
Total Current Liabilities	90,456	110,504	129,550	
Convertible preferred stock warrant	276	—	—	
Other liabilities, non-current	3,021	3,405	2,434	
TOTAL LIABILITIES	93,753	113,909	131,984	
Commitments and contingencies (Note 6)				
Convertible preferred stock, par value of $0.0001 per share; 34,000,000 shares authorized as of December 31, 2018 and 2019 and September 30, 2020 (unaudited); 33,398,753, 33,443,969 and 33,443,969 shares issued and outstanding as of December 31, 2018 and 2019 and September 30, 2020 (unaudited); aggregate liquidation preference of $62,755, $62,939 and $62,939 as of December 31, 2018 and 2019 and September 30, 2020 (unaudited)	60,820	61,216	61,216	—
Redeemable common stock, 5,901,863 shares as of December 31, 2018 and 2019 and no shares outstanding as of September 30, 2020 (unaudited)	19,025	19,025	—	—
Stockholders' Equity				
Common stock, par value $0.0001 per share; 55,000,000 shares authorized as of December 31, 2018 and 2019 and September 30, 2020 (unaudited); 5,726,954, 5,746,216 and 11,727,535 shares issued and outstanding as of December 31, 2018 and 2019 and September 30, 2020 (unaudited), respectively	1	1	2	5
Treasury stock, at cost - 3,136,698, 3,138,419 and 3,138,999 shares as of December 31, 2018 and 2019 and September 30, 2020 (unaudited)	(11,426)	(11,431)	(11,432)	(11,432)

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

Pubmatic, Inc. and Subsidiaries

Consolidated Balance Sheets

(In thousands, except par values and share data)

Additional paid-in capital	6,615	8,641	34,486	95,699
Accumulated other comprehensive income	—	6	2	2
Retained earnings	9,435	16,078	23,866	23,866
Total Stockholders' Equity	4,625	13,295	46,924	108,140
TOTAL LIABILITIES, CONVERTIBLE PREFERRED STOCK, REDEEMABLE COMMON STOCK, AND STOCKHOLDERS' EQUITY	$178,223	$207,445	$240,124	

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

Consolidated Statements of Operations

Pubmatic, Inc. and Subsidiaries

Consolidated Statements of Operations

(In thousands, except share and per share data)

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
			(unaudited)	
Revenue	$99,264	$113,871	$79,478	$92,506
Cost of revenue	31,235	36,104	26,781	29,736
Gross profit	68,029	77,767	52,697	62,770
Operating expenses:				
Technology and development	12,619	12,453	9,334	9,280
Sales and marketing	33,444	36,498	26,251	30,142
General and administration	16,998	20,307	14,472	13,799
Total operating expenses	63,061	69,258	50,057	53,221
Operating income	4,968	8,509	2,640	9,549
Interest income	877	1,290	999	475
Other expense, net	(215)	(577)	(200)	(132)
Total other income, net	662	713	799	343
Income before provision for income taxes	5,630	9,222	3,439	9,892
Provision for income taxes	1,205	2,579	920	2,104
Net income	$4,425	$6,643	$2,519	$7,788
Net income per share attributable to common stockholders:				
Basic	$—	$0.04	$—	$0.10
Diluted	$—	$0.04	$—	$0.09
Weighted-average shares used to compute net income per share attributable to common stockholders:				
Basic	11,249,579	10,036,983	10,033,313	10,178,598
Diluted	14,157,492	12,169,884	12,511,940	14,752,090
Pro forma net income per share attributable to common stockholders (unaudited):				
Basic		$0.16		$0.18
Diluted		$0.15		$0.16
Weighted-average shares used to compute pro forma net income per share attributable to common stockholders (unaudited):				
Basic		43,480,952		43,622,567
Diluted		45,613,853		48,196,059

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

Consolidated Statements of Comprehensive Income

Pubmatic, Inc. and Subsidiaries

Consolidated Statements of Comprehensive Income

(In thousands)

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
			(unaudited)	
Net income	$4,425	$6,643	$2,519	$7,788
Other comprehensive income (loss):				
Unrealized gain (loss) on marketable securities	4	6	3	(4)
Comprehensive income	$4,429	$6,649	$2,522	$7,784

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

Consolidated Statements of Convertible Preferred Stock, Redeemable Common Stock and Stockholders' Equity

Pubmatic, Inc. and Subsidiaries

Consolidated Statements of Convertible Preferred Stock, Redeemable Common Stock and Stockholders' Equity

(In thousands, except share data)

	Convertible Preferred Stock		Redeemable Common Stock		Common Stock						
	Shares	Amount	Shares	Amount	Shares	Amount	Treasury Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stock Equi
Balance — December 31, 2017	33,398,753	$60,820	—	$—	11,783,850	$2	$(11,125)	$27,119	$(4)	$5,010	$2
Stock-based compensation								3,429			3,42
Cashless exercise of common stock warrant					9,151						—
Exercise of stock options					34,849			13			13
Cash settlement for canceled stock options								(922)			(922
Repurchase of treasury stock, at cost					(199,033)		(301)				(301
Issuance of stockholders notes receivable								(4,000)			(4,0
Reclassification of redeemable common stock			5,901,863	19,025	(5,901,863)	(1)		(19,024)			(19,(
Other comprehensive income									4		4
Net income										4,425	4,42
Balance — December 31, 2018	33,398,753	60,820	5,901,863	19,025	5,726,954	1	(11,426)	6,615	—	9,435	4,62
Stock-based compensation								2,022			2,02
Cashless exercise of Series D convertible preferred stock warrants	45,216	396									—
Exercise of stock options					20,983	—		4			4
Repurchase of treasury stock, at cost					(1,721)	—	(5)				(5)
Other comprehensive income									6		6
Net income										6,643	6,64
Balance — December 31, 2019	33,443,969	$61,216	5,901,863	$19,025	5,746,216	$1	$(11,431)	$8,641	$6	$16,078	$1
Stock-based compensation (unaudited)								2,459			2,45
Exercise of stock options (unaudited)					80,036	—		94			94
Repurchase of treasury stock, at cost (unaudited)					(580)	—	(1)				(1)
Repayment of shareholders notes receivable (unaudited)								4,268			4,26

Reclassification of common stock (unaudited)			(5,901,863)	(19,025)	5,901,863	1		19,024			19,02
Other comprehensive loss (unaudited)									(4)		(4)
Net income (unaudited)										7,788	7,788
Balance — 9/30/2020 (unaudited)	33,443,969	$61,216	—	$—	11,727,535	$2	$(11,432)	$34,486	$2	$23,866	$4

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

Pubmatic, Inc. and Subsidiaries

Consolidated Statements of Convertible Preferred Stock, Redeemable Common Stock and Stockholders' Equity

(In thousands, except share data)

For the Nine Months Ended September 30, 2019 (unaudited)

	Convertible Preferred Stock		Redeemable Common Stock		Common Stock		Treasury Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	To St Eq
	Shares	Amount	Shares	Amount	Shares	Amount					
Balance — December 31, 2018	33,398,753	$60,820	5,901,863	$19,025	5,726,954	$1	$(11,426)	$6,615	$—	$9,435	
Stock-based compensation								1,544			
Cashless exercise of Series D convertible preferred stock warrants	45,216	276									
Exercise of stock options					20,765	—		4			
Repurchase of treasury stock, at cost					(1,721)		(5)				
Other comprehensive income									3		
Net income										2,519	2
Balance — Balance - September 30, 2019 (unaudited)	33,443,969	$61,096	5,901,863	$19,025	5,745,998	$1	$(11,431)	$8,163	$3	$11,954	

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

Consolidated Statements of Cash Flows

Pubmatic, Inc. and Subsidiaries

Consolidated Statements of Cash Flows

(In thousands)

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
			(unaudited)	
CASH FLOW FROM OPERATING ACTIVITIES:				
Net Income	$4,425	$6,643	$2,519	$7,788
Adjustments to reconcile net income to net cash provided by operating activities:				
Depreciation and amortization	12,285	12,671	9,340	11,574
Impairment of internally developed software	—	702	702	—
Stock-based compensation	3,175	2,002	1,531	2,439

Provision for doubtful accounts	753	3,557	2,567	319
Change in fair value of preferred stock warrant liability	(80)	120	—	—
Deferred income taxes	(4)	193	142	92
Amortization of premiums on marketable securities	(230)	(341)	(267)	(135)
Other	(7)	19	21	32
Changes in operating assets and liabilities:				
Accounts receivable	(24,183)	(11,919)	17,056	(23,190)
Prepaid expenses and other current assets	836	618	980	(2,932)
Accounts payable	17,560	18,465	(11,919)	18,300
Accrued expenses	1,706	2,011	(396)	476
Other liabilities, non-current	(641)	384	206	(971)
Net cash provided by operating activities	15,595	35,125	22,482	13,792
CASH FLOWS FROM INVESTING ACTIVITIES:				
Purchases of property and equipment	(5,187)	(9,553)	(7,087)	(12,885)
Capitalized software development costs	(4,470)	(5,442)	(4,108)	(5,638)
Purchases of marketable securities	(26,992)	(37,545)	(30,392)	(22,313)
Proceeds from sales of marketable securities	—	696	696	2,295
Proceeds from maturities of marketable securities	23,900	30,255	24,605	26,750
Purchase of equity securities	—	(500)	(500)	—
Net cash used in investing activities	(12,749)	(22,089)	(16,786)	(11,791)
CASH FLOWS FROM FINANCING ACTIVITIES:				
Payments on revolving line of credit	(3,000)	—	—	—
Issuance of stockholders' notes receivable	(4,000)	—	—	—
Proceeds from repayments of stockholders' notes receivable	—	—	—	4,268
Proceeds from exercise of stock options	13	4	4	94
Payments on cancellation of stock options	(705)	—	—	—
Payments to acquire treasury stock	(301)	(5)	(5)	(1)
Net cash provided by (used in) financing activities	(7,993)	(1)	(1)	4,361
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(5,147)	13,035	5,695	6,362
CASH AND CASH EQUIVALENTS - Beginning of Year	26,362	21,215	21,215	34,250
CASH AND CASH EQUIVALENTS - End of Year	$21,215	$34,250	$26,910	$40,612

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

Pubmatic, Inc. and Subsidiaries

Consolidated Statements of Cash Flows

(In thousands)

SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:				
Income taxes paid	$769	$3,016	$583	$415
SUPPLEMENTAL DISCLOSURES OF NON-CASH INVESTING AND FINANCING INFORMATION:				
Stock-based compensation capitalized as internal use software costs	$37	$20	$13	$20
Property and equipment included in accounts payable and accrued expenses	$1,717	$770	$2,113	$1,624
Capitalized software costs included in accounts payable and accrued expenses	$695	$1,214	$609	$636
Non-cash exercise of convertible preferred stock warrant	$—	$396	$276	$—

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

Notes to Consolidated Financial Statements

Pubmatic, Inc. and Subsidiaries

Notes to consolidated financial statements

Note 1 - Organization and Description of Business

PubMatic, Inc. and subsidiaries (Company or PubMatic) was founded in 2006. The Company is headquartered in Redwood City, California and has offices in New York, Europe, Asia, and Australia. The Company provides a specialized cloud infrastructure platform that enables real-time programmatic advertising transactions. The purpose-built technology and infrastructure provides superior outcomes for both publishers and advertising leveraging an efficient design, machine learning, and data processing capabilities, with customer alignment and global omnichannel reach.

