UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

Large accelerated filer

Non-accelerated filer

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

For the fiscal year ended December 31, 2019

OR

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

FOR THE TRANSITION PERIOD FROM TO

Commission File Number 001-38233

CarGurus, Inc.

(Exact name of Registrant as specified in its Charter)

04-3843478 (I.R.S. Employer Identification No.)

incorporation or organization) 2 Canal Park, 4th Floor Cambridge, Massachusetts (Address of principal executive offices)

Delaware

(State or other jurisdiction of

02141 (Zip Code)

Registrant's telephone number, including area code: (617) 354-0068

Securities registered pursuant to Section 12(b) of the Act:		
Title of Each Class	Trading Symbol	Name of Exchange on Which Registered
Class A Common Stock, par value \$0.001 per share	CARG	The Nasdaq Stock Market LLC (Nasdaq Global Select Market)

Securities registered pursuant to Section 12(g) of the Act: None

X

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes 🗵 No 🗆

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes 🗌 No 🗵

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

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

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

Accelerated filer	
Small reporting company	
Emerging growth company	

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes 🗌 No 🗵

The aggregate market value of the registrant's Class A common stock, par value \$0.001 per share, held by non-affiliates of the registrant based on the closing price of the registrant's common stock as reported on the Nasdaq Global Market on June 30, 2019 was \$2,464,065,369. Shares of voting and non-voting stock held by executive officers, directors and holders of more than 5% of the outstanding stock have been excluded from this calculation because such persons or institutions may be deemed affiliates. This determination of affiliate status is not a conclusive determination for other purposes.

As of February 6, 2020, the registrant had 91,983,435 shares of Class A common stock, and 20,314,644 shares of Class B common stock, par value \$0.001 per share, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for its 2020 Annual Meeting of Stockholders are incorporated by reference in Part III of this Annual Report on Form 10-K. Such Proxy Statement will be filed with the U.S. Securities and Exchange Commission within 120 days after the end of the fiscal year to which this report relates. Except with respect to information specifically incorporated by reference in this Form 10-K, the Proxy Statement is not deemed to be filed as part of this Form 10-K.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the federal securities laws, which statements involve substantial risks and uncertainties. Forward-looking statements generally relate to future events or our future financial or operating performance. In some cases, you can identify forward-looking statements because they contain words such as "anticipates," "believes," "could," "estimates," "expects," "intends," "likely," "may," "might," "plans," "potential," "predicts," "projects," "seeks," "should," "target," "will," "would," or similar expressions and the negatives of those terms. Forward-looking statements contained in this report include, but are not limited to, statements about:

- our future financial and business performance, including our expectations regarding our revenue, cost of revenue, gross profit or gross margin, operating expenses, ability to generate cash flow, and ability to achieve, and maintain, future profitability;
- the value proposition of our product offerings;
- our ability to deliver quality leads at a high volume for our dealer customers;
- our ability to maintain and acquire new customers;
- our anticipated growth and growth strategies and our ability to effectively manage that growth;
- our ability to grow our audience, as well as to maintain and build our brand;
- our ability to continue to expand internationally;
- our ability to realize benefits from our acquisitions and successfully implement our integration strategies;
- the impact of competition in our industry and innovation by our competitors;
- the impact of accounting pronouncements;
- the impact of litigation;
- our ability to hire and retain necessary qualified employees to expand our operations;
- our ability to adequately protect our intellectual property;
- our ability to stay abreast of and effectively comply with new or modified laws and regulations that currently apply or become applicable to our business;
- our ability to overcome challenges facing the automotive industry ecosystem, including global supply chain challenges, changes to trade policies and other macroeconomic issues;
- failure to maintain an effective system of internal controls necessary to accurately report our financial results and prevent fraud;
- our expectations with respect to the occupancy of our recently leased properties;
- our expectations regarding cash generation and the sufficiency of our cash to fund our operations; and
- the future trading prices of our Class A common stock.

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

The forward-looking statements made in this report relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this report to reflect events or circumstances after the date of this report or to reflect new information or the occurrence of unanticipated events, except as required by law.

Item 1. Business.

BUSINESS

Overview

CarGurus is a global, online automotive marketplace connecting buyers and sellers of new and used cars. Using proprietary technology, search algorithms, and innovative data analytics, we believe we are building the world's most trusted and transparent automotive marketplace and creating a differentiated automotive search experience for consumers. Our trusted marketplace empowers users with unbiased third-party validation on pricing and dealer reputation as well as other information that aids them in finding "Great Deals from Top-Rated Dealers." Our selection of car listings provides the largest number of car listings available on any of the major U.S. online automotive marketplaces. In addition to the United States, we operate online marketplaces under the CarGurus brand in Canada, the United Kingdom, Germany, Italy, and Spain. In the United Kingdom, we also operate the PistonHeads online marketplace as an independent brand.

A core principle of our marketplace is transparency. For consumers considering used vehicles, we aggregate vehicle inventory from dealers and apply our proprietary analysis to generate a Deal Rating as one of: Great Deal, Good Deal, Fair Deal, High Priced, or Overpriced. Deal Rating illustrates how competitive a listing is compared to similar cars sold in the same region in recent history. We determine Deal Rating principally on the basis of both our proprietary Instant Market Value, or IMV, algorithm, which determines the market value of a used vehicle in a local market, and Dealer Rating, a measure of a dealer's reputation as determined by reviews of that dealer from our user community. As the only major U.S. online automotive marketplace that defaults to sorting organic search results based on a used car's Deal Rating, we enable consumers to find the most relevant car for their needs. For new cars, we help our users understand deal quality by providing price analysis and our Dealer Rating. We also provide our users information historically not widely available, such as Price History, Time on Site, and Vehicle History. We believe this approach brings greater transparency, trust, and efficiency to a consumer's car research and buying process, leading to higher engagement and a more informed consumer who is better prepared to purchase at the dealership.

Our large, engaged, and predominantly mobile user base presents an attractive audience of in-market consumers for our dealers. By presenting consumers with data such as our Deal Ratings, Price History, Time on Site, and Vehicle History, we believe our consumer audience is comprised of more informed, ready-to-purchase shoppers. By connecting dealers with more informed, ready-to-purchase consumers, we believe we provide dealers with an efficient customer acquisition channel and attractive returns on their marketing spend with us. Dealers can list their inventory in our marketplace for free or with a subscription to one of our paid Listings packages. Non-paying dealers receive anonymized email connections and access to a subset of the tools on our Dealer Dashboard at no cost. Dealers with a paid subscription receive connections with consumers that are not anonymous and can be made through a wider variety of methods, including phone calls, email, managed text and chat, links to the dealers' website, and map directions to dealerships. The primary objective of our traffic acquisition and site improvement efforts is to generate greater volumes of consumer leads to dealers. Leads are a subcategory of connections that we define as user inquiries via our marketplace to dealers by phone calls, email, or managed text and chat interactions. Dealers with our paid Listings packages are able to display their dealer name, address, and dealership information on their listings on our websites to gain brand recognition, which promotes walk-in traffic to the dealer. We also provide paying dealers with full access to our Dealer Dashboard, including inventory pricing tools informed by real-time market conditions, which helps them more effectively price, merchandise, and sell their cars. Our success with dealers is evidenced by the number of paying dealers in our U.S. marketplace. Our U.S. marketplace had 28,990 paying dealers as of December 31, 2019 compared to 27,534 and 25,122 as of December 31, 2018 and December 31, 2017, respecti

Our scaled online marketplace model drives powerful network effects. The industry-leading inventory selection offered by our U.S. dealers attracts a large and engaged consumer audience. The value of robust connections to this audience incentivizes dealers to purchase our paid Listings packages. Displaying listings from more paying dealers provides consumers with more dealer information and methods to contact them. More consumers – 36.8 million average monthly U.S. unique users in 2019 – and connections – 65.3 million in the U.S. in 2019 – drive greater value to paying dealers on our platform. Driven by these network effects, we continue to amass more data, which we use to continuously improve our search algorithms, the accuracy of Deal Ratings, our user experience, and, ultimately, the quality of the connections between consumers and dealers.

We generate marketplace subscription revenue from dealers through subscriptions to our products, including our paid Listings packages (which include optional features and enhancements such as Delivery) and products marketed under our Real-time Performance Marketing suite, including our Dealer Display advertising and audience targeting products and our Dealer Search Engine Marketing product. We also generate advertising and other revenue from auto manufacturers and other auto-related brand advertisers, as well as from non-dealer products such as through our consumer financing partnerships and our peer-to-peer marketplace. Our rapid revenue growth and financial performance over the last several years exemplify the strength of our marketplace. We generated revenue of \$588.9 million in 2019, \$454.1 million in 2018, and \$316.9 million in 2017, representing year-over-year increases of 30% in 2019 and 43% in 2018. In 2019, we generated net income of \$42.1 million and our Adjusted EBITDA, a non-GAAP financial measure, was \$77.0 million, compared to net income of \$65.2 million and Adjusted EBITDA of \$49.7 million in 2018 and net income of \$13.2 million and Adjusted EBITDA of \$24.1 million in 2017. See "Selected Consolidated Financial Data — Adjusted EBITDA" for more information regarding our use of Adjusted EBITDA and a reconciliation of Adjusted EBITDA to our net income (loss).

Consumer Challenges

As consumers determine the car they would like to purchase, the key questions they ask are:

- What type of car should I buy?
- Where can I buy a car like this?
- What is a fair price for this particular type of car?
- Have others had a good experience buying from this dealer?

In answering these questions, consumers historically had limited access to unbiased information on specific vehicles, car pricing, and dealer reputation. Every used car is unique, and so for consumers searching for used cars, it is difficult to aggregate the relevant inventory of available cars across sellers, a difficulty exacerbated by the lack of consistency in the way that dealers characterize a car's attributes. Traditionally, dealers had more information about car prices than consumers did, as consumers had limited resources and tools to determine an appropriate price. Selecting the right dealer was also challenging for consumers as dealer reputations were historically based primarily on word-of-mouth. The lack of clear, unbiased, transparent information made it difficult for consumers to effectively compare vehicles, find the vehicles that best suited their needs and transact with well-regarded dealers.

Dealer Challenges

The economics of dealerships depend largely on sales volume, gross margin, and customer acquisition efficiency. To achieve a high return on their marketing investments, dealers must find in-market consumers; yet because car purchases are infrequent, only a small percentage of consumers are shopping for a car at any given point in time. Traditional marketing channels, including television, radio, and newspaper, can effectively target locally but are inefficient in targeting the relatively small percentage of consumers who are actively in the market to buy a car. In addition, used car pricing is fluid because it is based on rapidly shifting supply and demand dynamics. Dealers need to find ways to manage constantly changing inventory and adjust pricing strategies to adapt to frequently changing market conditions.

Our Strengths

We believe that our competitive advantages are based on the following key strengths:

Trusted Marketplace for Consumers. We provide consumers with unbiased information, intuitive search results, and other tools that empower them to find "Great Deals from Top-Rated Dealers." We offer the largest online selection of new and used car listings of any major U.S. online automotive marketplace. We aggregate and analyze these listings using proprietary technology and data along with innovative data analytics to create a differentiated automotive search experience for consumers. We believe that providing a transparent consumer experience with unbiased information has instilled trust in us among our users, helping us to become the most visited online automotive marketplace in the United States according to data from Comscore. In 2019, we experienced over 99.4 million average monthly sessions in the United States. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Key Business Metrics" for how we define average monthly sessions. We believe this user traffic, an indicator of consumer satisfaction and engagement, is critical to our marketplace success and will continue to strengthen our market position. We attract our audience from a diverse range of acquisition channels including, but not limited to, direct navigation, mobile applications, email, organic search, paid search advertising, social media advertising, display advertising, audience targeting, and brand advertising

campaigns. In addition, we focus our efforts on attracting users that we believe are near a car purchasing decision, resulting in a higher quality audience to which our dealers can market. For our United States marketplace, in 2019 we generated 65.3 million connections and 38.5 million leads, compared with 62.2 million connections and 33.8 million leads in 2018. We define (i) connections as interactions between consumers and dealers via our marketplace through phone calls, email, managed text and chat, and clicks to access the dealer's website and map directions to the dealership and (ii) leads as user inquiries via our marketplace to dealers by phone calls, email, or managed text and chat.

Proprietary Search Algorithms and Data-Driven Approach. We have built an extensive repository of data on cars, prices, dealers, and the interactions between consumers and dealers that is the result of many years of data aggregation and regression modeling. Our proprietary search algorithms and data analytics allow us to use this valuable data to bring greater transparency to our platform. The primary product of this analysis is our determination of a used car's IMV, which, together with Dealer Rating, drives our Deal Rating. We calculate IMV by applying more than 20 ranking signals and more than 100 normalization rules to tens of millions of data points, including the make, model, trim, year, features, condition, history, geographic location, and mileage of the car. We apply the knowledge gained from analyzing the growing volume of connections between consumers and dealers on our platform to build new features for our consumers and products for our dealers.

Strong Value Proposition to Dealers. We believe that our marketplace offers an efficient customer acquisition channel for dealers, helping them achieve attractive returns on their marketing spend with us. We provide our dealer base with connections to prospective car buyers; most of these connections have historically been for used cars. The primary objective of our traffic acquisition and site improvements is to generate greater volumes of consumer leads to our dealers. These leads include phone calls, email, and managed text and chat interactions to dealers, which we believe yield the highest value engagement for dealers. We provide all dealers with tools that are informed by real-time market conditions that help them merchandise and sell their cars, and our paying dealers get access to additional valuable information from our Pricing Tool and Market Analysis tool. Our strong value proposition to the dealer community is evidenced by our 19% growth in average annual revenue per subscribing dealer, or AARSD, in the United States in 2019 compared to 2018.

Network Effects Driven by Scale. With the majority of dealers in the United States listing inventory on our platform and having built the most visited online automotive marketplace in the United States according to data from Comscore, we believe that our scale creates powerful network effects that reinforce the competitive strength of our business model. Our large consumer audience increases our appeal to dealers and incentivizes more dealers to subscribe to our paid Listings packages to access the numerous benefits unavailable to non-paying dealers. Displaying listings from more paying dealers on our websites provides consumers with more dealer information and methods to contact those dealers. More consumers and connections drive greater value and a higher return to paying dealers' marketing spend on our platform. Driven by these network effects, we continue to amass data points, which we use to further strengthen our traffic acquisition efforts and marketplace search algorithms, the utility of analysis complementing each listing, the quality of our user experience, the value of connections between consumers and dealers, and the efficacy of our dealer digital marketing products.

Attractive Financial Model. We have a strong track record of revenue growth, profitability, and capital efficiency. We generated revenue of \$588.9 million in 2019, \$454.1 million in 2018, and \$316.9 million in 2017, representing year-over-year increases of 30% in 2019 and 43% in 2018. A significant portion of our revenue is recurring due to the subscription nature of our products. In 2019, 2018, and 2017, dealer marketplace subscription revenue from our Listings packages, our Dealer Display advertising and audience targeting products, and our Dealer Search Engine Marketing product, all of which we consider to constitute recurring revenue, comprised 89% of total revenue in each year. Furthermore, our revenue base is highly diversified due to the fragmented nature of the automotive dealer industry. We also have been able to grow and invest in our future growth while improving profitability due to the operating leverage in our business model. On a consolidated basis, while our revenue grew 30% in 2019 and 43% in 2018, our Adjusted EBITDA grew 55% in 2019 and 106% in 2018. As a percentage of revenue, our Adjusted EBITDA margin expanded to 13% in 2019 from 11% in 2018 and from 8% in 2017. In the United States, which is our most developed market, we grew our revenue by 27% in 2019 and 42% in 2018 while increasing our income from operations to \$73.9 million in 2019 from \$58.4 million in 2018 and \$41.6 million in 2017.

Founder-Led Management Team with Culture of Innovation. Our founder, Chief Executive Officer and Chairman, Langley Steinert, co-founded and was previously chairman of TripAdvisor, an online marketplace for travel-related content based on the mission of using technology and a data-driven approach to provide transparency for consumers' travel planning. Led by Mr. Steinert and a management team with extensive experience guiding technology companies in evolving industries, we bring the same commitment to fostering a culture of innovation and delivering data-driven transparency to the automotive market.

Our Products

Consumer Marketplace

We provide consumers an online automotive marketplace where they can search for new and used car listings from our dealers. With our U.S. marketplace's peer-to-peer offering, consumers also have access to additional car listings from private sellers, and are able to sell their car to other consumers. Through our marketplace, we provide consumers with information that helps them find the most relevant car for their needs. A user accesses our marketplace through our websites or, in the U.S. and certain international markets, by using our mobile applications. Most users specify whether they are searching for used, certified pre-owned, or new cars and then provide their desired vehicle make and model and their postal code. Our product offerings described below are available through our U.S. marketplace; their availability internationally varies by country. We also offer paid listings subscriptions for dealers and display advertising products through the PistonHeads website.