Note 2 – Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America (GAAP). The accompanying consolidated financial statements include the accounts of PubMatic, Inc. and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of the consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts of assets and liabilities reported, disclosures about contingent assets and liabilities, and reported amounts of revenue and expenses.

Significant items subject to such estimates include: revenue recognition criteria, including the determination of revenue reporting as net versus gross in the Company's revenue arrangements, internal use software development costs, stock-based compensation, and income taxes, including the valuation reserve on deferred tax assets. The Company evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors and adjusts those estimates and assumptions when facts and circumstances dictate. Actual results could materially differ from those estimates and assumptions. Due to the inherent uncertainty involved in making assumptions and estimates, events and changes in circumstances arising after December 31, 2019, including those resulting from the impacts of the COVID-19 pandemic, may result in actual outcomes that differ from those contemplated by the Company's assumptions and estimates.

Unaudited Interim Consolidated Financial Statements

The accompanying interim consolidated balance sheet as of September 30, 2020 and the consolidated statements of operations, comprehensive income and cash flows for the nine months ended September 30, 2019 and 2020, and the consolidated statement of convertible preferred stock and stockholders' equity for the nine months ended September 30, 2020, and the related footnote disclosures are unaudited. The unaudited interim consolidated financial statements have been prepared on the same basis as the annual consolidated financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary to present fairly the Company's financial position as of September 30, 2020 and its results of operations and cash flows for the nine months ended September 30, 2019 and 2020. The results of operations for the nine months ended September 30, 2020 are not necessarily indicative of the results to be expected for the year ending December 31, 2020 or for any other period.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentration of credit risk consist principally of cash and cash equivalents, marketable securities, and accounts receivable. The Company maintains its cash and cash equivalents with financial institutions in amounts which exceed Federal Deposit Insurance Corporation limits.

The Company's investment policy limits investments to certain types of securities issued by the U.S. government and its agencies and institutions with investment-grade credit ratings and places restrictions on maturities and concentration by type and issuer. The primary objective of its investment activities is to preserve principal while maximizing income without significantly increasing risk.

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity at the date of purchase of three months or less to be cash equivalents.

Marketable Securities

The Company classifies marketable securities as available-for-sale at the time of purchase and reevaluates such classification at each balance sheet date. The Company may sell these securities at any time for use in current operations even if they have not yet reached maturity. As a result, the Company classifies its marketable securities, including those with maturities beyond twelve months, as current assets in the consolidated balance sheets. These marketable securities are carried at fair value and unrealized gains and losses are recorded in other comprehensive income, which is reflected as a component of stockholders' equity. These marketable securities are assessed as to whether those with unrealized loss positions are other than temporarily impaired. The Company considers impairments to be other than temporary if they are related to deterioration in credit risk or if it is likely the securities will be sold before the recovery of their cost basis. Realized gains and losses from the sale of marketable securities and declines in value deemed to be other than temporary are determined based on the specific identification method. Realized gains and losses are reported in other expense, net in the consolidated statements of operations and comprehensive income.

Fair Value of Financial Instruments

Financial instruments consist of cash equivalents, marketable securities, accounts receivable, accounts payable, accrued liabilities, and a convertible preferred stock warrant. Cash equivalents, marketable securities, and convertible preferred stock warrant liability are remeasured at fair value at the end of every period. Accounts receivable, accounts payable and accrued liabilities are stated at their carrying value, which approximates fair value due to the short time to the expected receipt or payment.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded at the invoiced amount, are unsecured, and do not bear interest. The allowance for doubtful accounts is based on the best estimate of the amount of probable credit losses in existing accounts receivable. The allowance for doubtful accounts is determined based on historical collection experience and the review in each period of the status of the then outstanding accounts receivable, while taking into consideration current

customer information, collection history, and other relevant data. The Company reviews the allowance for doubtful accounts on a quarterly basis. Account balances are written off against the allowance when the Company believes it is probable the receivable will not be recovered. The following table presents the changes in the allowance for doubtful accounts (in thousands):

	December 31,		September 30,	
	2018	2019	2019	2020
			(unaudited)	
Allowance for doubtful accounts, beginning balance	$1,144	$1,784	$1,784	$2,051
Provision	753	3,557	2,567	319
Write-offs	(113)	(3,290)	(12)	—
Allowance for doubtful accounts, ending balance	$1,784	$2,051	$4,339	$2,370

Property and Equipment

Property and equipment, including leasehold improvements, are stated at cost, less accumulated depreciation and amortization. Depreciation is computed using the straight-line method over the estimated useful lives of the related assets, generally three years. Leasehold improvements are amortized on a straight-line basis over the shorter of the estimated useful lives of the assets or the remaining lease term.

Internal Use Software Development Costs

The Company capitalizes certain internal use software development costs associated with creating and enhancing internal use software related to its platform and technology infrastructure. These costs include personnel and related employee benefits expenses for employees who are directly associated with and who devote time to software projects, and external direct costs of materials and services consumed in developing or obtaining the software. Software development costs that do not meet the criteria for capitalization are expensed as incurred and recorded in technology and development expenses in the consolidated statements of operations and comprehensive income.

Software development activities generally consist of three stages, (i) the planning stage, (ii) the application and infrastructure development stage, and (iii) the post implementation stage. Costs incurred in the planning and post implementation stages of software development, including costs associated with the post configuration training and repairs and maintenance of the developed technologies, are expensed as incurred. The Company capitalizes costs associated with software developed for internal use when both the preliminary project stage is completed and management has authorized further funding for the completion of the project. Costs incurred in the application and infrastructure development stages, including significant enhancements and upgrades, are capitalized. Capitalization ends once a project is substantially complete and the software and technologies are ready for their intended purpose. Internal use software development costs are amortized using a straight-line method over the estimated useful life of two to five years, commencing when the software is ready for its intended use.

Intangible Assets

Intangible assets consist of identifiable intangible assets that the Company has acquired from previous business combinations, namely customer relationships and developed technology. Intangible assets are recorded at fair value, net of accumulated amortization. The Company amortizes its intangible assets reflecting the pattern in which the economic benefits of the intangible assets are consumed. When a pattern cannot be reliably determined, the Company uses a straight-line amortization method.

Impairment of Long-Lived Assets

The Company continually monitors events and changes in circumstances that could indicate that carrying amounts of its long-lived assets, including property and equipment and intangible assets may not be recoverable. When such events or changes in circumstances occur, the Company assesses the recoverability of long-lived assets by determining whether the carrying value of such assets will be recovered through their undiscounted expected future cash flows. If the future undiscounted cash flows are less than the carrying value of these assets, the Company recognizes an impairment loss based on the excess of the carrying value over the fair value of the assets.

Goodwill

Goodwill represents the excess of the aggregate fair value of the consideration transferred in a business combination over the fair value of the assets acquired, net of liabilities assumed. The Company tests for impairment of goodwill annually during the fourth quarter or more frequently if events or changes in circumstances indicate that the goodwill may be impaired.

Events or changes in circumstances which could trigger an impairment review include a significant adverse change in legal factors or in the business climate, an adverse action or assessment by a regulator, unanticipated competition, a loss of key personnel, significant changes in the manner of the Company's use of the acquired assets, or the strategy for the Company's overall business, significant negative industry or economic trends, or significant underperformance relative to expected historical or projected future results of operations. The Company has not recorded any goodwill impairment to date.

Non-marketable Investments

The Company accounts for investments in non-marketable equity securities that it does not exercise significant influence using the measurement alternative in accordance with Accounting Standards Update 2016-01. Under the measurement alternative, the carrying value is measured at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for identical or similar investments of the same issuer. Adjustments are determined primarily based on a market approach as of the transaction date.

The Company classifies its non-marketable investments as non-current assets on the Consolidated Balance Sheets as those investments do not have stated contractual maturity dates.

Revenue Recognition

On January 1, 2019, the Company adopted Accounting Standards Update 2014-09, Revenue from Contracts with Customers (Topic 606) (ASU 2014-09) using a modified retrospective approach applied to all contracts. The adoption of ASU 2414-09 did not result in a change in timing or amount of revenue recognized.

The Company recognizes revenue through the following steps:

n Identification of a contract with a customer;

n Identification of the performance obligations in the contract;

n Determination of the transaction price;

n Allocation of the transaction price to the performance obligations in the contract; and n Recognition of revenue when or as the performance obligations are satisfied.

The Company refers to its publishers, app developers, and channel partners collectively as its publishers. The Company generates revenue through the monetization of publisher ad impressions on its platform. The Company's platform allows publishers to sell, in real time, ad impressions to buyers and provides automated inventory management and monetization tools to publishers across various device types and digital ad formats. The Company charges publishers a fee, which is typically a percentage of the value of the ad impressions monetized through the Company's platform.

The Company maintains agreements with each publisher and buyer in the form of written service agreements, which set out the terms of the relationship, including payment terms (typically ninety days or less) and access to its platform.

The Company invoices buyers for publisher digital advertising inventory purchased through its platform. The Company recognizes revenue when a bid is won and a buyer purchases inventory on its platform. The Company estimates and records reductions to revenue for volume discounts based on expected volumes during the incentive term.

The determination as to whether revenue should be reported gross of amounts billed to buyers (gross basis) or net of payments to publishers (net basis) requires significant judgment, and is based on the Company's assessment of whether it is acting as the principal or an agent in the transaction. The Company has determined that it does not act as the principal in the purchase and sale of digital advertising inventory because it does not control the advertising inventory and it does not set the price which is the result of an auction within the marketplace. Based on these and other factors, the Company reports revenue on a net basis.

The Company generally invoices buyers at the end of each month for the full purchase price of ad impressions monetized in that month. Accounts receivable are recorded at the amount of gross billings for the amounts it is responsible to collect, and accounts payable are recorded at the net amount payable to publishers. Accordingly, both accounts receivable and accounts payable appear large in relation to revenue reported on a net basis.

Cost of Revenue

Cost of revenue consists primarily of data center co-location costs, depreciation expense related to hardware supporting the Company's platform, amortization expense related to capitalized internal use software development costs, personnel costs, and allocated facilities costs. Personnel costs include salaries, bonuses, stock-based compensation, and employee benefit costs, and are primarily attributable to the Company's network operations group which maintains the Company's servers and the Company's client operations group, which is responsible for integration of new publishers and buyers and providing customer support for existing customers.

Technology and Development Costs

Technology and development expenses consist primarily of personnel costs, including salaries, bonuses, stock-based compensation, and employee benefits costs, allocated facilities costs, and professional services. These expenses include costs incurred in the development, implementation and maintenance of internal use software, including platform and related infrastructure. Technology and development costs are expensed as incurred, except to the extent that such costs are associated with internal use software development that meets the criteria for capitalization. The Company amortizes internal use software development costs that relate to its revenue producing activities on its platform to cost of revenue.

Advertising Costs

Advertising costs are expensed as incurred and are included in sales and marketing expenses. The Company's advertising costs recorded during the years ended December 31, 2018 and 2019 and the nine months ended September 30, 2019 and 2020 (unaudited) were $0.1 million, $0.3 million, $0.0 million and $0.2 million respectively.