Used and Certified Pre-Owned Cars

Using our proprietary search algorithms, we immediately display the results of the consumer's search, ranked by Deal Rating, on a search results page, or SRP. Eligible used car listings in our marketplace are assigned one of five Deal Ratings: Great Deal, Good Deal, Fair Deal, High Priced, or Overpriced. Deal Rating illustrates how competitive a listing is compared to similar cars sold in the same region in recent history. A listing's Deal Rating is based primarily upon the IMV of the vehicle and the Dealer Rating of the dealer.

Instant Market Value. IMV is a proprietary algorithm that determines the market value of a used vehicle in a local market and is a key input for determining a vehicle's Deal Rating. The IMV algorithm is the product of many years of regression modeling utilizing millions of used car data points. IMV takes into account a number of factors, including comparable currently listed and previously sold used cars in the local market and vehicle details including make, model, trim, year, features, condition, history, and mileage. Our algorithm uses more than 20 ranking signals and more than 100 normalization rules that distill unstructured data from hundreds of sources across thousands of dealers.

Dealer Ratings. Dealer Ratings are derived from user-generated content from our users' experiences with dealers with which they have connected. To promote high-quality reviews, we require that a user have interacted with the dealer via our marketplace to submit a review. We believe this requirement, together with additional qualification standards, results in a more valuable Dealer Rating. Dealer Rating is an important component of a listing's Deal Rating and as a result can impact the organic search position of a listing.

Search Results Page. In addition to each car's Deal Rating, our SRP provides users with other useful information, including the difference between the listing price and the IMV that we have determined for the car, mileage, Dealer Rating, and dealer location for paying dealers. We provide in-depth search filters, including price, year, mileage, trim, color, options, condition, body style, miles per gallon, seating capacity, vehicle ownership history, usage history, seller type, and days on market, among others, which we believe deliver the most comprehensive search capability among major U.S. online automotive marketplaces. We also provide our users with additional features to aid their search, including similar vehicle recommendations, side-by-side vehicle comparisons, expert reviews, and user rankings. Our platform also gives users the ability to save searches and receive alerts that keep them informed of relevant developments in the market, including newly available inventory and price changes to cars they are monitoring.

Vehicle Detail Page. If a user clicks on one of the listings on the SRP, the user is taken to that listing's vehicle detail page, or VDP. VDPs are designed to provide numerous photos and a comprehensive description of the vehicle, dealer name, address, and dealership information for paying dealers, detailed dealer reviews, methods to contact the dealer, payment calculators, and helpful information about the vehicle, including:

- *Price History.* Changes to a vehicle's price on our platform. We also offer price change alerts to consumers on searches they have saved, which allow them to respond quickly to changes in the market.
- *Time on Site.* Length of time a vehicle has been on our platform and how many users have saved the vehicle to their list of favorite listings, indicators of the likely demand for the car.
- *Vehicle History.* Title check, accident check, number of owners, and fleet status of the vehicle, giving consumers data that helps them better understand the car's condition.

Search results for new car listings are sorted by price of inventory matching the user's search, with the lowest priced listings sorted first. Our new car VDPs include our Dealer Rating and many of the other features of our used car listings, such as Price History and Time on Site. Deal Rating is not applicable to new car listings because it utilizes data not relevant to new cars. Instead, we analyze data on manufacturers' suggested retail prices, or MSRPs, and recent sales of similar new vehicles, accounting for trade-ins, incentives, and other factors that can affect the price of a new car, to provide users with comparative price information.

Sell My Car

We also allow our consumer users to list their cars in our peer-to-peer marketplace in the United States. Our Sell My Car offering enables individual car owners to easily merchandise their vehicles, determine an appropriate selling price with our proprietary price guidance, and manage their listings and communications with prospective buyers from our audience. We offer services to facilitate financing, processing payment, titling, and other aspects of the private-sale transaction. We collect a fee from the selling consumer for these services.

Dealer Marketplace

Our marketplace connects dealers to a large audience of informed and engaged consumers. We offer multiple types of marketplace Listings subscriptions to dealers through our platform: Restricted Listings, which is free, and various levels of Listings packages, each of which requires a paid subscription. We price our paid Listings packages as a monthly, quarterly, semiannual, or annual subscription based on the dealer's inventory size, region, and our assessment of the return on investment, or ROI, our solution will provide them.

- *Restricted Listings.* We allow non-paying dealers to list their inventory in our marketplace as Restricted Listings (formerly referred to as Basic Listings). Restricted Listings do not display the name, address, website URL, or phone number of the relevant dealer and are subject to other limitations. Consumers can contact these dealers only through an anonymous, CarGurus-branded email address so the dealer does not receive any of the consumer's personal contact information from our platform.
- Listings Paid Subscriptions. Paying dealers are able to subscribe to one of four Listings package levels: Standard, Enhanced, Featured or Featured Priority. These paid Listings packages are designed to provide dealers with a higher volume and quality of connections and leads from consumers than our Restricted Listings option. Dealers that subscribe to a paid Listings package gain the opportunity to connect with consumers directly through email, phone, and excluding Standard Listings subscriptions managed text and chat. Listings for all paying dealers on our websites include a link to their website, dealership branding and information such as name, address, and hours of operation, and map directions to their dealership, helping consumers easily contact or visit the dealer, which we believe results in increased local brand awareness and walk-in traffic. A dealer that subscribes to our Featured Priority Listings package receives the same benefits of the Standard and Enhanced Listings packages, as well as opportunities for promotion of their Great Deal, Good Deal, and Fair Deal inventory in a clearly labeled section at the top of the SRP. Featured Priority listings are specifically promoted in the first position of the SRP. This premium placement for Featured and Featured Priority listings generates increased connection volume relative to Standard or Enhanced Listings. In addition, a dealer that pays for our Enhanced, Featured or Featured Priority Listings packages may subscribe to our Delivery feature, which expands the visibility of a dealer's inventory in the search results beyond its local market.

Dealer Dashboard and Merchandising Tools

All dealers with inventory on CarGurus may access the following Dealer Dashboard features and merchandising tools:

- Performance Summary. Provides dealers with real-time and historical data concerning the connections and consumer exposure they have
 received in our marketplace and through our digital marketing products. This enables dealers to analyze connections and SRP and VDP views at
 a granular level to inform the dealer's sales and merchandising efforts.
- *Dealer Insights.* Provides pricing analysis of the dealer's inventory, as well as a summary of a vehicle's missing information such as price, photos, or trim. This information helps dealers better merchandise their vehicles.



User Review Management. Allows dealers to track and manage their dealership reviews from our users. Dealers can respond to users, report potentially fraudulent reviews, and publish positive reviews to social media platforms for broader exposure.

Dealers subscribing to a paid Listings package also have access to the following additional features and tools:

- *Pricing Tool.* Helps dealers evaluate the impact of pricing changes for each used vehicle in their inventory and the resulting impact on the car's Deal Rating, empowering dealers to make informed pricing decisions based on market data in their local area.
- *Market Analysis.* Informs dealers of local market trends in used cars, such as the most searched makes and models in their local market. This information helps dealers align with local consumer preferences and inform strategies for increasing inventory turnover and efficient vehicle acquisition.

Dealer Digital Marketing and Customer Acquisition Products

We offer dealers subscribing to one of our Enhanced, Featured or Featured Priority Listings packages the following additional advertising and customer acquisition products and enhancements marketed under our Real-time Performance Marketing suite:

- Dealer Display Advertising and Audience Targeting. Dealers are able to buy display advertising that appears in our marketplace, on other sites on the internet, and/or on Facebook, a high-converting social platform, to build brand awareness and acquire customers. Advertisements can be targeted by the user's geography, search history, CarGurus website activity (including showing users relevant vehicles from a dealer's inventory that they have not yet discovered on our marketplace), and a number of other targeting factors, allowing dealers to increase their visibility with in-market consumers and drive qualified traffic to their websites.
- Dealer Search Engine Marketing. Leveraging the capabilities that we have developed for our own algorithmic traffic acquisition, we offer a product that delivers search engine marketing, social media advertising, and retargeting to programmatically drive qualified traffic to dealer websites. Utilizing algorithmic bidding strategies and automated keyword list management, we help dealers to optimize traffic acquisition.

Auto Manufacturer and Other Advertiser Products

Our platform offers auto manufacturers and others the ability to purchase display advertising on our sites to execute targeted marketing strategies:

- *Brand Reinforcement.* We allow auto manufacturers to buy advertising on our sites and target consumers based on the make, model, and postal code of the cars that a specific consumer is searching for, in order to increase exposure to interested consumers.
- *Category Sponsorship.* To address evolving priorities influenced by industry dynamics, seasonality, and other factors, we offer the ability to sponsor exclusively prominent high traffic pages on our sites, such as the New Car front page, Used Car front page, and Research Center.
- Automobile Segment Exclusivity. To support the introduction of new models or the success of existing models, we allow manufacturers to target specific automobile segments, such as SUV, sedan, hybrid, luxury, truck, and minivan.
- Consumer Segment Exposure. Auto manufacturers can target consumers both on CarGurus and third-party websites based on various
 parameters, including estimated household income and vehicle specifications, such as make or model, and postal codes.

Consumer Financing Partnerships

Through our partnerships with automotive lending companies, we allow eligible consumers on our U.S. website to pre-qualify for financing on cars from dealerships that offer financing from these partners. We primarily generate revenue from these partnerships based on the number of funded loans from consumers who pre-qualify with our lending partners through our site.

Marketing

Our marketing initiatives aim to drive brand awareness and engagement among consumers and dealers and to position us as a trusted online automotive marketplace.

Consumer Marketing

We have built our audience on the strength of our user experience, and we remain focused on delivering an engaging consumer marketplace. The strength of the consumer experience that we offer is one of our most powerful marketing tools. By providing an intuitive search experience in our marketplace and relevant content, updates, and tools to consumers during their car search, we believe that the users who comprise our large and engaged audience provide informal endorsements to other consumers, more powerful than most marketing messages.

Historically, our consumer marketing efforts were focused primarily on algorithmic traffic acquisition. We employ a team of strategists, engineers and data scientists that optimizes our user acquisition through search engines, social media, and other digital marketing channels and has tested over 1 billion keywords on various search engines as well as sophisticated, personalized remarketing, to nurture consumers toward finding the right car for them. We believe our expertise in this area constitutes a competitive advantage over less sophisticated competitors and those who outsource these capabilities.

We augment our marketing efforts with brand-building investments in media, including television and online video, as well as ongoing efforts to convey our unique brand value proposition throughout our core site experience. These brand efforts launched more recently than our algorithmic traffic acquisition efforts, resulting in brand awareness that remains lower than some other major U.S. online automotive marketplaces in the United States despite our large monthly audience and high user engagement. We have made significant progress in closing our brand awareness gaps since launching brand marketing in 2017 and believe that we are well-positioned to continue to strengthen our brand by continuing to invest in brand building efforts, particularly given our trusted product, which delivers well on the brand promises we convey.

Our vehicle listing data, on-site user behavior, connections between consumers and dealers, and opinion data from our users create significant opportunities for us to develop and publish car shopping insights and information about industry trends. We consistently gain earned media coverage in national, regional, and trade press outlets as well as social channels by leveraging our proprietary data to inform newsworthy content.

Dealer Marketing

The primary goals of our dealer marketing initiatives are to acquire dealers not yet in our marketplace, convert non-paying dealers into paying dealers, retain our existing paying dealers, and increase annual subscription revenues from our paying dealers. Our dealer marketing efforts aim to:

- *Educate Dealers on the Quality of Our Audience and Attractive ROI.* We educate dealers on our industry-leading monthly visits in the U.S., our strong user engagement, and the large number of connections that we facilitate through our marketplace. We also highlight to dealers how unique features of our platform, such as our intuitive user interface and our proprietary technology and data analytics, yield consumers that we believe are more informed and better prepared to purchase at the dealership, which can lead to a higher ROI for the dealers' marketing spend.
- *Provide Best Practices to Assist Dealers in Becoming Successful in Our Marketplace.* We provide ongoing communications through email, webinars, white papers, testimonials, and videos, which show dealers how to use our products to position their inventory for success on our platform and beyond. We maintain consistent communication with dealers via email, events and our Dealer Dashboard to ensure awareness of account performance and recent product updates.
- Provide Thought Leadership that Educates Dealers on Marketplace Trends. We generate insightful content on market trends and best practices in digital advertising that are shared through webinars, dealer forums, dealer advisory councils, and our participation in industry conferences and events. We also from time to time host thought leadership events in local markets and an automotive conference, Navigate, to continue to share our insights and help build our brand among dealerships.

Sales

Our sales team is responsible for bringing dealers onto our marketplace and converting non-paying dealers to paid subscriptions. We have built an efficient inside sales and account management team of approximately 350 employees worldwide who sell our marketplace products to franchise and independent dealers. We have built a field sales team that works with strategic franchise and national dealership groups in large metropolitan areas in the U.S., Canada and the U.K. In addition, we have advertising sales employees based in Cambridge, Massachusetts; Detroit, Michigan; Los Angeles, California; and certain foreign locations.

We have a comprehensive dealer account management process to assist dealers in becoming successful in our marketplace. We assign a Customer Success Associate to every new paying dealer to assist with onboarding and integration with any relevant software systems. The designated Customer Success Associate spends time educating dealers on a range of topics, including effectively using the Dealer Dashboard, tracking sales, and measuring ROI for their marketing spend. After the onboarding period, a Dealer Relations Account Manager is designated to assist the dealer in utilizing our tools and maximizing ROI from our offerings, including optimizing inventory acquisition, effectively pricing vehicles, vehicle merchandising, and keeping inventory up to date with complete vehicle information. We believe this active communication with our dealers fosters customer satisfaction and increases customer retention.

Culture and Employees

Our company culture has developed out of our data-driven and innovative approach to the automotive market. We leverage data to drive innovation across all facets of our business and continuously optimize our products and processes to serve our consumers, dealers, advertisers, and partners. Our approach emphasizes original thought, impact, and collaboration across our organization, and we recognize and award employees who drive positive impact across these constituencies. We encourage collaboration across our entire workforce and invest in creating a work environment that facilitates partnership among our employees and promotes diversity, equity and inclusion. In that spirit, we have identified our core values as follows:

- We are pioneering. From the beginning, we set out to radically change how people buy and sell cars. We tackle difficult problems head on. We are curious. We are risk takers. We embrace change even if it's uncomfortable.
- We are transparent. We believe transparency is the foundation of trust and enables better decision making. We communicate clearly and honestly. We deliver unbiased guidance. Our products, services and company culture are built on these principles.
- We are data-driven. We rely on data, not hunches, to make decisions. We listen to our instincts but we validate through rapid testing, learning and optimizing. We translate complex data into actionable insights for our users, our customers and our people.
- We are collaborative. We celebrate our individual strengths and perspectives but know that our success requires teamwork. We partner, we listen and we leverage feedback from each other, our users and our customers.
- We move quickly. We believe there's power in speed. We iterate quickly and often, continuously improving as we go. We are not afraid to break things. If we fail, we do it fast, learn from it and move on.
- We have integrity. We act responsibly and consider the impact of our actions on each other, our partners and the world around us. We believe empathy, respect and fairness are essential. We set high ethical standards and expect principled leadership from our people.

We have won a number of awards recognizing our strong culture, including *Fortune*'s "Best Places to Work" in 2019, *Computerworld*'s "Best Places to Work in IT" in 2019, *Boston Business Journal*'s "Best Places to Work" for five years in a row from 2015 to 2019, *Boston Globe*'s "Top Place to Work" in 2014, 2015, 2016 and 2018 and the Mass TLC Company of the Year award in 2018.

As of December 31, 2019, we had 921 full-time employees, 105 of whom were based outside the United States. None of our employees is represented by a labor union or covered by a collective bargaining agreement. We have not experienced any work stoppages, and we consider our relations with our employees to be good.

Technology and Product Development

We are a technology company focused on innovative, actionable data analysis. We design our mobile and web products to create an unbiased, transparent experience for both consumers and dealers. We believe in rapid development, release frequent updates and have internal tools and automation that allow us to efficiently evolve our products. Our software is built using a combination of internally developed software, third-party software and services, and open source software.

Our Search Technology

Our search and ranking technology is served by a proprietary in-memory search index solution that is scalable, fast, and extensible, allowing us to expand more easily into new markets, as demonstrated by our international marketplace launches. We have highly flexible interfaces that allow dealers to automatically add their inventory to our index, enabling us to quickly integrate hundreds of inventory sources with minimal effort and easily support inventory growth.

Our Mobile Technology

We have designed our marketplace to appeal to mobile users by developing our products with a mobile-first mindset. All of our search results pages use a single-page application type approach to eliminate page reloads and improve responsiveness. We also use techniques to load content onto a user's mobile device more efficiently.

Our Integrations

We make available several application program interfaces and web widgets that integrate with customer relationship management and inventory management solutions, among other platforms. These integrations allow dealers to incorporate designated data and tools into the fabric of their marketing and customer engagement strategies. For example, our Deal Rating Badges are used on dealer websites, which show our Deal Rating for cars that have been rated as a Great Deal, Good Deal, or Fair Deal. Our Deal Rating serves as trusted, third-party validation on dealer websites.

Infrastructure

Our development servers and U.S. and Canadian websites are hosted at third-party data centers near Boston, Massachusetts, as well as through thirdparty cloud services in the U.S. Our European websites are hosted on third-party cloud computing services near London, England. We use third-party content distribution networks to cache and serve many portions of our sites at locations across the globe. We monitor and test at the application, host, network, and full site levels to maintain availability and promote performance. We use third-party cloud computing services for many data processing jobs and backup/recovery services.

Competition

We face competition to attract consumers and paying dealers to our marketplace and to attract advertisers to purchase our advertising products and services. Our competitors offer various marketplaces, products, and services that compete with us. Some of these competitors include:

- major U.S. online automotive marketplaces: AutoTrader.com, Cars.com, and TrueCar.com;
- other U.S. automotive websites, such as Edmunds.com, KBB.com and Carfax.com;
- online automotive marketplaces and websites in international markets;
- internet search engines;
- digital marketing providers;
- peer to peer marketplaces, such as Craigslist;
- sites operated by individual automobile dealers; and
- online dealerships, such as Carvana and Vroom.



Competition for Consumers and Dealers

We compete for consumer visits with other online automotive marketplaces, free listing services, general search engines, and dealers' websites. We compete for consumers primarily on the basis of the quality of the consumer experience. We believe we compete favorably on user experience due to the number of our vehicle listings, the unbiased transparency of the information we provide on cars, prices, and dealers, the intuitive nature of our user interface, and our mobile user experience, among other factors.

We compete for dealers' marketing spend with offline customer acquisition channels, other online automotive marketplaces, dealers' own customer acquisition efforts on search engines, and other internet sites that attract consumers searching for vehicles. We compete primarily on the basis of the ROI that our marketplace provides. We believe we compete favorably due to our large user audience, high user engagement, and the volume and quality of connections we provide to well-informed consumers, which results in an attractive ROI for dealers.

Competition for Advertisers

We compete for a share of advertisers' total marketing budgets against media sites, websites dedicated to helping consumers shop for cars, major internet portals, search engines, and social media sites, among others. We also compete for a share of advertisers' overall marketing budgets with traditional media, such as television, radio, magazines, newspapers, automotive guide publications, billboards, and other offline advertising channels. We compete for advertising spend based on the marketing ROI that our marketplace provides. We believe we compete favorably due to our large user audience size, high user engagement, and the effectiveness and relevance of our advertising products.

Intellectual Property

We protect our intellectual property through a combination of patents, copyrights, trademarks, service marks, domain names, trade secret protections, confidentiality procedures, and contractual restrictions.

We have three pending U.S. patent applications and one pending international patent application. These applications cover proprietary technology that relates to various functionalities on our platform, generally in connection with pricing, ranking and detecting fraud in online listings. We intend to pursue additional patent protection to the extent we believe it would be beneficial to our competitive position.

We have a number of registered and unregistered trademarks, including "CarGurus," the CarGurus logo, the CG logo, and related marks, which we have registered as trademarks in the United States and certain other jurisdictions. We pursue additional trademark registrations to the extent we believe doing so would be beneficial to our competitive position.

We are the registered holder of several domestic and international domain names that include "CarGurus" and variations of our trade names.

In addition to the protection provided by our intellectual property rights, we enter into confidentiality and proprietary rights agreements with our employees and relevant consultants, contractors, and business partners. We control the use of our proprietary technology and intellectual property through provisions in contracts with our customers and partners and our general and product-specific terms of use on our websites.

Regulatory

Various aspects of our business are, may become, or may be viewed by regulators from time to time as subject, directly or indirectly, to U.S. federal, state, local and foreign laws and regulations. In particular, the advertising and sale of new or used motor vehicles is highly regulated by the states and jurisdictions in which we do business. Although we do not sell motor vehicles and we believe that vehicle listings on our sites are not themselves advertisements, regulatory authorities or third parties could take the position that some of the laws or regulations applicable to dealers or to the manner in which motor vehicles are advertised and sold generally are directly applicable to our business. These advertising laws and regulations, which often originated decades before the emergence of the internet, are frequently subject to multiple interpretations, are not uniform across jurisdictions, sometimes impose inconsistent requirements with respect to new or used motor vehicles, and the manner in which they should be applied to our business model is not always clear. Regulators or other third parties could take, and on some occasions have taken, the position that our marketplace or related products violate applicable brokering, bird-dog, consumer protection, or advertising laws or regulations.

In order to operate in this regulated environment, we develop our products and services with a view toward appropriately managing the risk that our regulatory compliance, or the regulatory compliance of the dealers whose inventory is listed on our websites, could be challenged.

We consider applicable advertising and consumer protection laws and regulations in designing our products and services. With respect to paid advertising, other than Featured Listings, Featured Priority Listings and Dealer Display advertising and audience targeting products marketed under our Realtime Performance Marketing suite, we believe that most of the content displayed on the websites we operate does not constitute paid advertising for the sale of motor vehicles. Nevertheless, we endeavor to design the content in a manner that would comply with relevant advertising regulations and consumer protection laws if, and to the extent that, the content is considered to be vehicle sales advertising.

Our websites and mobile applications enable us, dealers, and users to send and receive text messages and other mobile phone communications, which requires us to comply with the Telephone Consumer Protection Act, or TCPA, in the U.S. The TCPA, as interpreted and implemented by the Federal Communications Commission and federal and state courts, imposes significant restrictions on utilization of telephone calls and text messages to residential and mobile telephone numbers as a means of communication, particularly when the prior express consent of the person being contacted has not been obtained.

In addition, we are subject to numerous federal, national, state, and local laws and regulations in the United States and around the world regarding privacy and the collection, processing, storage, sharing, disclosure, use, cross-border transfer, and protection of personal information and other data. While the scope of these laws and regulations is changing and remains subject to differing interpretations, we seek to comply with industry standards and all applicable laws, policies, legal obligations, and industry codes of conduct relating to privacy and data protection. We are also subject to the terms of our privacy policies and privacy-related obligations to third parties.

Corporate Information

We were originally organized on November 10, 2005 as a Massachusetts limited liability company under the name "Nimalex LLC." Effective July 15, 2006, we changed our name to "CarGurus LLC." On June 26, 2015, we converted into a Delaware corporation and changed our name to "CarGurus, Inc."

Our principal executive offices are located at 2 Canal Park, 4th Floor, Cambridge, Massachusetts 02141, and our telephone number is (617) 354-0068. Our U.S. website is www.cargurus.com. Information that is contained on, or that can be accessed through, our websites is not incorporated by reference into this Annual Report on Form 10-K, and you should not consider information on our websites to be part of this Annual Report on Form 10-K.

CarGurus, the CarGurus logo, and other trademarks or service marks of CarGurus appearing in this Annual Report on Form 10-K are the property of CarGurus, Inc. Trade names, trademarks, and service marks of other companies appearing in this Annual Report on Form 10-K are the property of their respective holders. We have omitted the ® and TM designations, as applicable, for the trademarks used in this Annual Report on Form 10-K.

Additional Information

The following filings are available on our investor relations website after we file them with the Securities and Exchange Commission, or the SEC: Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Proxy Statements for our annual meetings of stockholders. These filings are also available for download free of charge on our investor relations website. Our investor relations website is located at http://investors.cargurus.com. You may obtain copies of these documents by mail from the Public Reference Section of the SEC, 100 F Street, N.E., Room 1580, Washington, D.C. 20549. The SEC also maintains a website that contains reports, proxy statements and other information about issuers, like us, that file electronically with the SEC. The address of that website is https://www.sec.gov.

We webcast our earnings calls and certain events that we participate in or host with members of the investment community on our investor relations website. Additionally, we provide news and announcements regarding our financial performance, including SEC filings, investor events, press and earnings releases, on our investor relations website. Corporate governance information, including our policies concerning business conduct and ethics, is also available on our investor relations website under the heading "Governance." No content from any of our websites is intended to be incorporated by reference into this Annual Report on Form 10-K or in any other report or document we file with the SEC, and any reference to our websites is intended to be an inactive textual reference only.

Item 1A. Risk Factors.

Investing in our Class A common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with all of the other information contained in this Annual Report, including "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes, before evaluating our business. Our business, financial condition, operating results, cash flow, and prospects could be materially and adversely affected by any of these risks or uncertainties. In that event, the trading price of our Class A common stock could decline. See "Special Note Regarding Forward-Looking Statements."

Risks Related to Our Business and Industry

Our business is substantially dependent on our relationships with dealers, and our subscription agreements with these dealers do not contain long-term contractual commitments. If a significant number of dealers terminate their subscription agreements with us, our business and financial results would be materially and adversely affected.

Our primary source of revenue consists of subscription fees paid to us by dealers for access to enhanced features on our automotive marketplace. Our subscription agreements with dealers generally may be terminated by us with 30 days' notice and by dealers with 30 days' notice at the end of the committed term. While we are transitioning many of these dealers to contracts with one-year committed terms, the majority of our contracts with dealers currently provide for one-month committed terms. The contracts do not contain contractual obligations requiring a dealer to maintain its relationship with us beyond the committed term. Accordingly, these dealers may cancel their subscriptions with us in accordance with the terms of their subscription agreements. If a significant number of our paying dealers terminate their subscriptions with us, our business and financial results would be materially and adversely affected.

If we fail to maintain or increase the number of dealers that pay subscription fees to us, or fail to maintain or increase the fees paid to us for subscriptions, our business and financial results would be materially and adversely affected.

If paying dealers do not experience the volume of consumer connections that they expect during their subscription period, or do not experience the level of car sales they expect from those connections, they may terminate their subscriptions at the conclusion of the committed term or may only be willing to renew their subscriptions at a lower level of fees. Even if dealers do experience increased consumer connections or sales, they may not attribute such increases to our platform. If we fail to maintain or expand our base of paying dealers or fail to maintain or increase the level of fees that we receive from them, our business and financial results would be materially and adversely affected.

We allow dealers to list their inventory in the CarGurus marketplace for free; however, we impose certain limitations on such free listings, such as excluding dealer identity and contact information, and these dealers do not receive access to the paid features of our marketplace. In the future we may decide to impose additional restrictions on free listings. Many dealers start with us on a non-paying basis and then become paying customers in order to take advantage of the features of our paid Listings packages. If dealers do not subscribe to our paid offerings at the rates we expect, or if a greater than expected number of paying dealers elect to terminate their subscriptions or reduce their fees, our business and financial results would be materially and adversely affected.

If dealers or other advertisers reduce their advertising spending with us and we are unable to attract new advertisers, our business would be harmed.

A significant amount of our revenue is derived from advertising revenues generated primarily through advertising sales, including display advertising and audience targeting services, to dealers, auto manufacturers, and other auto-related brand advertisers. We compete for this advertising revenue with other online automotive marketplaces and with television, print media, and other traditional advertising channels. Our ability to attract and retain advertisers, and to generate advertising revenue, depends on a number of factors, including:

- our ability to increase the number of consumers using our marketplace;
- our ability to compete effectively for advertising spending with other online automotive marketplaces;
- our ability to continue to develop our advertising products;
- our ability to keep pace with changes in technology and the practices and offerings of our competitors; and
- our ability to offer an attractive ROI to our advertisers for their advertising spend with us.

Our agreements with dealers for display advertising generally include terms ranging from one month to one year and may be terminated by us with 30 days' notice and by dealers with 30 days' notice at the end of the committed term. The contracts do not contain contractual obligations requiring an advertiser to maintain its relationship with us beyond the committed term. Our other advertising contracts, including those with auto manufacturers, are typically for a defined period of time and do not have ongoing commitments to advertise in our marketplace beyond the committed term. We may not succeed in capturing a greater share of our advertisers' spending if we are unable to convince advertisers of the effectiveness or superiority of our advertising services as compared to alternative channels. If current advertisers reduce or end their advertising spending with us and we are unable to attract new advertisers, our advertising revenue and business and financial results would be harmed.

If we are unable to provide a compelling vehicle search experience to consumers through our platform, the number of connections between consumers and dealers using our marketplace may decline and our business and financial results would be materially and adversely affected.

If we fail to continue to provide a compelling vehicle search experience to consumers, the number of connections between consumers and dealers through our marketplace could decline, which in turn could lead dealers to stop listing their inventory in our marketplace, cancel their subscriptions, or reduce their advertising spend with us. If dealers stop listing their inventory in our marketplace, we may not be able to maintain and grow our consumer traffic, which may cause other dealers to stop using our marketplace. This reduction in the number of dealers using our marketplace would likely materially and adversely affect our marketplace and our business and financial results. As consumers with a robust and user-friendly experience through their mobile devices. We believe that our ability to provide a compelling vehicle search experience, both on the web and through mobile devices, is subject to a number of factors, including:

- our ability to maintain an attractive marketplace for consumers and dealers, including on mobile platforms;
- our ability to continue to innovate and introduce products for our marketplace on mobile platforms;
- our ability to launch new products that are effective and have a high degree of consumer engagement;
- our ability to maintain the compatibility of our mobile applications with operating systems, such as iOS and Android, and with popular mobile devices running such operating systems; and
- our ability to access and analyze a sufficient amount of data to enable us to provide relevant information to consumers, including pricing
 information and accurate vehicle details.

If the use of our marketplace, particularly on mobile devices, does not continue to grow, our business and operating results would be harmed.

We rely on internet search engines to drive traffic to our websites, and if we fail to appear prominently in the search results, our traffic would decline and our business would be adversely affected.

We depend, in part, on internet search engines such as Google, Bing, and Yahoo! to drive traffic to our websites. The number of consumers we attract to our marketplace from search engines is due in part to how and where our websites rank in unpaid search results. These rankings can be affected by a number of factors, many of which are not under our direct control and may change frequently. For example, when a consumer searches for a vehicle in an internet search engine, we rely on a high organic search ranking of our webpages to refer the consumer to our websites. Our competitors' internet search engine optimization efforts may result in their websites receiving higher search result rankings than ours, or internet search engines could change their methodologies in a way that would adversely affect our search result rankings. If internet search engines modify their methodologies in ways that are detrimental to us, or if our competitors' internet search engine optimization efforts are more successful than ours, overall growth in our traffic could slow or our traffic could decline. In addition, internet search engine providers could provide dealer and pricing information directly in search results, align with our competitors, or choose to develop competing products. Search engines may also adopt a more aggressive auction-pricing system for keywords that would cause us to incur higher advertising costs or reduce our market visibility to prospective users. Our websites have experienced fluctuations in search result rankings in the past, and we anticipate fluctuations in the future. Any reduction in the number of consumers directed to our websites through internet search engines could harm our business and operating results.

Any inability by us to develop new products, or achieve widespread consumer and dealer adoption of those products, could negatively impact our business and financial results.

Our success depends on our continued innovation to provide products and services that make our marketplace, websites, and mobile applications useful for consumers and dealers or that otherwise provide value to consumers and dealers. These new products must be widely adopted by consumers and dealers in order for us to continue to attract consumers to our marketplace and dealers to our products and services. Accordingly, we must continually invest resources in product, technology, and development in order to improve the attractiveness and comprehensiveness of our marketplace and its related products and effectively incorporate new internet and mobile technologies into them. These product, technology, and development expenses may include costs of hiring additional personnel, engaging third-party service providers and other research and development activities. In addition, revenue relating to new products is typically unpredictable and our new products may have lower gross margins, lower retention rates, and higher marketing and sales costs than our existing products. We are likely to continue to modify our pricing models for both existing and new products so that our prices for our offerings reflect the value those offerings are providing to consumers and dealers. Our pricing models may not effectively reflect the value of products to consumers and dealers, and, if we are unable to provide a marketplace and products that consumers and dealers want to use, they may become dissatisfied and instead use our competitors' websites and mobile applications. Without an innovative marketplace and related products, we may be unable to attract additional, unique consumers or retain current consumers, which could affect the number of dealers that become paying dealers and the number of advertisers that want to advertise in our marketplace, which could, in turn, negatively impact our business and financial results.

We may be unable to maintain or grow relationships with data providers, or may experience interruptions in the data they provide, which may create a less valuable or transparent shopping experience and negatively affect our business and operating results.