Convertible Preferred Stock Warrant Liability

The Company accounts for a freestanding warrant to purchase shares of convertible preferred stock that is contingently redeemable as a liability in the consolidated balance sheets at its estimated fair value. The convertible preferred stock warrant is subject to remeasurement at each balance sheet date, and any change in fair value is recognized as a component of other expense, net in the consolidated statements of operations and comprehensive income.

The Company will continue to adjust the liability for changes in fair value until the earlier of (1) the exercise or expiration of the warrant or (2) the completion of a liquidation event, including the completion of a qualifying initial public offering, at which time the convertible preferred stock warrant will terminate unless otherwise exercised and the liability will be reclassified to additional paid-in capital in stockholders' equity.

Stock-Based Compensation

The Company calculates the fair value of all stock-based awards, including stock options on the date of grant using the Black-Scholes option-pricing model for stock options, which is impacted by the fair value of the Company's common stock, as well as changes in assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the expected common stock price volatility over the term of the stock options, the expected term of the stock options, risk-free interest rates, and the expected dividend yield.

Foreign Currency Translation

The functional currency of the Company's foreign subsidiaries is the U.S. dollar. Accordingly, all monetary assets and liabilities of these subsidiaries are remeasured at the current exchange rate at each balance sheet date, nonmonetary assets and liabilities are measured at historical rates, and revenue and expenses are remeasured at average exchange rates during the period. Transaction gains and losses are included in other expense, net in the accompanying consolidated statements of operations and comprehensive income. The Company's net foreign currency losses recorded during the years ended December 31, 2018 and 2019 and the nine months ended September 30, 2019 and 2020 (unaudited) were $0.4 million, $0.4 million, $0.3 million and $0.1 million respectively.

Comprehensive Income

Comprehensive income is composed of two components: net income and other comprehensive gain. The Company's changes in unrealized gains and losses on available-for-sale marketable securities represent the components of other comprehensive gain (loss) that are excluded from the reported net income.

Income Taxes

The Company utilizes the asset and liability method under which deferred tax assets and liabilities arise from the temporary differences between the tax basis of an asset or liability and its reported amount in the consolidated financial statements, as well as from net operating loss and tax credit carryforwards. Deferred tax amounts are determined by using the tax rates expected to be in effect when the taxes will actually be paid or refunds received, as provided for under currently enacted tax law. A valuation allowance is established when necessary to reduce deferred tax assets to the amount expected to be realized.

The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the consolidated financial statements from such positions are then measured based on the largest benefit that has a greater than 50% likelihood of being realized. The Company recognizes interest and penalties related to income tax matters as income tax expense.

Segment Information

Operating segments are components of an enterprise for which separate financial information is available and is evaluated regularly by the Company's chief operating decision maker in deciding how to allocate resources and assessing performance. The Company's chief operating decision maker is its Chief Executive Officer.

The Chief Executive Officer reviews financial information presented on a consolidated basis, for purposes of allocating resources and evaluating financial performance. The Company has one business activity and there are no segment managers accountable for operations, operating results beyond revenue or gross profit, or plans for levels or components below the consolidated unit level. Accordingly, the Company has a single reporting segment.

Concentration of Revenue and Accounts Receivable

The Company defines its revenue concentration based on revenue recognized from individual publishers. For the years ended December 31, 2018 and 2019 and the nine months ended September 30, 2019 and 2020 (unaudited), one publisher represented 30% , 28% , 29% and 21%, respectively, of the Company's revenue. As of December 31, 2018, two buyers accounted for 26% and 15%, respectively, of accounts receivable. As of December 31, 2019, two buyers accounted for 34% and 17%, respectively, of accounts receivable. As of September 30, 2020 (unaudited) four buyers accounted for 28%, 17%, 13% and 10%, respectively, of accounts receivable.

Net Income Per Share Attributable to Common Stockholders

Basic and diluted net income per share is computed in conformity with the two-class method required for participating securities. The Company considers all series of convertible preferred stock as participating securities. Holders of Series A, Series B, Series C, Series D, and Series D Prime convertible preferred stock are each entitled to receive noncumulative dividends at the rates of $0.0609, $0.0329, $0.04799, $0.3259, and $0.3857 per share per annum respectively, payable prior and in preference to any dividends on shares of the Company's common stock. In the event a dividend is paid on common stock, the holders of convertible preferred stock are also entitled to a proportionate share of any such dividend as if they were holders of common stock on an as-if converted basis. Holders of participating securities do not have a contractual obligation to share in the Company's losses. In accordance with the two-class method, earnings allocated to these participating securities and the related number of outstanding shares of the participating securities have been excluded from the computation of basic and diluted net income per share attributable to common stockholders.

Under the two-class method, in periods when the Company has net income, net income attributable to common stockholders is determined by allocating undistributed earnings, calculated as net income less current period convertible preferred stock non-cumulative dividends, between common stock and convertible preferred stock. In computing diluted net income attributable to common stockholders, undistributed earnings are re-allocated to reflect the potential impact of dilutive securities. Basic net income per share attributable to common stockholders is computed by dividing the net income attributable to common stockholders by the weighted-average number of common shares outstanding during the period. All participating securities are excluded from basic weighted-average common stock outstanding. The diluted net income per share attributable to common stockholders is computed by dividing the net income attributable to common stockholders by the weighted-average number of common shares outstanding, including potential dilutive common shares assuming the dilutive effect of outstanding stock options using the treasury stock method.

Unaudited Pro Forma Net Income Per Share Attributable to Common Stockholders

In contemplation of the Company's initial public offering, the Company has presented unaudited pro forma basic and diluted net income per share amounts, which have been calculated assuming: (i) the conversion of all series of the Company's convertible preferred stock (using the as-if converted method) into shares of common stock as though the conversion had occurred as of January 1, 2019 or, if later, the issuance date of the convertible preferred stock; and (ii) the net exercise of the Company's convertible preferred stock warrants as though the net exercise had occurred as of January 1, 2019 or, if later, the net exercise date of the preferred stock warrants. As a result, the Company has removed the gains and losses from the remeasurement of the convertible preferred stock warrant liability to fair value from the numerator in the pro forma basic and diluted net income per share calculation.

Unaudited Pro Forma Balance Sheet Information

Upon the consummation of the initial public offering (IPO) contemplated by the Company, all of the outstanding shares of convertible preferred stock will automatically convert into shares of common stock, as described in Note 8. The unaudited pro forma balance sheet as of September 30, 2020, has been prepared assuming the conversion of the convertible preferred stock outstanding into 33,443,969 shares of common stock.

Recently Adopted Accounting Pronouncements

In August 2016, FASB issued ASU No. 2016-15, Statement of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Cash Payments (ASU 2016-15), which addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. The Company adopted ASU 2016-15 effective January 1, 2019 using a retrospective transaction method and such adoption had no impact on the periods presented.

Recent Accounting Pronouncements Not Yet Adopted

In February 2016, FASB issued ASU No. 2016-02, Leases, which requires an entity to recognize right-of-use assets and lease liabilities on its balance sheet and disclose key information about leasing arrangements. The guidance offers specific accounting guidance for a lessee, lessor, and sale and leaseback transactions. Lessees and lessors are required to disclose qualitative and quantitative information about leasing arrangements to enable a user of the financial statements to assess the amount, timing, and uncertainty of cash flows arising from leases. Leases will be classified as either finance or operating, with the classification affecting the pattern of expense recognition in the income statement. The guidance is effective for the Company for fiscal year 2022 and requires a modified retrospective adoption, with early adoption permitted. Although the Company is currently evaluating the impact of this guidance on its consolidated financial statements, the Company expects that most of its operating lease commitments will be recognized as operating lease liabilities and right-of-use assets upon adoption of the new guidance.

In June 2016, FASB issued ASU No. 2016-13, Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments (ASU 2016-13). This update changes the accounting for recognizing impairments of financial assets, such that credit losses for certain types of financial instruments will be estimated based on expected losses. The update also modifies the impairment models for available-for-sale debt securities and for purchased financial assets with credit deterioration since their origination. ASU 2016-13 is effective for the Company in fiscal year 2023. Early adoption is permitted after for periods beginning after December 15, 2018. The Company has not yet determined the potential effects of this ASU on its consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04, Intangibles—Goodwill and Other: Simplifying the Test for Goodwill Impairment (ASU 2017-04). ASU 2017-04 eliminates Step 2 from the goodwill impairment test which measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill. Under ASU 2017-04, an entity should perform its annual or interim goodwill impairment test by comparing the fair value of the reporting unit with its carrying amount, and should recognize an impairment loss for the amount by which the carrying amount exceeds the reporting unit's fair value, with the loss not exceeding the total amount of goodwill allocated to that reporting unit. ASU 2017-04 will be effective for the Company beginning on January 1, 2023. Early adoption is permitted for interim or annual goodwill impairment tests performed after January 1, 2017. At adoption, this update will require a prospective approach. The Company is currently evaluating the impact of adopting ASU 2017-04 on its consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, Compensation - Stock Compensation (Topic 718) (ASU 2018-07). ASU 2018-07 aligns the accounting for share-based awards to employees and non-employees to follow the same model. The guidance is effective for the Company beginning on January 1, 2020 using a modified retrospective transition approach and early adoption is permitted but no earlier than a Company's adoption date of Topic 606. The Company adopted this pronouncement on January 1, 2020 and the adoption had no impact on its consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, Fair Value Measurement (Topic 820), Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement (ASU 2018-13) which amended its conceptual framework to improve the effectiveness of disclosures in notes to financial statements. ASU 2018-13 eliminates such disclosures around the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy. The guidance also adds new disclosure requirements for Level 3 measurements. ASU 2018-13 is effective for the Company beginning January 1, 2020. Early adoption is permitted. The Company adopted this pronouncement on January 1, 2020 and the adoption had no impact on its consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-15, Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40) - Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract (ASU 2018-15). ASC 2018-15 aligns the requirements for capitalizing implementation costs in a cloud computing arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. This standard will be effective for the Company beginning January 1, 2021 and should be applied either retrospectively or prospectively. Early adoption is permitted. The Company is currently evaluating the impact of ASU 2018-15 on its consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12—Simplifying the Accounting for Income Taxes (ASU 2019-12). ASU 2019-12 simplifies the accounting for income taxes by removing certain exceptions to general principles in Topic 740 and clarifies and amends existing guidance for clarity and consistent application. This guidance is effective for the Company beginning January 1, 2022. Early adoption is permitted. The Company is evaluating the impact of adopting this new accounting guidance on its consolidated financial statements and related disclosures.

Note 3 – Fair Value Measurements

Assets and liabilities recorded at fair value on a recurring basis in the consolidated balance sheets are categorized based upon the level of judgment associated with the inputs used to measure their fair values. Fair value represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. The authoritative guidance on fair value measurements establishes a three-tier fair value hierarchy for disclosure of fair value measurements as follows:

n Level I – Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date;

n Level II – Inputs are observable, unadjusted quoted prices in active markets for similar assets or liabilities, unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities; and n Level III – Unobservable inputs that are significant to the measurement of the fair value of the assets or liabilities that are supported by little or no market data.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires management to make judgments and consider factors specific to the asset or liability.

The Company's financial assets consist of Level I and II assets. The Company classifies its cash equivalents and marketable securities within Level I or Level II because they are valued using either quoted market prices or inputs other than quoted prices which are directly or indirectly observable in the market, including readily-available pricing sources for the identical underlying security which may not be actively traded. The Company's fixed income available-for-sale securities consist of high quality, investment grade securities from diverse issuers. The valuation techniques used to measure the fair value of the Company's marketable securities were derived from non-binding market consensus prices that are corroborated by observable market data and quoted market prices for similar instruments.

The Company's financial liabilities consist of Level III liabilities. The convertible preferred stock warrant liability is measured at fair value on a recurring basis. The valuation methodology and underlying assumptions are discussed further in Note 10 "Warrants." Changes in fair value of Level III liabilities are recorded in other expense, net.

The following table sets forth the fair value of the Company's financial assets and liabilities measured on a recurring basis by level within the fair value hierarchy (in thousands):

	December 31, 2018			
	Level I	Level II	Level III	Total
Financial Assets				
Cash equivalents	$5,545	$2,693	$–	$8,238
Commercial paper	$–	$12,111	$–	$12,111
U.S. Treasury and government debt securities	$–	$2,183	$–	$2,183
Financial Liabilities				
Convertible preferred stock warrant liability	$–	$–	$276	$276
	December 31, 2019			
	Level I	Level II	Level III	Total
Financial Assets				
Cash equivalents	$15,280	$3,692	$–	$18,972
Commercial paper	$–	$15,186	$–	$15,186
U.S. Treasury and government debt securities	$–	$6,016	$–	$6,016
	September 30, 2020			
	Level I	Level II	Level III	Total
	(unaudited)			
Financial Assets				
Cash equivalents	$24,839	$–	$–	$24,839
Commercial paper	$–	$10,593	$–	$10,593
U.S. Treasury and government debt securities	$–	$4,002	$–	$4,002

The following table sets forth a summary of the changes in the fair value, which is recognized as a component of other expense, net within the consolidated statement of operations and comprehensive income, of the Company's Level III financial liabilities (in thousands):

	Convertible Preferred Stock Warrant
Balance — December 31, 2017	$356
Change in fair value	(80)
Balance — December 31, 2018	276
Change in fair value	120
Exercise of warrants	(396)
Balance — December 31, 2019	$–

Note 4 – Balance Sheet Components

Marketable Securities

The following table summarizes the Company's marketable securities by significant investment categories (in thousands):

	December 31, 2018			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Loss	Fair Value
Commercial paper	$12,111	$–	$–	$12,111
U.S. Treasury and government debt securities	$2,183	$–	$–	$2,183
Total	$14,294	$–	$–	$14,294
	December 31, 2019			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Loss	Fair Value
Commercial paper	$15,186	$–	$–	$15,186
U.S. Treasury and government debt securities	$6,010	$6	$–	$6,016
Total	$21,196	$6	$–	$21,202
	September 30, 2020			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Loss	Fair Value
	(unaudited)			
Commercial paper	$10,593	$–	$–	$10,593
U.S. Treasury and government debt securities	$4,000	$2	$–	$4,002
Total	$14,593	$2	$–	$14,595

The remaining contractual maturity of all marketable securities was within one year as of December 31, 2019 and September 30, 2020 (unaudited). Realized gains and losses were not material for the years ended December 31, 2018 and 2019 and for the nine months ended September 30, 2019 and 2020 (unaudited). As of December 31, 2019 and September 30, 2020 (unaudited), there were no securities that were in an unrealized loss position for more than twelve months.

Property, Equipment and Software, Net

Property, equipment and software, net consists of the following (in thousands):

	December 31,		September 30,
	2018	2019	2020
			(unaudited)
Internal-use software	$19,596	$19,692	$24,767
Network hardware, computer equipment and software	36,831	45,173	58,350
Leasehold improvements	1,605	1,622	1,393
Furniture and fixtures	905	906	625
Property, equipment and software, gross	58,937	67,393	85,135
Less: accumulated depreciation and amortization	(40,171)	(47,062)	(57,591)
Total property, equipment and software, net	$18,766	$20,331	$27,544

Depreciation and amortization expense related to property, equipment, and software (excluding amortization of internal use software) was $6.3 million and $6.9 million for the years ended December 31, 2018 and 2019, respectively, and $4.9 million and $7.2 million for the nine months ended September 30, 2019 and 2020,(unaudited), respectively.

The Company capitalized $4.6 million, $6.0 million, $4.0 million and $5.1 million in software development costs during the years ended December 31, 2018 and 2019 and the nine months ended September 30, 2019 and 2020 (unaudited), respectively. Amortization expense of internal use software was $5.0 million, $5.4 million, $4.1 million and $4.4 million for the years ended December 31, 2018 and 2019 and the nine months ended September 30, 2019 and 2020 (unaudited), respectively. These costs are included within cost of revenue in the consolidated statements of operations and comprehensive income.

The Company did not recognize any impairment charges on its long-lived assets during the year ended December 31, 2018 or the nine months ended September 30, 2020 (unaudited) . During the year ended December 31, 2019 and the nine months ended September 30, 2019 (unaudited) the Company discontinued offering its Unified Ad Server product which is part of the capitalized software development and recorded a $0.7 million impairment charge in cost of revenue in the Company's consolidated statement of operations and comprehensive income.

Intangible Assets,

Intangible assets, net consists of the following (in thousands):

	December 31,		September 30,
	2018	2019	2020
			(unaudited)
Amortizable intangible assets:			
Customer relationships	$4,370	$4,370	$4,370
Developed technology	2,940	2,940	2,940
Trademarks	90	90	90
Total amortizable intangible assets, gross	7,400	7,400	7,400
Accumulated amortization – intangible assets	(7,063)	(7,400)	(7,400)
Total intangible assets, net	$337	$–	$–

The amortization period for customer relationships, developed technology, and trademark intangible assets is 60 months, 60 months, and 12 months, respectively. As of December 31, 2019, all intangible assets have been fully amortized.

Amortization expense of intangible assets, which is included as a component of cost of revenue, was $1.0 million, $0.3 million, $0.3 million and $— million for the years ended December 31, 2018 and 2019 and the nine months ended September 30, 2019 and 2020 (unaudited), respectively.

Accounts Payable

Accounts payable consists of the following (in thousands):

	December 31,		September 30,
	2018	2019	2020
			(unaudited)
Payable to publishers	$78,186	$96,834	$112,579
Other	3,675	2,550	5,953
Total accounts payable	$81,861	$99,384	$118,532

Accrued Expenses

Accrued expenses consist of the following (in thousands):

	December 31,		September 30,
	2018	2019	2020
			(unaudited)
Accrued compensation	$8,184	$9,986	$9,206
Accrued and other current liabilities	411	1,134	1,812
Total accrued expenses	$8,595	$11,120	$11,018

Note 5 – Loan and Security Agreement

In February 2011, the Company entered into a Loan and Security Agreement (Loan Agreement), with Silicon Valley Bank, or SVB, which was subsequently amended at various times to provide the Company with additional borrowing capacity and/or flexibility.

As of December 31, 2019 and September 30, 2020 (unaudited), under the revolving line of credit with SVB, the amount the Company can borrow was the lesser of $45.0 million or 80% of eligible accounts receivable less certain reserves, minus the aggregate principal amount of all outstanding advances. Interest accrues on advances under the revolving line of credit at a variable rate equal to the prime rate. An unused revolver fee in the amount of 0.30% per annum of the average unused portion of the revolver line is charged and is payable quarterly in arrears in any quarter where the average closing outstanding balance is less than $5.0 million. As of December 31, 2019 and September 30, 2020 (unaudited), the applicable interest rate under the revolving line of credit was 4.75% and 3.25%, respectively. The maturity date of the revolving line of credit is November 7, 2020. As of December 31, 2018 and 2019 and September 30, 2020 (unaudited) there were no outstanding advances under the revolving line of credit.

The Company's obligations under the line of credit and the letters of credit (described in Note 6) with SVB are secured by substantially all of its assets excluding its intellectual property. The Loan Agreement contains affirmative covenants including financial covenants that, among other things, require the Company to maintain an adjusted quick ratio of no less than 1.0 to 1.0. The adjusted quick ratio is defined as the ratio of unrestricted cash and cash equivalents at SVB, plus billed accounts receivable to total accounts payable plus all SVB loans outstanding and outstanding letters of credit. The Loan Agreement also restricts the Company from paying dividends to stockholders without prior consent from SVB. The Company was in compliance with the financial covenants as of December 31, 2019 and September 30, 2020 (unaudited).

Note 6 – Commitments and Contingencies

Operating Leases and Other Contractual Obligations

The Company has commitments for future payments related to office facilities leases and other contractual obligations. The Company leases its office facilities under operating lease agreements that expire over varying time periods through the year ending December 31, 2023. Certain of these lease agreements have free or escalating rent payment provisions or fund certain leasehold improvements, which the Company accounts as lease incentives. The Company recognizes rent expense under such agreements on a straight-line basis over the lease term, with any lease incentive amortized as a reduction of rent expense over the lease term. The Company also has other contractual obligations expiring over varying time periods through the year ending December 31, 2022. Other contractual obligations primarily relate to minimum contractual payments due to data center providers.

Future minimum commitments as of December 31, 2019, are as follows (in thousands):

Years ending December 31,	Leases	Other Contractual Obligations
2020	$2,962	$1,519
2021	1,748	1,595
2022	766	706
2023	104	—
Future minimum commitments	5,580	3,820
Less: minimum payments to be received from non-cancelable subleases	(447)	—
Total future minimum commitments, net	$5,133	$3,820

Future minimum commitments as of September 30, 2020, are as follows (in thousands):

Years ending December 31,	Leases	Other Contractual Obligations
	(unaudited)	
Remainder of 2020	$556	$1,059
2021	1,728	4,959
2022	746	2,074
2023	97	—
Total future minimum commitments	$3,127	$8,092

Rent expense, net of sublease income, incurred under operating leases was $2.5 million, $2.6 million, $1.9 million and $1.9 million for years ended December 31, 2018 and 2019 and the nine months ended September 30, 2019 and 2020 (unaudited), respectively. Rent expense was offset by sublease income of $0.7 million, $0.6 million, $0.4 million and $0.4 million for the years ended December 31, 2018 and 2019 and the nine months ended September 30, 2019 and 2020 (unaudited), respectively.

Letters of Credit

As of December 31, 2019 and September 30, 2020 (unaudited), the Company had two irrevocable letters of credit outstanding related to noncancelable facilities leases in the amounts of $0.7 million and $0.3 million, with annual automatic renewal and final expiration dates in June 2022 and October 2020, respectively.

Legal Matters

From time to time, the Company has become involved in claims and other legal matters arising in the normal course of business. The Company investigates these claims as they arise and accrue for contingencies when the Company believes that a loss is probable and that the Company can reasonably estimate the amount of any such loss. The Company has made an assessment of the probability of incurring any such losses and whether or not those losses are estimable and although claims are inherently unpredictable the Company concluded that these losses are not material to the Company's business, financial position, results of operations, or cash flows. To the extent there is a reasonable possibility that a loss exceeding amounts already recognized may be incurred, and the amount of such additional loss would be material, the Company will either disclose the estimated additional loss or state that such an estimate cannot be made.