We obtain data from many third-party data providers, including inventory management systems, automotive website providers, customer relationship management systems, dealer management systems, governmental entities, and third-party data licensors. Our business relies on our ability to obtain data for the benefit of consumers and dealers using our marketplace. For example, our success in international markets is dependent in part upon our ability to obtain and maintain inventory data and other vehicle information for those markets. The large amount of inventory and vehicle information available in our marketplace is critical to the value we provide for consumers. The loss or interruption of such inventory data or other vehicle information could decrease the number of consumers using our marketplace. We could experience interruptions in our data access for a number of reasons, including difficulties in renewing our agreements with data providers, changes to the software used by data providers, efforts by industry participants to restrict access to data, and increased fees we may be charged by data providers. Our marketplace could be negatively affected if any current provider terminates its relationship with us or our service from any provider is interrupted. If there is a material disruption in the data provided to us, the information that we provide to consumers and dealers using our marketplace may be limited. In addition, the quality, accuracy, and timeliness of this information may suffer, which may lead to a less valuable and less transparent shopping experience for consumers using our marketplace and could negatively affect our business and operating results.

The failure to build, maintain and protect our brand would harm our ability to grow our audience and to expand the use of our marketplace by consumers and dealers.

While we are focused on building our brand recognition, maintaining and enhancing our brand will depend largely on the success of our efforts to maintain the trust of consumers and dealers and to deliver value to each consumer and dealer using our marketplace. Our ability to protect our brand is also impacted by the success of our efforts to optimize our significant brand spend and overcome the intense competition in brand marketing across our industry, including competitors that may imitate our messaging in response to our success. If consumers were to believe that we are not focused on providing them with a better automobile shopping experience, or if we fail to overcome brand marketing competition and maintain a differentiated value proposition in consumers' minds, our reputation and the strength of our brand may be adversely affected.

Complaints or negative publicity about our business practices, our management team and employees, our marketing and advertising campaigns, our compliance with applicable laws and regulations, the integrity of the data that we provide to consumers, data privacy and security issues, and other aspects of our business, irrespective of their validity, could diminish consumers' and dealers' confidence and participation in our marketplace and could adversely affect our brand. There can be no assurance that we will be able to maintain or enhance our brand, and failure to do so would harm our business growth prospects and operating results.

Portions of our platform enable consumers and dealers using our sites to communicate with one another and other persons seeking information or advice on the internet. Claims of defamation or other injury could be made against us for content posted on our websites. In addition, negative publicity and user sentiment generated as a result of fraudulent or deceptive conduct by users of our marketplace could damage our reputation, reduce our ability to attract new users or retain our current users, and diminish the value of our brand.

Our recent, rapid growth is not indicative of our future growth, and our revenue growth rate will continue to decline in the future.

Our revenue increased to \$588.9 million for the year ended December 31, 2019 from \$454.1 million for the year ended December 31, 2018, representing a 30% increase between such periods, and increased to \$454.1 million for the year ended December 31, 2018 from \$316.9 million for the year ended December 31, 2017, representing a 43% increase between such periods. In the future, our revenue growth rates will continue to decline as we achieve higher market penetration rates, as our revenue increases to higher levels, and as we experience increased competition. As our revenue growth rates decline, investors' perceptions of our business may be adversely affected and the market price of our Class A common stock could decline. In addition, we will not be able to grow as expected, or at all, if we do not accomplish the following:

- increase the number of consumers using our marketplace;
- maintain and expand the number of dealers that subscribe to our marketplace and maintain and increase the fees that they are paying;
- attract and retain advertisers placing advertisements in our marketplace;
- further improve the quality of our marketplace and introduce high quality new products; and
- increase the number of connections between consumers and dealers using our marketplace.

If we fail to expand effectively into new markets, both domestically and abroad, our revenue, business, and financial results will be harmed.

We intend to continue to expand our operations to target new markets, both domestically and abroad, and there can be no assurance that our expansion into these new markets will be successful. Our expansion into new markets places us in unfamiliar competitive environments and involves various risks, including the need to invest significant resources and the likelihood that returns on such investments will not be achieved for several years, or possibly at all. In attempting to establish a presence in new markets, we expect, as we have in the past, to incur significant losses in those markets and face various other challenges, such as obtaining and maintaining access to data, competition for consumers and dealers using our products, new and different competitors, monetizing dealers and other customers, new regulatory environments and laws, different consumer behavior than we are familiar with, and our ability to expand the number of our account managers to cover those new markets. Our current and any future expansion plans will require significant resources and management attention. Furthermore, expansion into international markets may not yield results similar to those we have achieved in the United States.

Our international operations involve risks that are different from, or in addition to, the risks we may experience as a result of our domestic operations, and our exposure to these risks will increase if we continue to expand internationally.

We may expand our international operations by continuing to enter new markets and expanding our offerings in new languages. In most international markets, we would not be the first entrant, and our competitors may be more established or otherwise better positioned than we are to succeed. Our competitors may offer services to dealers that make dealers dependent on them, such as hosting dealers' websites and providing inventory feeds for dealers, which would make it difficult to attract dealers to our marketplace. Dealers may also be parties to agreements with other dealers and syndicates that prevent them from being able to access our marketplace. In addition, we may also face litigation from competitors in new markets. Any of these barriers could impede our expansion into additional international markets, which could affect our business and potential growth.

In addition to English, we have made portions of our platform available in French, German, Italian, and Spanish, and we will need to make all or portions of our platform available in additional languages as we launch in new countries. We may have difficulty modifying our technology and content for use in non-English-speaking markets or fostering new communities in non-English-speaking markets. Our ability to manage our business and conduct our operations internationally requires considerable management attention and resources, and is subject to the particular challenges of supporting a rapidly growing business in an environment of multiple languages, cultures, customs, legal and regulatory systems, alternative dispute resolution systems, and commercial infrastructures. Expanding internationally may subject us to new risks or increase our exposure in connection with current risks, including risks associated with:

- recruiting, managing and retaining qualified multilingual employees, including sales personnel;
- adapting our websites and mobile applications to conform to local consumer behavior;
- increased competition from local websites, mobile applications and periodicals and potential preferences by local populations for local providers;
- compliance with applicable foreign laws and regulations, including different privacy, censorship, and liability standards and regulations, and different intellectual property laws;
- providing solutions in different languages and for different cultures, which may require that we modify our solutions and features so they are culturally relevant in different countries;
- the enforceability of our intellectual property rights;
- credit risk and higher levels of payment fraud;
- compliance with anti-bribery laws, including compliance with the Foreign Corrupt Practices Act and the United Kingdom Bribery Act;
- currency exchange rate fluctuations;
- foreign exchange controls that might prevent us from repatriating cash earned outside the United States;
- political and economic instability in some countries;
- adverse changes in trade relationships among foreign countries and/or between the United States and such countries;
- double taxation of our international earnings and potentially adverse tax consequences arising from the tax laws of the United States or the foreign jurisdictions in which we operate; and
- higher costs of doing business internationally.

We participate in a highly competitive market, and pressure from existing and new companies may adversely affect our business and operating results.

We face significant competition from companies that provide listings, information, lead generation, marketing, and car-buying services designed to help consumers shop for cars and to enable dealers to reach these consumers. Our competitors offer various marketplaces, products, and services that compete with us. Some of these competitors include:

- major United States online automotive marketplaces: AutoTrader.com, Cars.com, and TrueCar.com;
- other United States automotive websites, such as Edmunds.com, KBB.com, and Carfax.com;
- online automotive marketplaces and websites in international markets;
- internet search engines;
- digital marketing providers;
- peer to peer marketplaces, such as Craigslist;
- sites operated by individual automobile dealers; and
- online dealerships, such as Carvana and Vroom.



We compete with these and other companies for a share of dealers' overall marketing budget for online and offline media marketing spend. To the extent that dealers view alternative marketing and media strategies to be superior to our marketplace, we may not be able to maintain or grow the number of dealers subscribing to, and advertising on, our marketplace, and our business and financial results may be adversely affected.

We also expect that new competitors will continue to enter the online automotive retail industry with competing marketplaces, products, and services, or that existing competitors will expand to offer competing products or services, which could have an adverse effect on our business and financial results.

Our competitors could significantly impede our ability to expand the number of dealers using our marketplace. Our competitors may also develop and market new technologies that render our existing or future platform and associated products less competitive, unmarketable, or obsolete. In addition, if our competitors develop platforms with similar or superior functionality to ours, and our web traffic declines, we may need to decrease our subscription and advertising fees. If we are unable to maintain our current pricing structure due to competitive pressures, our revenue would likely be reduced and our financial results would be negatively affected.

Our existing and potential competitors may have significantly more financial, technical, marketing, and other resources than we have, and the ability to devote greater resources to the development, promotion, and support of their marketplaces, products, and services. They may also have more extensive automotive industry relationships than we have, longer operating histories, and greater name recognition. As a result, these competitors may be able to respond more quickly with new technologies and to undertake more extensive marketing or promotional campaigns than we can. Additionally, to the extent that any competitor has existing relationships with dealers or auto manufacturers for marketing or data analytics solutions, those dealers and auto manufacturers may be unwilling to partner with us. If we are unable to compete with these competitors, the demand for our marketplace and related products and services could substantially decline.

In addition, if one or more of our competitors were to merge or partner with another of our competitors, the change in the competitive landscape could adversely affect our ability to compete effectively. Our competitors may also establish or strengthen cooperative relationships with our existing or future data providers, technology partners, or other parties with whom we have relationships, thereby limiting our ability to develop, improve, and promote our solutions. We may not be able to compete successfully against current or future competitors, and competitive pressures may harm our business and financial results.

Our business could be adversely affected if dealer associations or auto manufacturers were to discourage or otherwise deter dealers from subscribing to our marketplace.

Although the dealership industry is highly fragmented, a small number of interested parties have significant influence over the industry. These parties include national and regional dealership associations, national and local regulators, automotive manufacturers, consumer groups, independent dealers, and consolidated dealer groups. If and to the extent these parties believe that dealerships should not enter into or maintain subscription agreements with us, this belief could become shared by dealerships and we may lose a number of our paying dealers.

Furthermore, auto manufacturers may provide their franchise dealers with financial or other marketing support conditioned upon such dealers' adherence to certain marketing guidelines. Auto manufacturers may determine that the manner in which certain of their franchise dealers use our platform is inconsistent with the terms of such marketing guidelines, which determination could result in potential or actual loss of the manufacturers' financial or other marketing support to the dealers whose use of our platform is deemed objectionable. The potential or actual loss of such marketing support may cause such dealers to cease paying for our paid features, which may adversely affect our ability to maintain or grow the number of our paying dealers.

Dealer closures or consolidations could reduce demand for our products, which may decrease our revenue.

In the past, the number of United States dealers has declined due to dealership closures and consolidations as a result of factors such as global economic downturns. When dealers consolidate, the services they previously purchased separately are often purchased by the combined entity in a lesser quantity or for a lower aggregate price than before, leading to volume compression and loss of revenue. Further dealership consolidations or closures could reduce the aggregate demand for our products and services. If dealership closures and consolidations occur in the future, our business, financial position and results of operations could be materially and adversely affected.

We rely on third-party service providers and strategic partners for many aspects of our business, and any failure to maintain these relationships or to successfully integrate certain third-party platforms could harm our business.

Our success will depend upon our relationships with third parties, including our payment processor, our data center hosts, our information technology providers, our data providers for inventory and vehicle information, our human resources information system provider, our billing subscription software provider, our customer relationship management software provider, our financial planning and analysis software provider, our information integration platform providers, our marketing platform providers, our business intelligence and data analytics providers, our search engine and social media advertising providers, our invoice and expense provider, our equity administration provider, and our general ledger provider, as well as our strategic partners, including consumer lenders. If these third parties experience difficulty meeting our requirements or standards, have adverse audit results, violate the terms of our relationship or applicable law, fail to obtain or maintain applicable licenses, or if the relationships we have established with such third parties expire or otherwise terminate, it could make it difficult for us to operate some aspects of our business, which could damage our business and reputation. In addition, if such third-party service providers or strategic partners were to cease operations, temporarily or permanently, face financial distress or other business disruptions, increase their fees, or if our relationships with these providers or partners deteriorate or terminate, we could suffer increased costs and we may be unable to provide consumers with content or provide similar services until an equivalent provider could be found or we could develop replacement technology or operations. In addition, if we are unsuccessful in identifying or finding high-quality partners, if we fail to negotiate cost-effective relationships with them, or if we ineffectively manage these relationships, it could have an adverse impact on our business and financial results.

Our enterprise systems require that we integrate the platforms hosted by certain third-party service providers. We are responsible for integrating these platforms and updating them to maintain proper functionality. Issues with these integrations, our failure to properly update third-party platforms or any interruptions to our internal enterprise systems could harm our business by causing delays in our ability to quote, activate service and bill new and existing customers on our platform.

If we continue to grow rapidly, we may not be able to manage our growth effectively.

We have experienced rapid growth in our headcount and operations, which places substantial demand on management and our operational infrastructure. In addition, with further growth and expansion, our employee base will continue to spread outside of our headquarters in Cambridge, Massachusetts. As we continue to grow, we must effectively integrate, develop, and motivate a large number of new employees, while maintaining the beneficial aspects of our company culture. If we do not manage the growth of our business and operations effectively, the quality of our services and efficiency of our operations could suffer, which could harm our brand, results of operations, and overall business.

We depend on key personnel to operate our business, and if we are unable to retain, attract and integrate qualified personnel, our ability to develop and successfully grow our business could be materially and adversely affected.

We believe our success has depended, and continues to depend, on the efforts and talents of our executives and employees. Our future success depends on our continuing ability to attract, develop, motivate, and retain highly qualified and skilled employees. Qualified individuals are in high demand, and we may incur significant costs to attract and retain them. In addition, the loss of any of our executive officers or key employees, or the reduction in their involvement in the management of our business, could materially adversely affect our ability to execute our business plan and strategy, and we may not be able to find adequate replacements on a timely basis, or at all. Our executive officers and other employees are at-will employees, which means they may terminate their employment relationships with us at any time, and their knowledge of our business and industry would be extremely difficult to replace. We cannot ensure that we will be able to retain the services of any members of our senior management or other key employees. If we do not succeed in attracting well-qualified employees or retaining and motivating existing employees, our business could be materially adversely affected.

If we are unable to successfully respond to changes in the market, our business could be harmed.

While our business has grown rapidly as consumers and dealers have increasingly accessed our marketplace, we expect that our business will evolve in ways which may be difficult to predict. For example, we anticipate that over time we may reach a point when investments in new user traffic are less productive and the continued growth of our revenue will require more focus on developing new products for consumers and dealers, expanding our marketplace into new international markets to attract new consumers and dealers, and increasing our fees for our products. It is also possible that consumers and dealers could broadly determine that they no longer believe in the value of our marketplace. Our continued success will depend on our ability to successfully adjust our strategy to meet the changing market dynamics. If we are unable to do so, our business could be harmed and our results of operations and financial condition could be materially and adversely affected.

We may be subject to disputes regarding the accuracy of Instant Market Values, Deal Ratings, Dealer Ratings, New Car Price Guidance and other features of our marketplace.

We provide consumers using our marketplace with our proprietary Instant Market Values, or IMV, Deal Ratings, and Dealer Ratings, as well as other features to help them evaluate vehicle listings, including price guidance for new car listings, or New Car Price Guidance. Revisions to or errors in our automated valuation models, or the algorithms that underlie them, may cause the IMV, the Deal Rating, New Car Price Guidance, or other features to vary from our expectations regarding the accuracy of these tools. In addition, from time to time, regulators, consumers, dealers and other industry participants may question or disagree with our IMV, Deal Rating, Dealer Rating or New Car Price Guidance. Any such questions or disagreements could result in distraction from our business or potentially harm our reputation, could result in a decline in consumers' use of our marketplace and could result in legal disputes.

As we acquire other companies or technologies, such activities could divert our management's attention, result in additional dilution to our stockholders, and otherwise disrupt our operations and harm our operating results.

Our success will depend, in part, on our ability to grow our business in response to the demands of consumers, dealers, and other constituents within the automotive industry as well as competitive pressures. In some circumstances, we will do so through the acquisition of complementary businesses and technologies rather than through internal development. The identification of suitable acquisition candidates can be difficult, time-consuming, and costly, and we may not be able to successfully complete identified acquisitions. The risks we face in connection with acquisitions include:

- diversion of management time and focus from operating our business to addressing acquisition integration challenges;
- coordination of technology, product, research, and development, and sales and marketing functions;
- transition of the acquired company's consumers and data to our marketplace and products;
- retention of employees from the acquired company;
- cultural challenges associated with integrating employees from the acquired company into our organization;
- integration of the acquired company's accounting, management information, human resources, and other administrative systems;
- the need to implement or improve controls, procedures, and policies at a business that prior to the acquisition may have lacked effective controls, procedures, and policies;
- potential write-offs of intangibles or other assets acquired in such transactions that may have an adverse effect on our operating results in a given period;
- potential liabilities for activities of the acquired company before the acquisition, including patent and trademark infringement claims, violations of laws, commercial disputes, tax liabilities, and other known and unknown liabilities; and
- litigation or other claims in connection with the acquired company, including claims from terminated employees, consumers, former stockholders, and other third parties.