In June 2020, one of the Company's buyers which had filed for bankruptcy in March 2019, brought a cause of action to recover amounts paid to the Company 90 days prior to its bankruptcy filing on the basis that such payments constituted preferential payments by the buyer. This lawsuit is being managed by the bankruptcy court in consolidation with the buyer's overall bankruptcy process. The lawsuit claim represents a reasonably possible loss contingency under the applicable accounting standards. The range of the potential loss contingency is between $0 to $3.4 million. As of December 31, 2019 and September 30, 2020 (unaudited), no amounts have been recorded as payable, as the Company does not believe any amounts are probable of being owed by the Company. The Company intends to vigorously defend itself against the lawsuit.

Indemnification

In the normal course of business, the Company enters into contracts and agreements that contain a variety of representations and warranties and provide for general indemnification. The Company's exposure under these agreements is unknown because it involves future claims that may be made against the Company, but have not yet been made. To date, the Company has not paid any material claims or been required to defend any actions related to its indemnification obligations. However, the Company may record charges in the future as a result of these indemnification obligations. In addition, the Company has indemnification agreements with certain of its directors and executive officers that require it, among other things, to indemnify them against certain liabilities that may arise due to their status or service as directors or officers of the Company. The terms of such obligations may vary.

Note 7 – Common Stock Reserved for Issuance

The Company had reserved shares of common stock, on an as-converted basis, for future issuance as follows:

	December 31, 2019	September 30, 2020
		(unaudited)
Conversion of outstanding convertible preferred stock	33,443,969	33,443,969
Exercise of common stock warrants	18,216	—
Outstanding stock options	7,626,452	8,912,631
Shares reserved for future option grants	1,527,728	162,093
Total	42,616,365	42,518,693

Note 8 – Convertible Preferred Stock

Convertible preferred stock as of December 31, 2019 and September 30, 2020 (unaudited) consisted of the following (in thousands, except share amounts):

Convertible Preferred Stock:	Shares Authorized	Shares Issued and Outstanding	Net Carrying Value	Aggregate Liquidation Preference
Series A	6,973,055	6,973,055	$7,061	$7,075
Series B	6,614,432	6,614,432	3,605	3,630
Series C	9,376,233	9,376,233	7,464	7,500
Series D	8,000,000	7,753,006	29,971	31,584
Series D Prime	3,000,000	2,727,243	13,115	13,150
Undesignated	36,280	—	—	—
Total convertible preferred stock	34,000,000	33,443,969	$61,216	$62,939

The Company recorded the convertible preferred stock at fair value on the dates of issuance, net of issuance costs. Shares of the convertible preferred stock are not currently redeemable. The Company classified the convertible preferred stock outside of stockholders' equity because, in the event of certain "liquidation events" that are not solely within its control (including merger, acquisition, or sale of all or substantially all of its assets), the shares would become redeemable at the option of the holders. The Company did not adjust the carrying values of the convertible preferred stock to the deemed liquidation values of such shares since a liquidation event was not probable at any of the balance sheet dates. Subsequent adjustments to increase or decrease the carrying values to the ultimate liquidation values will be made only if and when it becomes probable that such a liquidation event will occur.

The holders of the Company's convertible preferred stock have various rights, preferences, and privileges as follows:

Conversion Rights

Each share of convertible preferred stock is convertible, at the option of the holder, into one fully paid non assessable share of common stock. The conversion formula is adjusted for such events as dilutive issuances, stock splits, or business combinations. Each and every series of convertible preferred stock shall convert automatically into common stock at the earlier of (i) a firmly underwritten public offering meeting certain criteria, including an offering price per share of not less than $12.0543 and at least $50.0 million in gross proceeds; or (ii) for Series A, Series B, and Series C upon the receipt of a written request for such conversion from holders of a majority of the holders of Series A, Series B, and Series C then outstanding (voting as a single class and on an as-converted to common stock basis) and for Series D and Series D Prime upon the receipt of a written request for such conversion from holders of a majority of the holders of Series D and Series D Prime then outstanding (voting as a single class and on an as-converted to common stock basis).

The respective conversion prices are subject to adjustment upon any future stock splits or stock combinations, reclassifications or exchanges of similar shares, or upon a reorganization, merger, or consolidation of the Company. In addition, the conversion prices are subject to adjustment upon issuance of additional common stock without consideration or for a consideration per share less than the applicable conversion price of a series of convertible preferred stock.

Voting Rights

The holders of the convertible preferred stock are entitled to the number of votes equal to the number of shares of common stock into which such convertible preferred stock is convertible. The holders of Series D, voting as a separate class, have the right to elect one director. The holders of Series A, Series B, and Series C, voting as a separate class on an as-converted to common stock basis, have the right to elect two directors. The holders of the common stock, voting as a separate class, have the right to elect two directors. Any additional directors are elected by the holders of the common stock and preferred stock, voting together as a single class on an as-converted to common stock basis.

Liquidation Rights

In the event of any liquidation, dissolution, or winding up of the Company, holders of Series D and Series D Prime are entitled to a liquidation preference of $4.0738 per share for the Series D and $4.8217 per share for the Series D Prime, plus any declared but unpaid dividends prior to, and in preference to, any distributions to the holders of Series A, Series B, Series C, and common stock. Holders of Series C are entitled to a liquidation preference of $0.7999 per share, plus any declared but unpaid dividends prior to, and in preference to, any distributions to the holders of Series A, Series B, and common stock. Holders of Series B are entitled to a liquidation preference of $0.5488 per share, plus any declared but unpaid dividends prior to, and in preference to, any distributions to the holders of Series A and common stock. Holders of Series A are entitled to a liquidation preference of $1.0146 per share, plus any declared but unpaid dividends prior to, and in preference to, any distributions to the holders of common stock. Any assets remaining following the distribution to the holders of Series A, Series B, Series C, Series D, and Series D Prime will be distributed ratably among the holders of Series D, Series D Prime, and common stock pro rata on the basis of the number of shares of common stock issuable upon the conversion of the convertible preferred stock until the holders of Series D and Series D Prime have received two and one half times the liquidation preference for the Series D and Series D Prime shares. Thereafter, any remaining assets of the Company will be distributed pro rata to the holders of common stock.

Any acquisition of the Company by means of merger or other form of corporate reorganization in which the outstanding shares of the corporation are exchanged for securities or other consideration issued, or caused to be issued, by the acquiring corporation or its subsidiary (other than a reincorporation transaction) or a sale of all or substantially all of the assets of the Company shall be treated as a liquidation, dissolution, or winding up of the corporation and shall entitle the holders of convertible preferred stock and common stock to receive at the closing the funds and assets that are legally available to them (deemed liquidation). Deemed liquidation may be waived by (i) with respect to the Series A, Series B, and Series C, the consent or vote of at least a majority of the outstanding Series A, Series B, and Series C, voting together as a single class on an as-converted to common stock basis; and (ii) with respect to the Series D and Series D Prime, the consent or vote of at least a majority of the outstanding Series D and Series D Prime, voting as a single class and on an as-converted to common stock basis.

Dividend Rights

The convertible preferred stockholders are entitled to receive dividends at a rate of $0.0609 per share of Series A per annum, $0.03290 per share of Series B per annum, $0.04799 per share of Series C per annum, $0.32590 per share of Series D per annum, and $0.38570 per share of Series D Prime per annum. Such dividends are payable out of funds legally available, are payable only when and if declared by the Company's board of directors and are noncumulative. No dividends shall be payable on any common stock until dividends on the convertible preferred stock have been paid or declared by the board of directors. As of December 31, 2019 and September 30, 2020 (unaudited), no dividends have been declared or paid.

Contingent Redemption

The holders of convertible preferred stock have no rights to voluntarily redeem shares. A liquidation or winding up of the Company, a greater than 50% change in control, or a sale of substantially all of its assets would constitute a redemption event. Although the convertible preferred stock is not mandatorily or currently redeemable, a liquidation or winding up of the Company would constitute a redemption event outside its control. Therefore, all shares of convertible preferred stock have been presented outside of stockholders' equity.

Note 9 – Stockholders' Notes Receivable and Redeemable Common Stock

In August 2018, the Company loaned its Chief Executive Officer and Chief Growth Officer a total of $4.0 million under secured nonrecourse promissory notes (the "Notes"). The Notes bear interest at a rate of 2.42% per annum compounded annually and mature on August 30, 2021, with interest and principal due at maturity. The Notes are secured by pledges of 1.6 million shares of outstanding common stock of the Company owned by the two officers (the "Pledged Shares"). The Notes may be prepaid in cash at any time without penalty. At maturity and in certain events of default, the Notes may, at the option of the two officers, be repaid in cash or surrender and cancellation of the Pledged Shares at fair market value. If the Pledged Shares are insufficient to repay the entire amount due under the Notes, then the value of the Pledged Shares will be deemed to be the full amount due under the Notes.

As the Company's only recourse on the Notes and associated interest is the Pledged Shares then the Notes are accounted for as nonrecourse and recorded to stockholders' equity. This is accounted for as though the Company repurchased the Pledged Shares and in exchange issued the Notes and granted 1.6 million fully vested stock options with an exercise price equal to the face value of Notes plus interest. Incremental compensation expense of $1.0 million was recorded as stock-based compensation expense within the consolidated statements of operations and comprehensive income and was calculated as the difference between the Repurchase Price (defined as the face value of the Notes and the fair value of the stock options) and the fair value of the Pledged Shares. Periodic principal and interest payments, if any, will be recorded as deposit liabilities until the Notes are paid off, at which time the deposit balance will be transferred to additional paid in capital. No principal or interest payments were paid during the year ended December 31, 2019. In the nine months ended September 30, 2020 (unaudited), the all principal and interest due under the notes were prepaid.

In connection with the Notes, the Company provided the officers with a right to sell to the Company outstanding shares of common stock upon settlement of the Notes (the "Put Option"). The officers may only exercise the Put Option upon repayment of the Notes using the Pledged Shares or upon the prepayment of the Notes using proceeds from the officers' sale or disposal of the Pledged Shares at a price less than the face value of the Notes. The Put Option allows the officers to require the Company to repurchase any or all common stock held or beneficially owned to offset their tax liabilities resulting from the settlement of the Notes via one of the above methods. As the exercisability of the Put Option and therefore redemption of the common stock is outside the control of the Company then all common stock held or beneficially owned by the officers requires temporary equity classification. The Company therefore classified $19.0 million of common stock outside of stockholders' equity, which represented the fair value of the shares held or beneficially owned on the transaction date. The Company did not adjust the carrying value of the redeemable common stock during the year ended December 31, 2019 since a redemption event was not probable. The Put Option expired unexercised upon the repayment of the Notes and as of September 30, 2020 (unaudited), the $19.0 million of redeemable common stock has been reclassified back to common stock.

Note 10 – Warrants

Convertible Preferred Stock Warrant

In conjunction with the Series D convertible preferred stock financing, the Company issued in September 2012 a warrant to purchase 122,736 shares of Series D convertible preferred stock at an exercise price of $4.0738 per share to a financial advisor. The fair value of the convertible preferred stock warrant at the time of issuance was $0.2 million, which was recorded as non-cash issuance costs against the proceeds of the Series D convertible preferred stock. The convertible preferred stock warrant was immediately exercisable in whole or in part over the term of the warrant. The convertible preferred stock warrant expires at the earlier of (i) seven years from issuance; (ii) immediately prior to the closing of a qualifying initial public offering; or (iii) completion of a liquidation event.

In September 2019, the Company issued 45,216 Series D convertible preferred shares upon a cashless exercise of all outstanding convertible preferred stock warrants. The Company recorded a $0.4 million increase in convertible preferred stock and a $0.4 million decrease in convertible preferred warrant liability on the exercise.

The convertible preferred stock warrant is classified as a liability in the accompanying consolidated balance sheets. The convertible preferred stock warrant liability was $0.3 million and $0 as of December 31, 2018 and 2019.

As of December 31, 2018, the Company remeasured the convertible preferred stock warrant liability to fair value using a Probability Weighted Expected Return Method, or PWERM. The PWERM involves a forward-looking analysis of the possible future outcomes of the enterprise. This method is particularly useful when discrete future outcomes can be predicted at a high confidence level with a probability distribution. Discrete future outcomes considered under the PWERM may include a sale, initial public offering, or IPO, and dissolution scenarios. To derive the fair value of the convertible preferred stock warrant, the Company considered scenarios of completing an IPO and remaining private in the PWERM analysis.

Note 11 – Stock Option Plans

The Company maintains two equity incentive plans: the 2006 Stock Option Plan (2006 Plan) and the 2017 Equity Incentive Plan. In February 2017, the Company adopted the 2017 Equity Incentive Plan (2017 Plan) and all shares remaining unissued under the 2006 Stock Option Plan were assumed by the 2017 Plan. Under the 2017 Plan, the Company may grant stock options, restricted stock, restricted stock units, or stock appreciation rights. Stock options granted under the stock option plans may be either incentive stock options (ISOs) or nonqualified stock options (NQSOs). ISOs may be granted to employees with exercise prices not less than the fair value of the common stock on the grant date as determined by the board of directors. Under the 2017 Plan, NQSOs may be granted to employees, consultants, and outside directors at exercise prices not less than the fair value of the common stock on the grant date as determined by the Company and the board of directors. No new awards were issued under the 2006 Plan after the effective date of the 2017 Plan. Outstanding awards granted under the 2006 Plan will remain subject to the applicable award agreements until such awards are exercised or otherwise terminated or expired by their terms.

	Options Outstanding			
	Number of Shares Underlying Outstanding Options	Weighted-Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (in thousands)
Outstanding – December 31, 2018	7,702,079	$1.94	6.54	$9,512
Options granted	1,411,077	2.97		
Options exercised	(20,983)	0.20		
Options canceled	(505,567)	2.41		
Options expired	(960,154)	1.15		
Outstanding – December 31, 2019	7,626,452	$2.20	6.58	$8,739
Options granted (unaudited)	1,528,170	2.28		
Options exercised (unaudited)	(80,036)	1.18		
Options canceled (unaudited)	(148,871)	2.54		
Options expired (unaudited)	(13,084)	0.25		
Outstanding – September 30, 2020 (unaudited)	8,912,631	$2.22	6.52	$27,402
Vested – December 31, 2019	5,387,443	$1.84	5.70	$7,996
Vested – September 30, 2020 (unaudited)	6,234,686	$1.99	5.49	$20,629

Aggregate intrinsic value represents the difference between the exercise price of the options and the estimated fair value of the Company's common stock as determined by the board of directors. The intrinsic value of options exercised was $0.1 million, $0.1 million,$0.1 million and $0.1 million for the years ended December 31, 2018 and 2019 and the nine months ended September 30, 2019 and 2020 (unaudited), respectively.

The weighted-average grant date fair value of options granted was $1.81, $1.65, $1.65 and $3.49 for the years ended December 31, 2018 and 2019 and the nine months ended September 30, 2019 and 2020 (unaudited), respectively. As of December 31, 2019, unrecognized stock-based compensation of $3.8 million related to unvested stock options will be recognized on a straight-line basis over a weighted average period of 2.33 years. As of September 30, 2020 (unaudited), unrecognized stock-based compensation of $6.6 million related to unvested stock options will be recognized on a straight-line basis over a weighted average period of 2.63 years.

In August 2018, the Company and certain executives entered into option cancellation agreements whereby the Company and the executives agreed to cancel 325,000 fully-vested options held by the executives and convert the options into the right to receive an amount of cash consideration equal to $0.9 million. As the cash paid was $0.2 million greater than the fair value of the common stock issuable under the option agreements this excess was recorded as stock-based compensation expense within the consolidated statements of operations and comprehensive income.

Stock-Based Compensation

The total stock-based compensation recognized for both incentive and non-statutory stock options granted under the 2017 and 2006 Plan in the consolidated statements of operations and comprehensive income is as follows (in thousands):

	December 31,		September 30,	
	2018	2019	2019	2020
			(unaudited)	
Cost of revenue	$38	$26	$17	$30
Technology and development	554	402	329	377
Sales and marketing	759	684	514	721
General and administrative	2,041	890	671	1,311
Total stock-based compensation	3,392	2,002	1,531	2,439
Tax benefit from stock-based compensation	(148)	(181)	(132)	(293)
Total stock-based compensation, net of tax effect	$3,244	$1,821	$1,399	$2,146

Determination of Fair Value

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
			(unaudited)	
Fair market value of common stock	$3.04-$3.69	$3.01-$3.18	$3.01-$3.18	$3.20-$5.29
Expected term (in years)	5.0–6.6	5.2-6.6	5.2-6.6	5.2-6.4
Risk-free interest rate	2.6%–3.1%	1.4%–2.6%	1.4%-2.6%	0.2%-1.5%

Expected volatility	52%–54%	52%–54%	52%-54%	51%-56%
Dividend rate	–%	–%	–%	–%

The fair value of each grant of stock options was determined by the Company and its board of directors using the Black-Scholes option-pricing model and assumptions discussed below. Each of these inputs is subjective and generally requires significant judgment to determine.

Fair Value of Common Stock - Given the absence of a public trading market, the Company's board of directors considers numerous objective and subjective factors to determine the fair value of its common stock at each grant date. These factors include, but are not limited to (i) independent contemporaneous third-party valuations of common stock; (ii) the prices for the Company's convertible preferred stock sold to outside investors; (iii) the rights and preferences of convertible preferred stock relative to common stock; (iv) the lack of marketability of its common stock; (v) developments in the business; and (vi) the likelihood of achieving a liquidity event, such as an initial public offering or sale of the Company, given prevailing market conditions.

Expected Term - The expected term represents the period that the Company's stock-based awards are expected to be outstanding. For option grants that are considered to be "plain vanilla," the Company determines the expected term using the simplified method. The simplified method deems the term to be the average of the time-to-vesting and the contractual life of the options. For other option grants, the Company estimates expected term using historical data on employee exercises and post-vesting employment termination behavior taking into account the contractual life of the award.

Risk-Free Interest Rate - The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the option's expected term.

Expected Volatility - Since the Company does not have a trading history of its common stock, the expected volatility is derived from the average historical stock volatilities of several unrelated public companies within the Company's industry that the Company considers to be comparable to its business over a period equivalent to the expected term of the stock option grants.

Dividend Rate - The expected dividend is assumed to be zero as the Company has never paid dividends and has no current plans to do so.

Note 12 – Net Income Per Share and Unaudited Pro Forma Net Income Per Share Attributable to Common Stockholders The following table sets forth the computation of the Company's basic and diluted net income per share (in thousands, except share and per share data):

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
			(unaudited)	
Net income per share attributable to common stockholders – basic:				
Numerator:				
Net income	$4,425	$6,643	$2,519	$7,788
Less: Undistributed earnings allocated to participating securities	(4,425)	(6,204)	(2,519)	(6,788)
Net income attributable to common stockholders – basic	$–	$439	$–	$1,000
Denominator:				
Weighted average common shares outstanding – basic	11,249,579	10,036,983	10,033,313	10,178,598
Net income per share attributable to common stockholders – basic:	$–	$0.04	$–	$0.10
Net income per share attributable to common stockholders – diluted:				
Numerator:				
Net income attributable to common stockholders - diluted	$–	$508	$–	$1,312
Denominator:				
Weighted average shares outstanding – basic	11,249,579	10,036,983	10,033,313	10,178,598
Options to purchase common stock	2,890,121	2,119,796	2,464,995	4,573,492
Warrants to purchase common stock	17,792	13,105	13,632	–
Weighted average shares outstanding – diluted	14,157,492	12,169,884	12,511,940	14,752,090
Net income per share attributable to common stockholders – diluted	$–	$0.04	$–	$0.09

The following weighted-average outstanding shares of common stock equivalents were excluded from the computation of diluted net income per share attributable to common stockholders for the periods presented because including them would have been anti-dilutive:

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
			(unaudited)	
Options to purchase common stock	2,731,945	3,359,458	2,139,559	47,856
Common stock issuable upon conversion of convertible preferred stock	33,398,753	33,410,274	33,398,919	33,443,969
Common stock issuable upon exercise and conversion of preferred stock warrant	122,736	–	–	–
Total excludable from net income per share attributable to common stockholders – diluted	36,253,434	36,769,732	35,538,478	33,491,825

The following table sets forth the computation of the Company's unaudited pro forma basic and diluted net income per share attributable to common stockholders (in thousands, except share and per share data)1:

	Year ended December 31, 2019	Nine Months Ended September 30, 2020
	(unaudited)	
Numerator:		
Net income	$6,643	$7,788

Add: Change in fair value of convertible preferred stock warrant liability	120	$—
Pro forma net income attributable to common stockholders – basic and diluted	$6,763	$7,788
Denominator – basic:		
Weighted average common shares outstanding	10,036,983	10,178,598
Pro forma adjustment to reflect assumed conversion of convertible preferred stock to common stock	33,398,753	33,443,969
Pro forma adjustment to reflect assumed net exercise of in-the-money convertible preferred stock warrants	45,216	—
Pro forma weighted-average shares outstanding – basic	43,480,952	43,622,567
Pro forma net income per share attributable to common stockholders – basic	$0.16	$0.18
Denominator – diluted:		
Pro forma weighted-average shares outstanding - basic	43,480,952	43,622,567
Options to purchase common stock	2,119,796	4,573,492
Warrants to purchase common stock	13,105	—
Pro forma weighted-average shares outstanding – diluted	45,613,853	48,196,059
Pro forma net income per share attributable to common stockholders – diluted	$0.15	$0.16

1The table above has been corrected for a typographical error related to the Pro forma weighted-average shares outstanding – diluted, which was previously reported as 2,132,901 and is now reported as 45,613,853. Pro forma net income per share attributable to common stockholders – diluted remained the same.