Our failure to address these risks or other problems encountered in connection with acquisitions and investments could cause us to fail to realize the anticipated benefits of these acquisitions or investments, cause us to incur unanticipated liabilities, cause us to be reluctant to engage in future transactions, and harm our business generally. Acquisitions could

result in dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities, amortization expense, and impairment charges associated with acquired intangible assets or goodwill, any of which could harm our financial condition. Also, the anticipated benefits of any acquisitions may not materialize.

We are subject to a complex framework of federal, state, and foreign laws and regulations, many of which are unsettled, still developing and contradictory, which have in the past, and could in the future, subject us to claims, challenge our business model, or otherwise harm our business.

Various aspects of our business are, may become, or may be viewed by regulators from time to time as subject, directly or indirectly, to United States federal, state and local laws and regulations, and to foreign laws and regulations. Failure to comply with such laws or regulations may result in the suspension or termination of our ability to do business in affected jurisdictions, the imposition of significant civil and criminal penalties, including fines or the award of significant damages against us and dealers in class action or other civil litigation, or orders or settlements requiring us to make adjustments to our marketplace and related products and services.

Local Motor Vehicle Sales, Advertising and Brokering, and Consumer Protection Laws

The advertising and sale of new and used motor vehicles is highly regulated by the jurisdictions in which we do business. Although we do not sell motor vehicles, and although we believe that vehicle listings on our site are not themselves advertisements, regulatory authorities or third parties could take the position that some of the laws or regulations applicable to dealers or to the manner in which motor vehicles are advertised and sold generally are directly applicable to our business. These advertising laws and regulations are frequently subject to multiple interpretations and are not uniform from jurisdiction to jurisdiction, sometimes imposing inconsistent requirements with respect to new or used motor vehicles. If our marketplace and related products are determined to not comply with relevant regulatory requirements, we or dealers could be subject to significant civil and criminal penalties, including fines, or the award of significant damages in class actions or other civil litigation, as well as orders interfering with our ability to continue providing our marketplace and related products and services in certain states. In addition, even absent such a determination, to the extent dealers are uncertain about the applicability of such laws and regulations to our business, we may lose, or have difficulty increasing the number of paying dealers, which would affect our future growth.

If regulators or other third parties take the position in the future that our marketplace or related products violate applicable brokering, bird-dog, consumer protection, consumer finance or advertising laws or regulations, responding to such allegations could be costly, could require us to pay significant sums in settlements, could require us to pay civil and criminal penalties, including fines, could interfere with our ability to continue providing our marketplace and related products in certain jurisdictions, or could require us to make adjustments to our marketplace and related products or the manner in which we derive revenue from dealers using our platform, any or all of which could result in substantial adverse publicity, termination of subscriptions by dealers, decreased revenues, distraction for our employees, increased expenses, and decreased profitability.

Federal Laws and Regulations

The United States Federal Trade Commission, or the FTC, has the authority to take actions to remedy or prevent acts or practices that it considers to be unfair or deceptive and that affect commerce in the United States. If the FTC takes the position in the future that any aspect of our business, including our advertising and privacy practices, constitutes an unfair or deceptive act or practice, responding to such allegations could require us to defend our practices and pay significant damages, settlements, and civil penalties, or could require us to make adjustments to our marketplace and related products and services, any or all of which could result in substantial adverse publicity, distraction for our employees, loss of participating dealers, lost revenues, increased expenses, and decreased profitability.

Our platform enables us, dealers, and users to send and receive text messages and other mobile phone communications. The Telephone Consumer Protection Act, or the TCPA, as interpreted and implemented by the Federal Communications Commission, or the FCC, and federal and state courts, imposes significant restrictions on utilization of telephone calls and text messages to residential and mobile telephone numbers as a means of communication, particularly if the prior express consent of the person being contacted has not been obtained. Violations of the TCPA may be enforced by the FCC, by state attorneys general, or by others through litigation, including class actions. Statutory penalties for TCPA violations range from \$500 to \$1,500 per violation, which is often interpreted to mean per phone call or text message. Furthermore, several provisions of the TCPA, as well as applicable rules and orders, are open to multiple interpretations, and compliance may involve fact-specific analyses.

Any failure by us, or the third parties on which we rely, to adhere to, or successfully implement, appropriate processes and procedures in response to existing or future laws and regulations could result in legal and monetary liability, fines and penalties, or damage to our reputation in the marketplace, any of which could have a material adverse effect on our business, financial condition, and results of operations. Even if the claims are meritless, we may be required to expend resources and pay costs to defend against regulatory actions or third-party claims. Additionally, any change to the TCPA or its interpretation that further restricts the way consumers and dealers interact through our platform, or any governmental or private enforcement actions related thereto, could adversely affect our ability to attract customers and could harm our business, financial condition, results of operations, and cash flows.

Antitrust Laws

Antitrust and competition laws prohibit, among other things, any joint conduct among competitors that would lessen competition in the marketplace. We believe that we are in compliance with the legal requirements imposed by such antitrust laws. However, a governmental or private civil action alleging the improper exchange of information, or unlawful participation in price maintenance or other unlawful or anticompetitive activity, even if unfounded, could be costly to defend and could harm our business, results of operations, financial condition, and cash flows.

Other

Claims could be made against us under both United States and foreign laws, including claims for defamation, libel, invasion of privacy, false advertising, intellectual property infringement, or claims based on other theories related to the nature and content of the materials disseminated by users of our marketplace and portions of our websites. In addition, domestic and foreign legislation has been proposed that could prohibit or impose liability for the transmission over the internet of certain types of information. Our defense against any of these actions could be costly and involve significant time and attention of our management and other resources. If we become liable for information provided by our users and transmitted in our marketplace in any jurisdiction in which we operate, we could be directly harmed and we may be forced to implement new measures to reduce our exposure to this liability.

The foregoing description of laws and regulations to which we are or may be subject is not exhaustive, and the regulatory framework governing our operations is subject to continuous change. As we expand our operations internationally, we are, and we will continue to be, exposed to legal and regulatory risks including with respect to privacy, tax, law enforcement, content, intellectual property, competition, and other matters. The enactment of new laws and regulations or the interpretation of existing laws and regulations, both domestically and internationally, in an unfavorable way may affect the operation of our business, directly or indirectly, which could result in substantial regulatory compliance costs, civil or criminal penalties, including fines, adverse publicity, loss of participating dealers, lost revenues, increased expenses, and decreased profitability. Further, investigations by governmental agencies, including the FTC, into allegedly anticompetitive, unfair, deceptive or other business practices by us or dealers using our marketplace, could cause us to incur additional expenses and, if adversely concluded, could result in substantial civil or criminal penalties and significant legal liability, or orders requiring us to make adjustments to our marketplace and related products and services.

Our business is subject to risks related to the larger automotive industry ecosystem, including consumer demand, global supply chain challenges, trade relations between the United States and China and other macroeconomic issues, which could have a material adverse effect on our business, revenue, results of operations, and financial condition.

Decreases in consumer demand could adversely affect the market for automobile purchases and, as a result, reduce the number of consumers using our platform. Consumer purchases of new and used automobiles generally decline during recessionary periods and other periods in which disposable income is adversely affected. Purchases of new and used automobiles are typically discretionary for consumers and have been, and may continue to be, affected by negative trends in the economy, including: the cost of energy and gasoline; the availability and cost of credit; rising interest rates, which may reduce the demand for consumer credit due to the higher cost of borrowing; reductions in business and consumer confidence; stock market volatility; increased unemployment; and changing trade barriers, including increased tariff rates or custom duties.

Further, in recent years the market for motor vehicles has experienced rapid changes in technology and consumer demands. Self-driving technology, ride sharing, transportation networks, and other fundamental changes in transportation could impact consumer demand for the purchase of automobiles. A reduction in the number of automobiles purchased by consumers could adversely affect dealers and car manufacturers and lead to a reduction in other spending by these groups, including targeted incentive programs.

In addition, our business may be negatively affected by challenges to the larger automotive industry ecosystem, including global supply chain challenges, changes to trade policies, trade relations between the United States and China and other macroeconomic issues. These factors could have a material adverse effect on our business, revenue, results of operations, and financial condition.

The consequences we may face from the exit of the United Kingdom from the European Union could have a material adverse effect on our business, revenue, results of operations, and financial condition.

The United Kingdom's exit from the European Union, or the EU, commonly referred to as "Brexit", could adversely affect European and global economic or market conditions, contribute to instability in global financial markets, create uncertainty in the wider commercial, legal, and regulatory environment, and cause disruptions to our business and operations in the United Kingdom, including with respect to our customers, suppliers, and consumers in the United Kingdom. As a result of this economic uncertainty, our dealer customers in particular may be unwilling to subscribe to our websites or renew or increase their existing subscriptions, as applicable. We may also face new regulatory costs and challenges that could have an adverse effect on our operations. Brexit has created economic uncertainty and its consequences could have a material adverse effect on our business, revenue, results of operations, and financial condition.

Making decisions that we believe are in the best interests of our marketplace may cause us to forgo short-term gains in pursuit of potential but uncertain long-term growth.

In the past, we have forgone, and we will in the future continue to forgo, certain expansion or short-term revenue opportunities that we do not believe are in the long-term best interests of our marketplace, even if such decisions negatively impact our results of operations in the short term. For example, we manage the text-chat feature of our websites where consumers can message paying dealers. Our management of this feature has helped improve dealer response times to consumers, which in turn improves the consumer experience. While our management of this feature provides value to both consumers and paying dealers and could be a potential source of short-term revenue for us, we are not currently charging for this feature and are instead focusing on the potential long-term value of this feature to our marketplace and its users. However, this strategy may not result in the long-term benefits that we expect, in which case our user traffic and engagement, business, and financial results could be harmed.

A significant disruption in service on our websites or mobile applications could damage our reputation and result in a loss of consumers, which could harm our business, brand, operating results, and financial condition.

Our brand, reputation, and ability to attract consumers, dealers, and advertisers depend on the reliable performance of our technology infrastructure and content delivery. We have experienced, and we may in the future experience, interruptions with our systems. Interruptions in these systems, whether due to system failures, computer viruses, ransomware, or physical or electronic break-ins, could affect the security or availability of our marketplace on our websites and mobile applications, and prevent or inhibit the ability of dealers and consumers to access our marketplace. For example, past disruptions have impacted our ability to activate customer accounts and manage our billing activities in a timely manner. Such interruptions could also result in third parties accessing our confidential and proprietary information, including our intellectual property. Problems with the reliability or security of our systems could harm our reputation, harm our ability to protect our confidential and proprietary information, result in a loss of consumers and dealers, and result in additional costs.

Substantially all of the communications, network, and computer hardware used to operate our platform is located in the United States near Boston, Massachusetts, and internationally near London, England. Although we have two locations in the United States and we believe our systems are redundant, there may be exceptions for certain hardware or software. In addition, we do not own or control the operation of these facilities. We also use third-party hosting services to back up some data but do not maintain redundant systems or facilities for some of the services. A disruption to one or more of these systems may cause us to experience an extended period of system unavailability, which could negatively impact our relationship with consumers, customers and advertisers. Our systems and operations are vulnerable to damage or interruption from fire, flood, power loss, telecommunications failure, terrorist attacks, acts of war, electronic and physical break-ins, computer viruses, earthquakes, and similar events. The occurrence of any of these events could result in damage to our systems and hardware or could cause them to fail. In addition, we may not have sufficient protection or recovery plans in certain circumstances.

Problems faced by our third-party web hosting providers could adversely affect the experience consumers have while using our marketplace. Our third-party web hosting providers could close their facilities without adequate notice. Any financial difficulties, up to and including bankruptcy, faced by our third-party web hosting providers or any of the service

providers whose services they use may have negative effects on our business, the nature and extent of which are difficult to predict. If our third-party web hosting providers are unable to keep up with our growing capacity needs, our business could be harmed.

Any errors, defects, disruptions, or other performance or reliability problems with our network operations could cause interruptions in access to our marketplace as well as delays and additional expense in arranging new facilities and services and could harm our reputation, business, operating results, and financial condition.

Although we carry insurance, it may not be sufficient to compensate us for the potentially significant losses, including the potential harm to the future growth of our business, that may result from interruptions in our service as a result of system failures.

We collect, process, store, transfer, share, disclose, and use consumer information and other data, and our actual or perceived failure to protect such information and data or respect users' privacy could damage our reputation and brand and harm our business and operating results.

Some functions of our marketplace involve the storage and transmission of consumers' information, such as IP addresses, contact information of users who connect with dealers and profile information of users who create accounts on our marketplace, as well as dealers' information. We also process and store personal and confidential information of our vendors, partners, and employees. Some of this information may be private, and security breaches could expose us to a risk of loss or exposure of this information, which could result in potential liability, litigation, and remediation costs. For example, hackers could steal our users' profile passwords, names, email addresses, phone numbers, and zip codes. We rely on encryption and authentication technology licensed from third parties to effect secure transmission of such information. Like all information systems and technology, our websites, mobile applications, and information systems are subject to computer viruses, break-ins, phishing attacks, attempts to overload the systems with denial-of-service or other attacks, ransomware, and similar incidents or disruptions from unauthorized use of our computer systems, any of which could lead to interruptions, delays, or website shutdowns, and could cause loss of critical data and the unauthorized disclosure, access, acquisition, alteration, or use of confidential information, consumers, customers, advertisers, partners, vendors, and employees may lose trust and confidence in us, and consumers may decrease the use of our websites or stop using our websites entirely, dealers may stop or decrease their subscriptions with us, and advertisers may decrease or stop advertising on our websites.

Further, outside parties have attempted and will continue to attempt to fraudulently induce employees, consumers, or advertisers to disclose sensitive information in order to gain access to our information or our consumers', dealers', advertisers', and employees' information. As cyber-attacks increase in frequency and sophistication, our cyber-security and business continuity plans may not be effective in anticipating, preventing and effectively responding to all potential cyber-risk exposures. In addition, because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently, often are not recognized until after being launched against a target, and may originate from less regulated and remote areas around the world, we may be unable to proactively address these techniques or to implement adequate preventative measures.

Any or all of the issues above could adversely affect our brand reputation, negatively impact our ability to attract new consumers and increase engagement by existing consumers, cause existing consumers to curtail or stop use of our marketplace or close their accounts, cause existing dealers and advertisers to cancel their contracts, cause employees to terminate their employment, cause employment candidates to be unwilling to pursue employment opportunities or accept employment offers, and or subject us to governmental or third-party lawsuits, investigations, regulatory fines, or other actions or liability, thereby harming our business, results of operations, and financial condition.

There are numerous federal, national, state, and local laws and regulations in the United States and around the world regarding privacy and the collection, processing, storage, sharing, disclosure, use, cross-border transfer, and protection of personal information and other data. These laws and regulations are evolving, are subject to differing interpretations, may be costly to comply with, may result in regulatory fines or penalties, may subject us to third-party lawsuits, may be inconsistent between countries and jurisdictions, and may conflict with other requirements.

We seek to comply with industry standards and are subject to the terms of our privacy policies and privacy-related obligations to third parties, as well as all applicable laws, policies, legal obligations, and industry codes of conduct relating to privacy and data protection. However, it is possible that these obligations may be interpreted and applied in new ways or in a manner that is inconsistent from one jurisdiction to another and may conflict with other rules or our practices and that new regulations could be enacted. Several proposals have recently become effective or are pending, as applicable, before federal, state, local, and foreign legislative and regulatory bodies that could significantly affect our business, including the General Data Protection Regulation in the EU, or the GDPR, which went into effect on May 25, 2018, and the California Consumer Privacy Act, or the CCPA, which went into effect on January 1, 2020. The CCPA, among other things, contains new disclosure obligations for businesses that collect personal information about California residents and provides California residents with additional rights relating to their personal information. The GDPR and CCPA in particular have already required, and may further require, us to change our policies and procedures and may in the future require us to take on more onerous obligations in our contracts and restrict our ability to store, transfer, and process data, which may seriously harm our business. Similarly, Brexit may require us to change our policies and procedures and, if we are not in compliance, may also seriously harm our business. We may not be entirely successful in our efforts to comply with the evolving regulations to which we are subject due to various factors within our control, such as limited internal resource allocation, or outside our control, such as a lack of vendor cooperation, new regulatory interpretations, or lack of regulatory guidance in respect of certain GDPR or CCPA requirements.