Note 13 – Income Taxes

The geographical breakdown of the Company's income before provision for income taxes is as follows (in thousands):

	December 31,	
	2018	2019
Domestic	$3,631	$6,995
International	1,999	2,227
Income before provision for income taxes	$5,630	$9,222

The components of the provision for income taxes are as follows (in thousands):

	December 31,	
	2018	2019
Current provisions for income taxes:		
Federal	$535	$1,639
State	145	58
Foreign	529	689
Total current tax expense	1,209	2,386
Deferred tax expense:		
Federal	$458	$254
State	(440)	4
Foreign	(22)	(65)
Total deferred tax expense	(4)	193
Total provision for income taxes	$1,205	$2,579

In December 2017, the U.S. government enacted the Tax Cuts and Jobs Act (Tax Act). The Tax Act includes significant changes to the US corporate income tax system including: a federal corporate tax rate reduction from 35% to 21%; limitations on the deductibility of executive compensation and research and development expenditures, immediate expensing of qualified property, the creation of new minimum tax rates such as the base erosion anti-abuse tax (BEAT), and Global Intangible Low Taxed Income (GILTI) tax; and the transition of U.S. international taxation from a worldwide tax system to a modified territorial tax system, which will result in a one time U.S. tax liability on those earnings which have not previously been repatriated to the U.S. (Transition Tax).

The Company has not historically provided for U.S. deferred taxes on the cumulative earnings of non-U.S. affiliates that have been reinvested indefinitely. However, under the Tax Act the Company was deemed to have repatriated the cumulative earnings of its non-U.S. affiliates and the U.S. liability associated with those cumulative earnings has been reflected in the current federal tax provision. In addition, the Tax Act has enacted tax provisions that will subject all foreign earnings to U.S. taxation. The Company will continue to maintain its policy of indefinite reinvestment to the extent that the repatriation of foreign earnings are restricted by local laws, accounting rules, substantial incremental costs associated with repatriating the foreign earnings, or other business requirements.

The primary differences between the effective tax rate and the federal statutory tax rate relates to the valuation allowances on the Company's net operating losses, uncertain tax positions, the reduction of the federal tax rate as part of the Tax Act, foreign tax rate differences, and non-deductible stock-based compensation expense.

The income tax provision differs from the amount of income tax determined by applying the applicable U.S. federal statutory income tax rate of 21% to pre-tax income.

The reconciliation of the statutory federal income after-tax rate and the Company's effective income after-tax rate is as follows:

	December 31,

	2018	2019
Statutory federal income tax rate	21.00 %	21.00 %
State after-tax rate	(5.24)	0.67
Stock options	10.57	5.48
Research credit	(7.22)	(2.85)
Transfer pricing reserve	(3.99)	(0.68)
Foreign rate differential	5.52	2.37
Foreign derived intangible income	(1.18)	(7.89)
Other	1.94	9.86
	21.40 %	27.96 %

The tax effects of temporary differences that give rise to significant portions of deferred income tax assets (liabilities) are as follows (in thousands):

	December 31,	
	2018	2019
Deferred tax assets:		
Net operating loss carryforwards	$233	$194
Accruals and allowances	753	784
Tax credits	864	1,064
Stock-based compensation	1,958	1,749
Intangibles assets	1,310	1,202
Other	824	967
Total deferred tax assets	5,942	5,960
Deferred tax liabilities:		
Property, equipment, and software	(2,825)	(3,003)
Goodwill	(508)	(562)
Other	(277)	(256)
Total deferred tax liabilities	(3,610)	(3,821)
Net deferred income tax asset	$2,332	$2,139

A valuation allowance is provided for deferred tax assets where the recoverability of the assets is uncertain. The determination to provide a valuation allowance is dependent upon the assessment of whether it is more likely than not that sufficient future taxable income will be generated to utilize the deferred tax assets. Management has determined that there is sufficient positive evidence that a valuation allowance against deferred tax assets is not required as of December 31, 2018 and 2019.

The Company had gross state net operating loss carryforwards of approximately $3.2 million as of December 31, 2019. These net operating losses will expire at various dates beginning in 2032 if not utilized and may be subject to annual limitations of usage, as promulgated by the Internal Revenue Service, due to ownership changes that may have occurred in the past. As of December 31, 2019, the Company has state research and development credit carryforwards of $2.1 million. The federal credits were fully utilized in 2019. The state credits can be carried forward indefinitely.

Pursuant to Section 382 of the Internal Revenue Code of 1986, as amended (Code), the Company's ability to utilize net operating loss carryforwards or other tax attributes, such as research tax credits, in any taxable year may be limited if the Company experiences an "ownership change." A Section 382 "ownership change" generally occurs if one or more stockholders or groups of stockholders who own at least 5% of the Company's stock increase their ownership by more than 50 percentage points over their lowest ownership percentage within a rolling three year period. Similar rules may apply under state tax laws. Net operating loss carryforwards and other tax attributes generated are currently not subject to limitation by Section 382, but subsequent changes in the Company's stock ownership as well as other changes that may be outside of the Company's control, could result in additional ownership changes under Section 382 of the Code.

The Company files U.S., state and foreign income tax returns with varying statutes of limitations. The federal, state, and foreign returns statute of limitations remains open for tax years from 2013 and thereafter. There are currently no income tax audits involving the Company by U.S., state, or foreign tax authorities. The India audit was closed in 2019, without any adjustments to tax expense.

Uncertain Tax Positions

The activity related to the unrecognized income tax benefits is as follows (in thousands):

	Year Ended December 31,	
	2018	2019
Gross unrecognized income tax benefits — beginning balance	$1,956	$2,210
Increases related to tax positions taken during the current year	543	541
Decreases related to tax positions taken during prior years	(353)	(382)
Increases related to tax positions taken during the prior years	64	—
Gross unrecognized income tax benefits — ending balance	$2,210	$2,369

The Company recognizes interest and penalties, if any, related to uncertain tax positions in its income tax provision. As of December 31, 2018 and 2019, the Company had approximately $0.2 million and $0.2 million, respectively, of accrued interest related to uncertain tax positions.

All of the $2.4 million of unrecognized income tax benefits would, if recognized, impact the effective tax rate in the period in which each of the benefits is recognized.

Nine Months Ended September 30, 2019 and 2020 (unaudited)

In determining quarterly provisions for income taxes, the Company uses the annual estimated effective tax rate applied to the actual year-to-date income.

Income tax expense was $0.9 million and $2.1 million for the nine months ended September 30, 2019 and 2020, respectively. The effective income tax rate was 27% and 21% for the nine months ended September 30, 2019 and 2020, respectively. The income tax expense for the nine months ended September 30, 2019 differs from the statutory rate due to nondeductible stock-based compensation, a higher tax rate in certain foreign countries where the Company operates offset by a deduction for foreign-sourced revenue and federal and state research credits. The decrease in the Company's effective tax rate for the nine months ended September 30, 2020 was due to was primarily due to a lower state income tax rate and larger federal research credits.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") was signed into law, in response to the COVID-19 pandemic. The CARES Act is meant to infuse negatively affected companies with various tax cash benefits to ease the impact of the COVID-19 pandemic. The CARES Act, among other things, includes provisions relating to refundable payroll tax credits, deferment of employer-side social security payments, and net operating loss carryback periods. The Company has determined the tax implications of the CARES Act will not be material.

The Company had unrecognized tax benefits of approximately $2.7 million as of September 30, 2020, if recognized, it will impact the effective tax rate in the period in which each of the benefits is recognized. The Company does not expect to have any significant changes to unrecognized tax benefits within the next 12 months.

Note 14 – Segment Information

The following table represents total revenue by geographic area based on the publisher's billing address (in thousands):

	Year Ended December 31,		Nine Months Ended September 30,	
	2018	2019	2019	2020
			(unaudited)	
United States	$63,899	$77,314	$53,819	$60,962
EMEA	24,561	23,642	16,179	20,454
APAC	10,026	10,988	8,232	9,396
Rest of the world	778	1,927	1,248	1,694
Total	$99,264	$113,871	$79,478	$92,506

The Company's long-lived assets, net by geographic area are summarized as follows (in thousands):

	Year Ended December 31,		Nine Months Ended September 30,
	2018	2019	2020
			(unaudited)
United States	$16,393	$16,886	$22,654
Rest of the world	2,710	3,445	4,890
Total	$19,103	$20,331	$27,544

Note 15 – 401(k) Plan

The Company has a 401(k) Savings Plan (the 401(k) Plan) that qualifies as a deferred salary arrangement under Section 401(k) of the Internal Revenue Code. Under the 401(k) Plan, participating employees may elect to contribute up to 100% of their eligible compensation, subject to certain limitations. The 401(k) Plan provides for a discretionary employer matching contribution. The Company made no matching contribution to the 401(k) Plan in 2018 and 2019 or the nine months ended September 30, 2020 (unaudited).

Note 16 – Subsequent Events

The Company evaluated subsequent events through September 16, 2020, the date on which these consolidated financial statements as of and for the years ended December 31, 2018 and 2019 were available to be issued.

In February 2020, the Company granted stock options under the 2017 Plan to purchase 178,170 shares of common stock at an exercise price of $3.20 per share.

In July 2020, the Company granted stock options under the 2017 Plan to purchase 1,350,000 shares of common stock at an exercise price of $2.16 per share.

In August 2020, an officer prepaid $1.0 million and interest due under the Stockholders' Note Receivable.

(unaudited)

For the unaudited interim financial statements for the nine months ended September 30, 2020, the Company has evaluated subsequent events through November 13, 2020, the date the consolidated financial statements were available to be issued.

In October 2020, the Company amended the automatic conversion upon a qualified public offering terms of all series of convertible preferred stock to remove the minimum share price criterion. The Company has initially concluded the amendments should be accounted for as modifications and will result in an aggregate deemed dividend of $11.9 million based on a preliminary valuation. The amendments will have no effect on the Company's consolidated statement of operations, however a deemed dividend will reduce net income attributable to common stockholders' in the determination of net income per share attributable to common stockholders' in the fourth quarter of 2020.

Contemporaneously, the Company further amended the qualified public offering automatic conversion terms of the Series D and Series D Prime preferred stock. Following the amendments, upon automatic conversion in connection with a qualified IPO that occurs at a price less than 2.5 times the original issuance prices of the Series D and Series D Prime preferred stock ($10.1845 and $12.0545, respectively), holders will receive more than one common share per share of preferred stock. If the qualified public offering occurs at a price (i) less than 1.5 times the original issuance prices of those series of preferred stock ($6.11 and $7.23, respectively), holders will receive 1.67 shares of common stock per share of preferred stock; or (ii) greater than 1.5 times the original issuance prices, but less than 2.5 times the original issuance prices, holders will receive a variable number of shares equal to 2.5 times the original issuance prices. Conversions that occur at qualified public offering prices between 1.5 times and 2.5 times the original issuance prices are equivalent to contingent redemptions at a fixed value. At the discretion of a simple majority of our board of directors, excluding directors appointed by holders of Series D or Series D Prime preferred stock, we can settle the difference between the price of a qualified public offering and 2.5 times the original issuance prices in cash or shares of common stock. If settled in common stock, the Company may issue up to 7.0 million shares.

In October 2020, the Company granted stock options under the 2017 Plan to purchase 711,180 shares of common stock at an exercise price of $5.29 per share.

In November 2020, the Company amended its Loan Agreement with Silicon Valley Bank to extend the maturity date of the revolving line of credit to March 7, 2021.

Shares

PubMatic, Inc.

Class A Common Stock

Preliminary Prospectus

Joint Book-Running Managers

Jefferies

RBC Capital Markets

Co-Managers

JMP Securities

KeyBanc Capital Markets

Oppenheimer & Co.

Raymond James

Part Ii

Information Not Required in Prospectus

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth all costs and expenses, other than underwriting discounts and commissions, paid or payable by the Registrant in connection with the sale of the Class A common stock being registered. All amounts shown are estimates except for the SEC registration fee and the FINRA filing fee:

	Amount Paid or to be Paid
SEC registration fee	$8,813
FINRA filing fee	11,750
Nasdaq Global Market listing fee	*
Blue sky qualification fees and expenses	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees and expenses	*
Miscellaneous expenses	*
Total	$*

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*To be completed by amendment.

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers under certain circumstances, and subject to certain limitations. The terms of Section 145 of the Delaware General Corporation Law are sufficiently broad to permit indemnification under certain circumstances for liabilities, including reimbursement of expenses incurred, arising under the Securities Act.

As permitted by the Delaware General Corporation Law, the Registrant's restated certificate of incorporation to be effective upon the completion of this offering contains provisions that eliminate the personal liability of its directors for monetary damages for any breach of fiduciary duties as a director, except liability for the following:

n any breach of the director's duty of loyalty to the Registrant or its stockholders;

n acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;

n under Section 174 of the Delaware General Corporation Law (regarding unlawful dividends and stock purchases); or n any transaction from which the director derived an improper personal benefit.

n As permitted by the Delaware General Corporation Law, the Registrant's restated bylaws to be effective upon the completion of this offering, provide that:

n the Registrant is required to indemnify its directors and executive officers to the fullest extent permitted by the Delaware General Corporation Law, subject to very limited exceptions;

n the Registrant may indemnify its other employees and agents as set forth in the Delaware General Corporation Law;

n the Registrant is required to advance expenses, as incurred, to its directors and executive officers in connection with a legal proceeding to the fullest extent permitted by the Delaware General Corporation Law, subject to very limited exceptions; and n the rights conferred in the restated bylaws are not exclusive.

Prior to completion of this offering, the Registrant has entered or will enter into indemnification agreements with each of its current directors and executive officers to provide these directors and executive officers additional contractual assurances regarding the scope of the indemnification set forth in the Registrant's restated certificate of incorporation and restated bylaws and to provide additional procedural protections. There is no pending litigation or proceeding involving a director or executive officer of the Registrant for which indemnification is sought. Reference is also made to the underwriting agreement to be filed as Exhibit 1.1 to this registration statement, which provides for the indemnification of executive officers, directors, and controlling persons of the Registrant against certain liabilities. The indemnification provisions in the Registrant's restated certificate of incorporation, restated bylaws, and the indemnification agreements entered into or to be entered into between the Registrant and each of its directors and executive officers may be sufficiently broad to permit indemnification of the Registrant's directors and executive officers for liabilities arising under the Securities Act.

The Registrant has obtained insurance policies under which, subject to the limitations of the policies, coverage is provided to its directors, and executive officers against loss arising from claims made by reason of breach of fiduciary duty or other wrongful acts as a director or executive officer, including claims relating to public securities matters, and to the Registrant with respect to payments that may be made by us to these directors and executive officers pursuant to the Registrant's indemnification obligations or otherwise as a matter of law.

Certain of the Registrant's non-employee directors may, through their relationships with their employers, be insured and/or indemnified against certain liabilities incurred in their capacity as members of the Registrant's board of directors.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES.

Since January 1, 2017, the Registrant has issued and sold the following securities:

1.The Registrant has granted to its directors, officers, employees, and consultants options to purchase 7,061,116 shares of Class B common stock under its 2017 Equity Incentive Plan with per share exercise prices ranging from $2.15 to $5.29. These transactions were exempt from the registration requirements of the Securities Act in reliance upon Rule 701 promulgated under the Securities Act, Section 4(a)(2) of the Securities Act or Regulation D or Regulation S promulgated under the Securities Act.

2.The Registrant issued to its directors, officers, employees and consultants 369,445 shares of Class B common stock upon exercise of options granted by the Registrant under its 2006 Stock Option Plan and 2017 Equity Incentive Plan, with purchase prices ranging from $0.15 to $4.12 per share. These transactions were exempt from the registration requirements of the Securities Act in reliance upon Rule 701 promulgated under the Securities Act, Section 4(a)(2) of the Securities Act or Regulation D or Regulation S promulgated under the Securities Act.

3.In September 2012, the Registrant issued to GCA Savvian Advisors, LLC a warrant to purchase an aggregate of 122,736 shares of Series D Preferred Stock, with an exercise price per share of $4.0738. On September 5, 2019, GCA Savvian Advisors, LLC exercised its warrant for 45,216 shares of Series D Preferred Stock for an aggregate exercise price of $184,200.95. The securities issued in this transaction were exempt from the registration requirements of the Securities Act in reliance on Section 4(a)(2) of the Securities Act.

4.In May 2013, the Registrant issued to MediaLink, LLC warrants to purchase an aggregate of 18,216 shares of common stock at a purchase price of $0.7999 per share. In October 2019, MediaLink, LLC transferred its warrants to purchase common stock to MLEHCO, LLC. On May 1, 2020, the warrants expired pursuant to their terms. The securities issued in this transaction were exempt from the registration requirements of the Securities Act in reliance on Section 4(a)(2) of the Securities Act.

5.In February 2011, the Registrant issued to Silicon Valley Bank a warrant to purchase an aggregate of 40,000 shares of common stock at a purchase price of $3.00 per share. In February 2018, Silicon Valley Bank transferred its warrant to purchase common stock to SVB Financial Group. On February 21, 2018, SVB Financial Group exercised its warrant for 9,151 shares of common stock pursuant to the net exercise terms of the warrant. The securities issued in this

transaction were exempt from the registration requirements of the Securities Act in reliance on Section 4(a)(2) of the Securities Act.

6.In July 2011, the Registrant issued to Silicon Valley Bank a warrant to purchase an aggregate of 80,000 shares of common stock at a purchase price of $3.00 per share. On July 29, 2018, the Registrant and Silicon Valley Bank agreed to extend the term of the warrant to December 31, 2018. On December 31, 2018, the warrant expired pursuant to its terms. The securities issued in this transaction were exempt from the registration requirements of the Securities Act in reliance on Section 4(a)(2) of the Securities Act.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering, and the Registrant believes each transaction was exempt from the registration requirements of the Securities Act as stated above. All recipients of the foregoing transactions either received adequate information about the Registrant or had access, through their relationships with the Registrant, to such information. Furthermore, the Registrant affixed appropriate legends to the share certificates and instruments issued in each foregoing transaction setting forth that the securities had not been registered and the applicable restrictions on transfer.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

(a)Exhibits.

Exhibit Number	Description of Document
1.1*	Form of Underwriting Agreement.
3.1	Eighth Amended and Restated Certificate of Incorporation, as currently in effect.
3.2*	Form of Restated Certificate of Incorporation, to be effective immediately prior to the completion of this offering.
3.3	Bylaws, as currently in effect.
3.4*	Form of Restated Bylaws, to be effective immediately prior to the completion of this offering.
4.1*	Form of Class A Common Stock Certificate.
4.2	Sixth Amended and Restated Investors' Rights Agreement, dated October 1, 2020, by and among the Registrant and certain of its stockholders.
5.1*	Opinion of Fenwick & West LLP.
10.1	Form of Indemnification Agreement.
10.2	2006 Stock Option Plan, as amended.
10.3	2019 Executive Bonus Plan.
10.4	2017 Equity Incentive Plan, as amended.
10.5*	2020 Equity Incentive Plan, to become effective on the day immediately before the date of this prospectus, and forms of award agreements.
10.6*	2020 Employee Stock Purchase Plan, to be effective on the effective date of this registration statement, and form of subscription agreement.
10.7*	Employment Agreement, effective as of , by and between the Registrant and Rajeev K. Goel.
10.8*	Employment Agreement, effective as of , by and between the Registrant and Amar K. Goel.
10.9*	Employment Agreement, effective as of , by and between the Registrant and Steven Pantelick.
10.10	Promissory Note, dated as of August 30, 2018, by and between the Registrant and The Goel Family Trust.
10.11	Promissory Note, dated as of August 30, 2018, by and between the Registrant and the Blue Rock Trust.
10.12	Stock Repurchase Agreement, dated as of November 20, 2018, by and between the Registrant and Mukul Kumar.
10.13	Third Amended and Restated Loan and Security Agreement, dated November 7, 2017, by and between the Registrant and Silicon Valley Bank, as amended.
10.14†	Google Exchange Integration Agreement, dated May 14, 2018, by and between the Registrant and Google Inc, as amended.
10.15†	PubMatic Demand Partner Agreement, dated November 5, 2011, by and between the Registrant and The Trade Desk, Inc., as amended.
10.16†	Yahoo Ad Exchange Agreement - Media Buyer, effective as of December 16, 2015, by and between the Registrant and Yahoo! Inc.
10.17	Sub-sublease Agreement, dated August 7, 2020, by and between the Registrant and Ulab Systems, Inc.
10.18	Office Lease Agreement, dated August 22, 2014, by and between the Registrant and BRE/NYT L.L.C.
10.19	Leave and License Agreement, dated February 23, 2018, by and between Pubmatic India Private Limited and His Holiness Dr. Syedna Taher Saifuddin Memorial Foundation.
21.1	Subsidiaries of the Registrant.
23.1	Consent of Deloitte & Touche LLP, independent registered public accounting firm.
23.2*	Consent of Fenwick & West LLP (included in Exhibit 5.1).
23.3	Consent of Magna Global USA, Inc.
24.1*	Power of Attorney (included in the signature page to this Registration Statement on Form S-1).

* To be filed by amendment.

† Registrant has omitted portions of the exhibit as permitted under Item 601(b)(10) of Regulation S-K.

(b)Financial Statement Schedules.

No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or notes.

ITEM 17. UNDERTAKINGS.

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers, and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer, or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(a)For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act of 1933 shall be deemed to be part of this registration statement as of the time it was declared effective.

(b)For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Signatures

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in Redwood City, California, on the 13th day of November, 2020.

PUBMATIC, INC.	
By:	/s/ Rajeev K. Goel
	Rajeev K. Goel
	Chief Executive Officer

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Rajeev K. Goel and Steven Pantelick, and each of them, as his true and lawful attorneys-in-fact, proxies and agents, each with full power of substitution, for him in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments or any abbreviated registration statement and any amendments thereto filed pursuant to Rule 462(b) increasing the number of securities for which registration is sought), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact, proxies and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, proxies and agents, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Rajeev K. Goel	Chief Executive Officer and Director	
Rajeev K. Goel	(Principal Executive Officer)	November 13, 2020
/s/ Steven Pantelick	Chief Financial Officer	
Steven Pantelick	(Principal Financial Officer)	November 13, 2020
/s/ Michael Van Der Zweep	Controller	
Michael Van Der Zweep	(Principal Accounting Officer)	November 13, 2020
/s/ Cathleen Black		
Cathleen Black	Director	November 13, 2020
/s/ W. Eric Carlborg		
W. Eric Carlborg	Director	November 13, 2020
/s/ Susan Daimler		
Susan Daimler	Director	November 13, 2020
/s/ Amar K. Goel		
Amar K. Goel	Director	November 13, 2020
/s/ Ashish Gupta		
Ashish Gupta	Director	November 13, 2020

/s/ Narendra Gupta		
Narendra Gupta	Director	November 13, 2020