Any failure or perceived failure by us to comply with United States and international data protection laws and regulations, our privacy policies, or our privacy-related obligations to consumers, customers, employees and other third parties, or any compromise of security that results in the unauthorized release or transfer of sensitive information, which could include personal information or other user data, may result in governmental investigations, enforcement actions, regulatory fines, litigation, criminal penalties, or public statements against us by consumer advocacy groups or others, and could cause consumers and dealers to lose trust in us, which could significantly impact our brand reputation and have an adverse effect on our business. Additionally, if any third party that we share information with experiences a security breach or fails to comply with its privacy-related legal obligations or commitments to us, such matters may put employee, consumer or dealer information at risk and could in turn expose us to claims for damages or regulatory fines or penalties and harm our reputation, business, and operating results.

Our ability to attract consumers to our own websites and for our advertising clients depends on the collection of consumer data from various sources, which may be restricted by consumer choice, privacy restrictions imposed by advertising partners, web browsers or other software, and developments in laws, regulations and industry standards.

The success of our consumer marketing and the delivery of internet advertisements for our clients depends on our ability to leverage data, including data that we collect from our clients, data we receive from our publisher partners and third parties, and data from our operations. Using cookies and non-cookie-based technologies, such as mobile advertising identifiers, we collect information about the interactions of users with our clients' and publishers' digital properties (including, for example, information about the placement of advertisements and users' shopping or other interactions with our clients' websites or advertisements). Our ability to successfully leverage such data depends on our continued ability to access and use such data, which could be restricted by a number of factors, including:

- increasing consumer adoption of "do not track" mechanisms as a result of legislation including GDPR and CCPA;
- privacy restrictions imposed by web browser developers, advertising partners or other software developers that impair our ability to understand the preferences of consumers by limiting the use of third-party cookies or other tracking technologies or data indicating or predicting consumer preferences; and
- new developments in, or new interpretations of, privacy laws, regulations and industry standards.

Each of these developments could materially impact our ability to collect consumer data and deliver relevant internet advertisements to attract consumers to our websites or to deliver targeted advertising for our advertising clients. If we are unsuccessful in evolving our advertising and marketing strategies to adapt to and mitigate these evolving consumer data limitations, our business results could be materially impacted.

We have been, and may again be, subject to intellectual property disputes, which are costly to defend and could harm our business and operating results.

We are subject to claims and litigation by third parties that we infringe their intellectual property rights, and we may face allegations in the future that we have infringed the trademarks, copyrights, patents, and other intellectual property rights of third parties, including from our competitors or non-practicing entities. We may also learn of possible infringement to our trademarks, copyrights, patents, and other intellectual property. In addition, we could be subject to lawsuits where consumers and dealers posting content on our websites disseminate materials that infringe the intellectual property rights of third parties. We have encountered lawsuits in the past containing such allegations.

Patent and other intellectual property litigation may be protracted and expensive, and the results are difficult to predict and may result in significant settlement costs or payment of substantial damages. Many potential litigants, including patent holding companies, have the ability to dedicate substantially greater resources to enforce their intellectual property rights and to defend claims that may be brought against them. Furthermore, a successful claimant could secure a judgment that requires us to stop offering some features or prevents us from conducting our business as we have historically done or may desire to do in the future. We might also be required to seek a license and pay royalties for the use of such intellectual property, which may not be available on commercially acceptable terms, or at all. Alternatively, we may be required to modify our marketplace and features while we develop non-infringing substitutes, which could require significant effort and expense and may ultimately not be successful.

In addition, we use open source software in our platform and will use open source software in the future. From time to time, we may face claims from companies that incorporate open source software into their products, claiming ownership of, or demanding release of, the source code, the open source software, or derivative works that were developed using such software, or otherwise seeking to enforce the terms of the applicable open source license. These claims could also result in litigation, require us to purchase a costly license or require us to devote additional product, technology, and development resources to change our platform or services, any of which would have a negative effect on our business and operating results.

Even if these matters do not result in litigation or are resolved in our favor or without significant cash settlements, these matters, and the time and resources necessary to litigate or resolve them, could harm our business, our operating results, and our reputation.

Failure to adequately protect our intellectual property could harm our business and operating results.

Our business depends on our intellectual property, the protection of which is crucial to the success of our business. We rely on a combination of patent, trademark, trade secret, and copyright law and contractual restrictions to protect our intellectual property. In addition, we attempt to protect our intellectual property, technology, and confidential information by requiring our employees and consultants to enter into confidentiality and assignment of inventions agreements and third parties to enter into nondisclosure agreements as we deem appropriate. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our platform's features, software, and functionality or obtain and use information that we consider proprietary.

Competitors may adopt service names similar to ours, thereby harming our ability to build brand identity and possibly leading to user confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks, or trademarks that incorporate variations of the term "CarGurus." If we are restricted in any way in registering our CARGURUS mark in international markets, it could impact our ability to establish and grow our business internationally. Also, while we have registered the CARGURUS and CG logos in the EU and the United Kingdom, as well as the word-mark CARGURUS in Italy, France, Spain, the United Kingdom and, for a subset of services, Ireland, we were not able to register the word-mark CARGURUS in the EU and Germany as the mark was deemed to be non-distinctive, and thus not registerable. We may be unable to register CARGURUS, the word-mark, in certain other countries in the EU. If we are unable to register the CARGURUS word-mark in any country, it may limit our ability to challenge unauthorized users of marks that are the same as or similar to CARGURUS.

We currently hold the "CarGurus.com" internet domain name and various other related domain names. The regulation of domain names is subject to change. Regulatory bodies could establish additional top-level domains, appoint additional domain name registrars, or modify the requirements for holding domain names. As a result, we may not be able to acquire or maintain all domain names that use the name CarGurus. In addition, third parties have created and may in the future create copycat or squatter domains to deceive consumers, which could harm our brand, interfere with our ability to register domain names, and result in additional costs.

Confidentiality agreements with employees and others may not adequately prevent disclosure of trade secrets and other proprietary information.

In order to protect our technologies and processes, we rely in part on confidentiality agreements with our employees, independent contractors, and other advisors. These agreements may not effectively prevent disclosure of confidential information, including trade secrets, and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. Others may also independently discover our trade secrets and proprietary information, and in such cases, we may not be able to assert our trade secret rights against such parties. To the extent that our employees, contractors, or other third parties with whom we do business use intellectual property owned by others in their work for us, disputes may arise as to the rights to related or resulting know-how and inventions. The loss of confidential information or intellectual property rights, including trade secret protection, could make it easier for third parties to compete with our products. In addition, any changes in, or unexpected interpretations of, intellectual property laws may compromise our ability to enforce our trade secret and intellectual property rights. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain protection of our trade secrets or other proprietary information could harm our business, results of operations, reputation, and competitive position.

We may be unable to halt the operations of websites that aggregate or misappropriate our data.

From time to time, third parties may misappropriate our data through website scraping, robots, or other means and aggregate this data on their websites with data from other companies. In addition, copycat websites may misappropriate data in our marketplace and attempt to imitate our brand or the functionality of our websites. If we become aware of such activities, we intend to employ technological or legal measures in an attempt to halt their operations. However, we may be unable to detect all such activities in a timely manner and, even if we could, technological and legal measures may be insufficient to halt their operations. In some cases, particularly in the case of entities operating outside of the United States, our available remedies may not be adequate to protect us against the impact of the operation of such websites. Regardless of whether we can successfully enforce our rights against the operators of these websites, any measures that we may take could require us to expend significant financial or other resources, which could harm our business, results of operations, and financial condition. In addition, to the extent that such activity creates confusion among consumers or advertisers, our brand and business could be harmed.

We may incur losses in the future if we fail to sufficiently grow our revenue or manage our costs effectively.

Although we have experienced significant growth in revenue on a year-over-year basis, our annual revenue growth rate is likely to continue to decline in the future as a result of a variety of factors. Our international expansion and new product launches will cause our costs to increase in future periods as we continue to expend substantial financial resources to enter into those markets and promote the new products, as applicable. If we fail to increase our revenue or manage these additional costs, we may incur losses in the future.

Complying with the laws and regulations affecting public companies has increased and may continue to increase our costs and the demands on management and could harm our operating results.

As a public company, and particularly since December 31, 2018 when we ceased being an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, we incur significant legal, accounting, and other expenses to comply with applicable laws and regulations. In addition, the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, and rules subsequently implemented by the SEC and the Nasdaq Stock Market, or Nasdaq, impose various requirements on public companies, including requiring certain corporate governance practices. Our management and other personnel devote and expect to continue to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations have increased and may continue to increase our legal, accounting, and financial compliance costs and have made and will continue to make some activities more time consuming and costly. These rules and regulations could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors or our board committees or as executive officers.

In addition, the Sarbanes-Oxley Act requires, among other things, that we assess the effectiveness of our internal control over financial reporting annually and the effectiveness of our disclosure controls and procedures quarterly. In particular, as we are a large accelerated filer, our independent registered public accounting firm is required to attest to the effectiveness of our internal control over financial reporting, pursuant to Section 404 of the Sarbanes-Oxley Act, or Section 404, and we now incur the cost of our compliance with Section 404. Our compliance with applicable provisions of Section 404 requires that we incur substantial accounting expense and expend significant management time on compliance-related issues as we implement additional corporate governance practices and comply with reporting requirements.

We must maintain proper and effective internal controls over financial reporting and any failure to maintain the adequacy of these internal controls may adversely affect investor confidence in our company and, as a result, the value of our Class A common stock could decline.

We are required, pursuant to Section 404 and the related rules adopted by the SEC, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting on an annual basis. This assessment includes disclosure of any material weaknesses identified by our management in our internal control over financial reporting. During the evaluation and testing process, if we identify and fail to remediate one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal controls are effective.

In addition, our independent registered public accounting firm must attest to the effectiveness of our internal control over financial reporting under Section 404. Our independent registered public accounting firm may issue a report that is adverse to us in the event it is not satisfied with the level at which our controls are documented, designed or operating. We may not be able to remediate any future material weaknesses, or to complete our evaluation, testing and any required remediation in a timely fashion. We are also required to disclose significant changes made to our internal control procedures on a quarterly basis. Our compliance with Section 404 requires that we incur substantial accounting expense and expend significant management efforts.

Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition or results of operations. If we are unable to assert that our internal control over financial reporting is effective or our independent registered public accounting firm is unable to express an opinion on the effectiveness of our internal control over financial reporting when it is required to issue such opinion, we could lose investor confidence in the accuracy and completeness of our financial reports, the market price of our Class A common stock could decline, and we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities.

Seasonality may cause fluctuations in our operating results.

Across the retail automotive industry, consumer purchases are typically greatest in the first three quarters of each year, due in part to the introduction of new vehicle models from manufacturers, and our consumer-marketing spend generally fluctuates accordingly. As consumer automotive purchases slow in the fourth quarter, our rate of marketing spend typically also slows. This seasonality has not been immediately apparent historically due to the overall growth of other operating expenses. As our growth rates begin to moderate, the impact of these seasonality trends on our results of operations could become more pronounced.

We expect our results of operations to fluctuate on a quarterly and annual basis.

Our revenue and results of operations could vary significantly from period to period and may fail to match expectations as a result of a variety of factors, some of which are outside of our control. Our results may vary as a result of fluctuations in the number of dealers subscribing to our marketplace and the size and seasonal variability of our advertisers' marketing budgets. As a result of the potential variations in our revenue and results of operations, period-to-period comparisons may not be meaningful and the results of any one period should not be relied on as an indication of future performance. In addition, our results of operations may not meet the expectations of investors or public market analysts who follow us, which may adversely affect the trading price of our Class A common stock.

We may require additional capital to pursue our business objectives and respond to business opportunities, challenges, or unforeseen circumstances. If capital is not available to us, our business, operating results, financial condition, and prospects could be adversely affected.

We intend to continue to make investments to support our growth and may require additional capital to pursue our business objectives and respond to business opportunities, challenges, or unforeseen circumstances, including to increase our marketing expenditures to improve our brand awareness, develop new products, further improve our platform and existing products, enhance our operating infrastructure, expand internationally, and acquire complementary businesses and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds. However, additional funds may not be available when we need them on terms that are acceptable to us or at all. Volatility in the credit markets may also have an adverse effect on our ability to obtain debt financing.

If we raise additional funds through further issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences, and privileges superior to those of holders of our Class A common stock. If we are unable to obtain adequate financing or financing on

terms satisfactory to us when we require it, our ability to continue to pursue our business objectives and to respond to business opportunities, challenges, or unforeseen circumstances could be significantly limited, and our business, operating results, financial condition, and prospects could be adversely affected.

We could be subject to adverse changes in applicable tax laws, regulations and interpretations, as well as challenges to our tax positions.

We are subject to taxation in the United States and certain other jurisdictions in which we operate. Changes in applicable tax laws or regulations may be proposed or enacted that could materially and adversely affect our effective tax rate, tax payments, results of operations, financial condition and cash flows.

In addition, tax laws and regulations are complex and subject to varying interpretations. For instance, on June 21, 2018, the United States Supreme Court issued its decision in *South Dakota v. Wayfair, Inc.*, or the Wayfair Decision, which overturned prior case law that held that out-of-state merchants were not required to collect sales taxes unless they had a physical presence in the buyer's state. Although we currently believe that the Wayfair Decision is unlikely to have a material effect on our business, it has created uncertainty over sales tax liability, and could precipitate reactions by legislators, regulators and courts that could adversely increase our tax administrative costs and tax risk, and negatively affect our overall business, results of operations, financial condition and cash flows.

We are also regularly subject to audits by tax authorities. For example, we are currently under audit by the Internal Revenue Service with respect to our 2016, 2017 and 2018 federal employment taxes. Any adverse development or outcome in connection with these tax audits, and any other audits or litigation, could materially and adversely impact our effective tax rate, tax payments, results of operations, financial condition and cash flows.

Failure to deal effectively with fraud or other illegal activity could lead to potential legal liability, harm our business, cause us to lose paying dealer customers and adversely affect our reputation, financial performance and growth.

Based on the nature of our business we are exposed to potential fraudulent and illegal activity in our marketplace, including:

- listings of automobiles that are not owned by the purported dealer or that the dealer has no intention of selling at the listed price;
- receipt of fraudulent leads that we may send to our dealers; and
- deceptive practices in our peer-to-peer marketplace, including through the seller's listing of inventory without intent to sell or improper use of the private payment platform.

The measures we have in place to detect and limit the occurrence of such fraudulent and illegal activity in our marketplace may not always be effective or account for all types of fraudulent or other illegal activity. Further, the measures that we use to detect and limit the occurrence of fraudulent and illegal activity must be dynamic, as technologies and ways to commit fraud and illegal activity are continually evolving. Failure to limit the impact of fraudulent and illegal activity on our websites could lead to potential legal liability, harm our business, cause us to lose paying dealer customers and adversely affect our reputation, financial performance and growth.

Risks Related to Our Class A Common Stock

Our founder controls a majority of the voting power of our outstanding capital stock, and, therefore, has control over key decision-making and could control our actions in a manner that conflicts with the interests of other stockholders.

Primarily by virtue of his holdings in shares of our Class B common stock, which has a ten-to-one voting ratio compared to our Class A common stock, Langley Steinert, our founder, Chief Executive Officer and Chairman, is able to exercise voting rights with respect to a majority of the voting power of our outstanding capital stock and therefore has the ability to control the outcome of matters submitted to our stockholders for approval, including the election of directors and any merger, consolidation, or sale of all or substantially all of our assets. This concentrated control could delay, defer, or prevent a change of control, merger, consolidation, or sale of all or substantially all of our assets that our other stockholders support, or conversely this concentrated control could result in the consummation of such a transaction that our other stockholders do not support. This concentrated control could also discourage a potential investor from acquiring our Class A common stock, which has limited voting power relative to the Class B common stock and might harm the trading price of our Class A common stock. In addition, Mr. Steinert has the ability to control the management and major strategic investments

of our company as a result of his positions as our Chief Executive Officer and Chairman, and his ability to control the election or replacement of our directors. As a board member and officer, Mr. Steinert owes a fiduciary duty to our stockholders and must act in good faith in a manner he reasonably believes to be in the best interests of our stockholders. If Mr. Steinert's status as an officer and director is terminated, his fiduciary duties to our stockholders will also terminate, but his voting power as a stockholder will not be reduced as a result of such termination unless such termination is either made voluntarily by Mr. Steinert, due to Mr. Steinert's death, or if the sum of the number of shares of our capital stock held by Mr. Steinert, by any Family Member of Mr. Steinert, and by any Permitted Entity of Mr. Steinert (as such terms are defined in our amended and restated certificate of incorporation), assuming the exercise and settlement in full of all outstanding options and convertible securities and calculated on an as-converted to Class A common stock basis, is less than 9,091,484 shares. As a stockholder, even a controlling stockholder, Mr. Steinert is entitled to vote his shares in his own interests, which may not always be aligned with the interests of our other stockholders.

We believe that Mr. Steinert's continued control of a majority of the voting power of our outstanding capital stock is beneficial to us and is in the best interests of our stockholders. In the event that Mr. Steinert no longer controls a majority of the voting power, whether as a result of the disposition of some or all his shares of Class A or Class B common stock, the conversion of the Class B common stock into Class A common stock in accordance with its terms, or otherwise, our business or the trading price of our Class A common stock may be adversely affected.

The multiple class structure of our common stock has the effect of concentrating voting control with our founder and certain other holders of our Class B common stock, which will limit or preclude the ability of our stockholders to influence corporate matters.

Our Class B common stock has ten votes per share and our Class A common stock has one vote per share. Our founder and certain of his affiliates hold a substantial number of the outstanding shares of our Class B common stock and therefore hold a substantial majority of the voting power of our outstanding capital stock. Because of the ten-to-one voting ratio between our Class B and Class A common stock, the holders of our Class B common stock collectively control a majority of the combined voting power of our common stock and therefore are able to control all matters submitted to our stockholders for approval so long as the shares of Class B common stock represent at least 9.1% of all outstanding shares of our Class B common stock. This concentrated control will limit or preclude the ability of our stockholders to influence corporate matters for the foreseeable future.

Transfers by holders of Class B common stock will generally result in those shares converting into Class A common stock, subject to limited exceptions, such as certain transfers effected for estate planning or charitable purposes. The conversion of Class B common stock into Class A common stock will have the effect, over time, of increasing the relative voting power of those holders of Class B common stock who retain their shares in the long term. If, for example, Mr. Steinert retains a significant portion of his holdings of Class B common stock for an extended period of time, he could, in the future, continue to control a majority of the combined voting power of our outstanding capital stock.

The trading price of our Class A common stock has been and may continue to be volatile and the value of our stockholders' investment in our stock could decline.

The trading price of our Class A common stock has been and may continue to be volatile and fluctuate substantially. The trading price of our Class A common stock depends on a number of factors, including those described in this "Risk Factors" section, many of which are beyond our control and may not be related to our operating performance. Factors that could cause fluctuations in the trading price of our Class A common stock include the following:

- price and volume fluctuations in the overall stock market from time to time;
- changes in operating performance and stock market valuations of other technology companies generally, or those in our industry in particular;
- sales of shares of our Class A common stock by us or our stockholders;
- failure of securities analysts to maintain coverage of us, changes in financial estimates by any securities analysts who follow our company, or our failure to meet these estimates or the expectations of investors;
- announcements by us or our competitors of new products;
- the public's reaction to our issuances of earnings guidance, as well as our press releases, other public announcements, and filings with the SEC;

- rumors and market speculation involving us or other companies in our industry;
- actual or anticipated changes in our operating results or fluctuations in our operating results;
- actual or anticipated developments in our business, our competitors' businesses, or the competitive landscape generally;
- litigation involving us, our industry or both, or investigations by regulators into our operations or those of our competitors;
- developments or disputes concerning our intellectual property or other proprietary rights;
- announced or completed acquisitions of businesses or technologies by us or our competitors;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business;
- changes in accounting standards, policies, guidelines, interpretations, or principles;
- any significant change in our management;
- conditions in the automobile industry; and
- general economic conditions and positive or negative growth of our markets.

In addition, the stock market in general, and the market for technology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry factors may seriously affect the market price of our Class A common stock, regardless of our actual operating performance. In addition, in the past, following periods of volatility in the overall market and the market prices of a particular company's securities, securities class action litigation has often been instituted against these companies. Litigation of this type, if instituted against us, could result in substantial costs and a diversion of our management's attention and resources.

Our business could be negatively affected as a result of actions of activist stockholders, which could be disruptive and potentially costly, and such activism could impact the trading value of our common stock and cause uncertainty about the strategic direction of our business.

Even though we are a controlled company, the actions of activist stockholders could nevertheless adversely affect our business. Activist stockholders may from time to time attempt to effect changes in our strategic direction, and in furtherance thereof, may seek changes in how our company is governed. Responding to strategic proposals by activist stockholders related to our business, strategy, management or operations, or the composition of our board of directors, could disrupt our operations, be costly and time-consuming, or divert the attention of our board of directors and senior management from the pursuit of business strategies. In addition, perceived uncertainties as to the future strategic direction of our business in relation to the actions of an activist stockholder may be exploited by our competitors, cause concern to current or potential customers, result in the loss of potential business opportunities, make it more difficult to attract and retain qualified personnel and/or affect our relationships with vendors, customers and other third parties. Actions of an activist stockholder may also cause fluctuations in the trading price of our Class A common stock based on temporary or speculative market perceptions or other factors that do not necessarily reflect the underlying fundamentals and prospects of our business.

The exclusion of our Class A common stock from major stock indexes could adversely affect the trading market and price of our Class A common stock.

Several major stock index providers have announced they will begin to exclude, or are considering plans to exclude, from their indexes the securities of companies with unequal voting rights such as ours. Exclusion from stock indexes could make it more difficult, or impossible, for some fund managers to buy the excluded securities, particularly in the case of index tracking mutual funds and exchange traded funds. The exclusion of our Class A common stock from major stock indexes could adversely affect the trading market and price of our Class A common stock.



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

The provisions of our amended and restated certificate of incorporation and amended and restated bylaws, and provisions of Delaware law, may have the effect of rendering more difficult, delaying, or preventing an acquisition deemed undesirable by our board of directors. Our corporate governance documents include provisions:

- creating a classified board of directors whose members serve staggered three-year terms;
- authorizing "blank check" preferred stock, which may contain voting, liquidation, dividend, and other rights superior to our Class A common stock and which, from and after the date, referred to as the threshold date, on which the votes applicable to the Class A common stock and Class B common stock controlled by Mr. Steinert represent less than a majority of the aggregate votes applicable to all shares of the outstanding Class A common stock and Class B common stock, could be issued by our board of directors without stockholder approval;
- limiting the liability of, and providing indemnification to, our directors and officers;
- limiting the ability of our stockholders to call and bring business before special meetings;
- requiring advance notice of stockholder proposals for business to be conducted at meetings of our stockholders and for nominations of candidates for election to our board of directors;
- limiting the ability, from and after the threshold date, of stockholders to amend our amended and restated certificate of incorporation;
- limiting the ability, from and after the threshold date, of stockholders to fill vacant directorships and remove directors; and
- prohibiting cumulative voting by stockholders.

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

As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation law, which prevent some stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations without approval of the holders of substantially all of our outstanding common stock.

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

Our amended and restated certificate of incorporation includes a forum selection clause, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us.

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will, to the fullest extent permitted by law, be the sole and exclusive forum for any stockholder to bring: (i) any derivative action or proceeding brought on behalf of us; (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees or agents to us or to our stockholders; (iii) any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law or our amended and restated certificate of incorporation or amended and restated bylaws; (iv) any action asserting a claim against us or any of our directors, officers, or other employees or agents governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and have consented to the foregoing provisions. This forum selection provision in our amended and restated certificate of incorporation may limit our stockholders' ability to obtain a favorable judicial forum for disputes with us. It is also possible that, notwithstanding the forum selection clause included in our amended and restated certificate of incorporation clause included in our amended and restated certificate of incorporation asserting a bility to obtain a favorable judicial forum for disputes with us. It is also possible that, notwithstanding the forum selection clause included in our amended and restated certificate of incorporation clause included in our amended and restated certificate of incorporation clause included in our amended and restated certificate of incorporation, a court could rule that such a provision is inapplicable or unenforceable.

If securities or industry analysts do not publish, or cease publishing, research or reports about us, our business or our market, or if they change their recommendations regarding our stock adversely, the trading price and trading volume of our Class A common stock could decline.

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

We do not intend to pay cash dividends for the foreseeable future.

We have never declared or paid cash dividends on our capital stock. We currently intend to retain any future earnings to finance the operation and expansion of our business, and we do not expect to declare or pay any cash dividends in the foreseeable future. As a result, our stockholders may only receive a return on their investment in our Class A common stock if the trading price of their shares increases.

Our status as a "controlled company" could make our Class A common stock less attractive to some investors or otherwise harm the trading price of our Class A common stock.

More than 50% of our voting power is held by Mr. Steinert. As a result, we are a "controlled company" under the corporate governance rules for Nasdaq-listed companies. Under these rules, a company of which more than 50% of the voting power is held by an individual, a group or another company is a controlled company and may elect not to comply with certain Nasdaq corporate governance requirements, including:

- the requirement that a majority of our board of directors consist of "independent directors" as defined under the rules of Nasdaq;
- the requirement that we have a compensation committee that is composed entirely of directors meeting Nasdaq independence standards applicable to compensation committee members with a written charter addressing the committee's purpose and responsibilities;
- the requirement that our compensation committee be responsible for the hiring and overseeing of persons acting as compensation consultants and be required to consider certain independence factors when engaging such persons; and
- the requirement that director nominees either be selected, or recommended for board of directors' selection, either by "independent directors" as
 defined under the rules of Nasdaq constituting a majority of the board of director's independent directors in a vote in which only independent
 directors participate, or by a nominations committee comprised solely of independent directors.

We rely and have relied on certain or all of these exemptions. Accordingly, should the interests of our controlling stockholder differ from those of other stockholders, the other stockholders may not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance rules for Nasdaq-listed companies. Our status as a controlled company could make our Class A common stock less attractive to some investors or otherwise harm our stock price.

Item 1B. Unresolved Staff Comments.

Not applicable.

Item 2. Properties.

We do not own any real property. Our principal executive offices are located in Cambridge, Massachusetts where we lease a total of approximately 163,675 square feet of space in various parcels in three buildings with lease terms that expire in November 2022, August 2023, January 2025, and December 2033, as applicable. We also lease office space in Dublin, Ireland for our European operations. In 2019 we entered into (i) an amendment of an existing lease to increase our leased office space at 55 Cambridge Parkway in Cambridge, Massachusetts, which additional space we expect to occupy in 2020, and (ii) a lease for office space at 1001 Boylston Street in Boston, Massachusetts, which we expect to occupy in 2023.

Item 3. Legal Proceedings.

From time to time we may become involved in legal proceedings or be subject to claims arising in the ordinary course of our business. We are not presently subject to any pending or threatened litigation that we believe, if determined adversely to us, individually, or taken together, would reasonably be expected to have a material adverse effect on our business or financial results.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information for Common Stock

Our Class A common stock has been listed on the Nasdaq Global Select Market under the symbol "CARG" since October 12, 2017. Prior to that date, there was no public trading market for our Class A common stock. Our initial public offering, or IPO, was priced at \$16.00 per share on October 11, 2017.

On February 13, 2020, the last reported sale price of our Class A common stock on the Nasdaq Global Select Market was \$34.10 per share.

Holders

As of February 6, 2020, we had 19 holders of record of our Class A common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners but whose shares are held in street name by brokers and other nominees. The number of holders of record does not include stockholders whose shares may be held in trust by other entities.

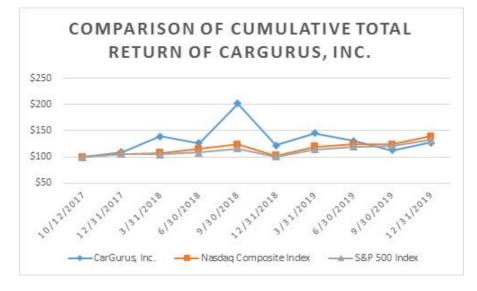
Dividends

We have never declared or paid any cash dividends on our common stock. We currently anticipate that we will retain future earnings to fund development and growth of our business, and we do not anticipate paying cash dividends in the foreseeable future.

Performance Graph

This performance graph shall not be deemed "soliciting material" or to be "filed" with the Securities and Exchange Commission for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, or otherwise be subject to the liabilities under that section, and shall not be deemed to be incorporated by reference into any filing of CarGurus, Inc. under the Exchange Act or the Securities Act of 1933, as amended.

The following graph shows a comparison from October 12, 2017 (the date our Class A common stock commenced trading on the Nasdaq Global Select Market) through December 31, 2019 of the cumulative total return for our Class A common stock, the Nasdaq Composite Index and the S&P 500 Index. All values assume a \$100 initial cash investment and data for the Nasdaq Composite Index and the S&P 500 Index assume reinvestment of dividends, if any. Such returns are based on historical results and are not intended to suggest future performance.



	10/12/2017	12/31/2017	3/31/2018	6/30/2018	9/30/2018	12/31/2018	3/31/2019	6/30/2019	9/30/2019	12/31/2019
CARG	100	109	139	126	202	122	145	131	112	128
S&P 500 Index	100	105	104	108	116	101	114	119	121	132
Nasdaq Computer Index	100	105	108	115	123	102	119	124	124	139

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities

None.



Item 6. Selected Consolidated Financial Data.

The following Selected Consolidated Financial Data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations", the consolidated financial statements and related notes, and other financial information included in this Annual Report on Form 10-K.

We derived the consolidated statements of operations data for the years ended December 31, 2019, 2018, and 2017 and the consolidated balance sheet data as of December 31, 2019 and 2018 from our audited consolidated financial statements, which are included elsewhere in this Annual Report on Form 10-K. We derived the consolidated statement of operations data for the year ended December 31, 2016 and 2015 and the consolidated balance sheet data as of December 31, 2017, 2016 and 2015 from our audited consolidated financial statements, which are not included in this Annual Report on Form 10-K. Historical results are not necessarily indicative of the results to be expected in future periods.

		Year Ended December 31,								
		2019		2018(4)		2017		2016		2015
Concellidated Statements of One continue Dates				(in thousands	s, exc	ept share and p	er sha	are data)		
Consolidated Statements of Operations Data:										
Revenue: Marketplace subscription	\$	526.043	\$	405 700	ሰ	282.664	¢	171 202	ሰ	75 1 4 2
	Э	,	Э	405,780	\$	- ,	\$	171,302	\$	75,142
Advertising and other		62,873		48,306		34,197		26,839		23,446
Total revenue		588,916		454,086		316,861		198,141		98,588
Cost of revenue ⁽¹⁾		36,300		24,811		17,609		9,575		4,234
Gross profit		552,616		429,275		299,252		188,566		94,354
Operating expenses:										
Sales and marketing		393,844		315,939		236,165		154,125		81,877
Product, technology, and development		69,462		47,866		22,470		11,453		8,235
General and administrative		50,434		39,475		22,688		12,783		5,801
Depreciation and amortization		4,554		2,804		2,655		1,634		969
Total operating expenses		518,294		406,084		283,978		179,995		96,882
Income (loss) from operations		34,322		23,191		15,274		8,571		(2,528)
Other income (expense), net:										
Interest income		2,984		2,283		869		416		1
Other income (expense), net		1,399		10		(306)		(42)		(13)
Total other income (expense), net		4,383		2,293		563		374		(12)
Income (loss) before income taxes		38,705		25,484		15,837		8,945		(2,540)
(Benefit from) provision for income taxes		(3,441)		(39,686)		2,638		2,448		(904)
Net income (loss)	\$	42,146	\$	65,170	\$	13,199	\$	6,497	\$	(1,636)
Net income (loss) per share attributable to common stockholders, basic and diluted: ⁽²⁾										
Basic	\$	0.38	\$	0.60	\$	0.13	\$	(0.58)	\$	(0.41)
Diluted	\$	0.37	\$	0.57	\$	0.12	\$	(0.58)	\$	(0.41)
Weighted—average shares used to compute net income (loss) per share attributable to common stockholders: ⁽²⁾	_									
Basic	1	11,450,443	10	8,833,028		55,835,265		44,138,922		43,141,236
Diluted	1	13,431,850	11	3,364,712		60,637,584		44,138,922		43,141,236
Other Financial Information:										
Adjusted EBITDA(3)	\$	76,989	\$	49,658	\$	24,097	\$	10,965	\$	(366)

(1) Includes depreciation and amortization expense for the years ended December 31, 2019, 2018, 2017, 2016 and 2015 of \$3,263, \$2,225, \$1,140, \$438, and \$153 respectively.

- (2) For years ended December 31, 2019, 2018, and 2017, see Note 11 of the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K for an explanation of the calculations of our net income (loss) per share attributable to common stockholders. For years ended December 31, 2016 and 2015, see our Annual Report on Form 10-K for the year ended December 31, 2017 for an explanation of the calculations of our net income (loss) per share attributable to common stockholders.
- (3) See "— Adjusted EBITDA" below for more information and for a reconciliation of Adjusted EBITDA to net income (loss), the most directly comparable financial measure calculated and presented in accordance with GAAP.
- (4) See Note 2 of the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K for an explanation of the impact of adoption of ASC 606.

	December 31,									
	2019(2)			2018(1)	2017		2016			2015
					(in	thousands)				
Consolidated Balance Sheet Data:										
Cash, cash equivalents, and investments	\$	171,612	\$	157,687	\$	137,709	\$	74,250	\$	61,363
Property and equipment, net		27,950		24,269		16,563		12,780		7,147
Working capital		145,196		131,355		114,238		56,547		52,751
Total assets		393,623		268,290		176,594		100,331		77,781
Total liabilities		136,768		74,179		49,569		35,605		20,534
Convertible preferred stock		_		_				132,698		73,378
Total stockholders' equity (deficit)		256,855		194,111		127,025		(67,972)		(16,131)

(1) See Note 2 of the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K for an explanation of the impact of adoption of ASC 606.

(2) See Note 2 of the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K for an explanation of the impact of adoption of ASC 842.

Adjusted EBITDA

To provide investors with additional information regarding our financial results, we monitor and have presented within this Annual Report on Form 10-K Adjusted EBITDA, which is a non-GAAP financial measure. This non-GAAP financial measure is not based on any standardized methodology prescribed by U.S. generally accepted accounting principles, or GAAP, and is not necessarily comparable to similarly titled measures presented by other companies.

We define Adjusted EBITDA as net income (loss), adjusted to exclude: depreciation and amortization, stock-based compensation expense, acquisition-related expenses, other (income) expense, net, and the (benefit from) provision for income taxes. We have presented Adjusted EBITDA in this Annual Report on Form 10-K because it is a key measure used by our management and board of directors to understand and evaluate our operating performance, generate future operating plans, and make strategic decisions regarding the allocation of capital. In particular, we believe that the exclusion of certain items in calculating Adjusted EBITDA can produce a useful measure for period-to-period comparisons of our business.

We use Adjusted EBITDA to evaluate our operating performance and trends and make planning decisions. We believe Adjusted EBITDA helps identify underlying trends in our business that could otherwise be masked by the effect of the expenses that we exclude. Accordingly, we believe that Adjusted EBITDA provides useful information to investors and others in understanding and evaluating our operating results, enhancing the overall understanding of our past performance and future prospects, and allowing for greater transparency with respect to key financial metrics used by our management in its financial and operational decision-making. In addition, we evaluate our Adjusted EBITDA in relation to our revenue. We refer to this as Adjusted EBITDA margin and define it as Adjusted EBITDA divided by total revenue.

Our Adjusted EBITDA is not prepared in accordance with GAAP, and should not be considered in isolation of, or as an alternative to, measures prepared in accordance with GAAP. There are a number of limitations related to the use of Adjusted EBITDA rather than net income (loss), which is the most directly comparable GAAP equivalent. Some of these limitations are:

- Adjusted EBITDA excludes depreciation and amortization expense and, although these are non-cash expenses, the assets being depreciated may have to be replaced in the future;
- Adjusted EBITDA excludes stock-based compensation expense, which will be, for the foreseeable future, a significant recurring expense for our business and an important part of our compensation strategy;
- Adjusted EBITDA excludes acquisition-related expenses incurred by us during a reporting period, which may not be reflective of our
 operational performance during such period, for acquisitions that have been completed as of the filing date of our annual or quarterly report (as
 applicable) relating to such period;
- Adjusted EBITDA does not reflect other (income) expense, net which primarily includes interest income earned on our cash, cash equivalents, and investments, sublease income and net foreign exchange gains and losses;
- Adjusted EBITDA does not reflect the (benefit from) provision for income taxes; and
- other companies, including companies in our industry, may calculate Adjusted EBITDA differently, which reduces its usefulness as a comparative measure.

Because of these limitations, we consider, and you should consider, Adjusted EBITDA together with other operating and financial performance measures presented in accordance with GAAP.

The following table presents a reconciliation of Adjusted EBITDA to net income (loss), the most directly comparable measure calculated in accordance with GAAP, for each of the periods presented.

	Year Ended December 31,									
		2019	2	2018(2)(3)		2017		2016		2015
					(in	thousands)				
Reconciliation of Adjusted EBITDA:										
Net income (loss)	\$	42,146	\$	65,170	\$	13,199	\$	6,497	\$	(1,636)
Depreciation and amortization		7,817		5,029		3,795		2,072		1,122
Stock-based compensation expense		34,301		20,794		5,028		322		1,040
Acquisition-related expenses(1)		549		644				—		
Other (income) expense, net		(4,383)		(2,293)		(563)		(374)		12
(Benefit from) provision for income taxes		(3,441)		(39,686)		2,638		2,448		(904)
Adjusted EBITDA	\$	76,989	\$	49,658	\$	24,097	\$	10,965	\$	(366)

(1) Acquisition-related expenses relate to acquisition costs incurred during the years ended December 31, 2019 and 2018. Refer to Note 3 and Note 16 to our consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K for further information.

- (2) In December 2019, we revised our definition of Adjusted EBITDA to exclude the impact of acquisition-related expenses. This changed definition more accurately reflects management's view of our business and financial performance. Adjusted EBITDA for the year ended December 31, 2018 has been restated for comparison purposes. There were no acquisition-related expenses incurred during the years ended December 31, 2017, 2016 or 2015.
- (3) See Note 2 of the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K for an explanation of the impact of adoption of ASC 606.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes and other financial information included elsewhere in this report. Some of the information contained in this discussion and analysis or elsewhere in this report, including information with respect to our plans and strategy for our business and our performance and future success, includes forward-looking statements that involve risks and uncertainties. See "Special Note Regarding Forward-Looking Statements." You should review the "Risk Factors" section of this Annual Report on Form 10-K for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion rules. These rules regarding non-GAAP financial measures under Securities and Exchange Commission rules. These rules regarding non-GAAP financial measures require supplemental explanation and reconciliation, which is included elsewhere in this Annual Report on Form 10-K. Investors should not consider non-GAAP financial measures in isolation from or in substitution for, financial information presented in compliance with U.S. generally accepted accounting principles, or GAAP.

Company Overview

CarGurus is a global, online automotive marketplace connecting buyers and sellers of new and used cars. Using proprietary technology, search algorithms, and innovative data analytics, we provide information and analysis that create a differentiated automotive search experience for consumers. Our trusted marketplace empowers users with unbiased third-party validation on pricing and dealer reputation as well as other information that aids them in finding "Great Deals from Top-Rated Dealers." In addition to the United States, we operate online marketplaces under the CarGurus brand in Canada, the United Kingdom, Germany, Italy, and Spain. In the United Kingdom, we also operate the PistonHeads online marketplace as an independent brand.

We generate marketplace subscription revenue from dealers primarily through Listings, and Dealer Display subscriptions, and advertising and other revenue from automobile manufacturers and other auto-related brand advertisers as well as partnerships with financing services companies. We generated revenue of \$588.9 million in 2019, \$454.1 million in 2018, and \$316.9 million in 2017, representing year-over-year increases of 30% in 2019 and 43% in 2018.

In 2019, we generated net income of \$42.1 million and our Adjusted EBITDA was \$77.0 million, compared to a net income of \$65.2 million and Adjusted EBITDA of \$49.7 million in 2018, and a net income of \$13.2 million and Adjusted EBITDA of \$24.1 million in 2017. See "Selected Consolidated Financial Data — Adjusted EBITDA" for more information regarding our use of Adjusted EBITDA, a non-GAAP financial measure, and a reconciliation of Adjusted EBITDA to our net income.

We have two reportable segments, United States and International. See Note 13 of our consolidated financial statements included in Item 8 of this Annual Report on Form 10-K for more information.

Key Business Metrics

We regularly review a number of metrics, including the key metrics listed below, to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections, and make operating and strategic decisions. We believe it is important to evaluate these metrics for the United States and International segments. The International segment derives revenues from marketplace subscriptions, advertising services, and other revenues from customers outside of the United States. International markets perform differently from the United States market due to a variety of factors, including our operating history in the market, our rate of investment, market size, market maturity, competition and other dynamics unique to each country.

Monthly Unique Users

For each of our websites, we define a monthly unique user as an individual who has visited such website within a calendar month, based on data as measured by Google Analytics. We calculate average monthly unique users as the sum of the monthly unique users in a given period, divided by the number of months in that period. We count a unique user the first time a computer or mobile device with a unique device identifier accesses one of our websites during a calendar month. If an individual accesses a website using a different device within a given month, the first access by each such device is counted as a separate unique user. We view our average monthly unique users as a key indicator of the quality of our user experience, the effectiveness of our advertising and traffic acquisition, and the strength of our brand awareness. Measuring unique users is important to us and we believe it provides useful information to our investors because our marketplace subscription revenue depends, in part, on our ability to provide dealers with connections to our users and exposure to our marketplace audience. We define connections as interactions between consumers and dealers on our marketplace through phone calls, email, managed text and chat, and clicks to access the dealer's website or map directions to the dealership.

	Year En	ded December 31,	31,				
Average Monthly Unique Users	2019	2018	2017				
	(in	thousands)					
United States	36,804	34,275	24,469				
International	10,353 (1)	4,280	2,451				
Total	47,157	38,555	26,920				

(1) Includes users from the PistonHeads website.

Monthly Sessions

We define monthly sessions as the number of distinct visits to our websites that take place each month within a given time frame, as measured and defined by Google Analytics. We calculate average monthly sessions as the sum of the monthly sessions in a given period, divided by the number of months in that period. A session is defined as beginning with the first page view from a computer or mobile device and ending at the earliest of when a user closes their browser window, after 30 minutes of inactivity, or each night at midnight (i) Eastern Time for our United States and Canada websites, (ii) Greenwich Mean Time for our U.K. websites and (iii) Central European Time (or Central European Summer Time when daylight savings is observed) for our Germany, Italy, and Spain websites, as applicable. A session can be made up of multiple page views and visitor actions, such as performing a search, visiting vehicle detail pages, and connecting with a dealer. We believe that measuring the volume of sessions in a time period, when considered in conjunction with the number of unique users in that time period, is an important indicator to us of consumer satisfaction and engagement with our marketplace, and we believe it provides useful information to our investors because the more satisfied and engaged consumers we have, the more valuable our service is to dealers.

	Yea	ar Ended December 3	er 31,					
Average Monthly Sessions	2019	2018	2017					
		(in thousands)						
United States	99,412	91,798	64,758					
International	24,955 (3	1) 9,873	5,365					
Total	124,367	101,671	70,123					

(1) Includes sessions from the PistonHeads website.

Number of Paying Dealers

A paying dealer is a dealer, based on a distinct associated inventory feed, that subscribes to one of our paid Listings packages or Dealer Display advertising and audience targeting products at the end of a defined period. The number of paying dealers we have is important to us and we believe it provides valuable information to investors because it is indicative of the value proposition of our marketplace products, as well as our sales and marketing success, including our ability to retain paying dealers and develop new dealer relationships.

	As of December 31,				
Number of Paying Dealers	2019	2018	2017		
United States	28,990	27,534	25,122		
International	7,125 (1)	3,938	2,548		
Total	36,115	31,472	27,670		

(1) Includes paying dealers from the PistonHeads website.

Average Annual Revenue per Subscribing Dealer (AARSD)

We measure the average annual revenue we receive from each paying dealer. We define AARSD, which is measured at the end of a defined period, as the total marketplace subscription revenue during the trailing 12 months divided by the average number of paying dealers during the same trailing 12-month period. This information is important to us, and we believe it provides useful information to investors because we believe that our ability to grow AARSD is an indicator of the value proposition of our products and the return on investment, or ROI, our paying dealers realize from our products. In addition, increases in AARSD, which we believe reflect the value of exposure to our engaged audience in relation to subscription cost, are driven by our ability to grow the volume of connections to our users and the quality of those connections, which result in increased opportunity to upsell package levels and cross-sell additional products to our paying dealers.

	As of December 31,							
Average Annual Revenue per Subscribing Dealer (AARSD)		2019 2018				2017		
United States	\$	17,576	\$	14,819	\$	12,055		
International	\$	5,399	(1)\$	4,778	\$	4,904		
Consolidated	\$	15,757	\$	13,718	\$	11,544		

(1) Excludes revenue and dealers for dealers that subscribe to the (i) PistonHeads website as it was acquired on January 8, 2019, and therefore, data for the trailing 12-month revenue calculation is not available and (ii) Italy website as it began earning marketplace subscription revenue in April 2019, and therefore, data for the trailing 12-month revenue calculation is not available.

Adjusted EBITDA

We define Adjusted EBITDA as net income, adjusted to exclude: depreciation and amortization, stock-based compensation expense, acquisitionrelated expense, other (income) expense, net, and the (benefit from) provision for income taxes. We monitor and have presented Adjusted EBITDA in this Annual Report on Form 10-K as a non-GAAP financial measure to supplement the financial information we present on a GAAP basis to provide investors with additional information regarding our financial results. Adjusted EBITDA, as a non-GAAP financial measure, should not be considered in isolation from, or as an alternative to, measures prepared in accordance with GAAP. We consider, and you should consider, Adjusted EBITDA together with other operating and financial performance measures presented in accordance with GAAP. Also, our non-GAAP measure may not necessarily be comparable to similarly titled measures presented by other companies.

We believe that Adjusted EBITDA is a key indicator of our operating results. For further explanation of the uses and limitations of this measure and a reconciliation of our Adjusted EBITDA to the most directly comparable GAAP measure, net income, please see "Selected Consolidated Financial Data — Adjusted EBITDA."

Components of Consolidated Statements of Operations

Revenue

We derive revenue from two primary sources: (1) marketplace subscription revenue, which consists primarily of Listings, and Dealer Display subscriptions, and (2) advertising and other revenue, which consists primarily of display advertising revenue from auto manufacturers and other auto-related brand advertisers as well as partnerships with financing services companies.

Marketplace Subscription Revenue

We offer multiple types of marketplace Listings packages to our dealers through our platform: Restricted Listings (formerly referred to as Basic Listings), which is free; and various levels of Listings packages, which each require a paid subscription under a monthly, quarterly, semiannual, or annual subscription basis. Contractual subscriptions for customers generally auto-renew on a monthly basis and are cancellable by dealers with 30 days' advance notice at the end of the committed term. We also offer all dealers on our platform access to our Dealer Dashboard, which includes a performance summary, Dealer Insights tool, and user review management platform. Dealers subscribing to a paid Listings package also have access to the Pricing Tool and Market Analysis tool are available only to paying dealers. Subscription pricing is determined based on a dealer's inventory size, region, and our assessment of the connections and ROI the platform will provide them.

In addition to listing inventory in our marketplace and providing access to the Dealer Dashboard, we offer dealers subscribing to one of our Enhanced, Featured, or Featured Priority Listings packages other subscription advertising and customer acquisition products, including Dealer Display, pursuant to which dealers can buy display advertising that appears in our marketplace, and on other sites on the internet, and for which such advertisements can be targeted by the user's geography, search history, CarGurus website activity (including showing users relevant vehicles from a dealer's inventory that they have not yet discovered on our marketplace), and a number of other targeting factors, allowing dealers to increase their visibility with in-market consumers and drive qualified traffic for dealers.

We also offer paid listings and display products through the PistonHeads website.

Advertising and Other Revenue

Advertising and other revenue consists primarily of non-dealer display advertising revenue from auto manufacturers and other auto-related brand advertisers sold on a cost per thousand impressions, or CPM, basis. An impression is an advertisement loaded on a web page. In addition to advertising sold on a CPM basis, we also have advertising sold on a cost per click basis. Auto manufacturers and other brand advertisers can execute advertising campaigns that are targeted across a wide variety of parameters, including demographic groups, behavioral characteristics, specific auto brands, categories such as Certified Pre-Owned, and segments such as hybrid vehicles.

Advertising and other revenue also includes revenue from partnerships with certain financing services companies pursuant to which we enable eligible consumers on our United States website to pre-qualify for financing on cars from dealerships that offer financing through such companies. Our revenues from these financing partnerships are based on a funded-loan basis.

For a description of our revenue accounting policies, see "- Critical Accounting Policies and Significant Estimates."

Cost of Revenue

Cost of revenue primarily consists of costs related to supporting and hosting our product offerings. These costs include salaries, benefits, incentive compensation, and stock-based compensation for our customer support team and third-party service provider costs such as data center and networking expenses, allocated overhead costs, depreciation and amortization expense associated with our property and equipment, and amortization of capitalized website development costs. We allocate overhead costs, such as rent and facility costs, information technology costs, and employee benefit costs, to all departments based on headcount. As such, general overhead expenses are reflected in cost of revenue and each operating expense category. We expect these expenses to increase as we continue to scale our business and introduce new products.

Operating Expenses

Sales and Marketing

Sales and marketing expenses consist primarily of personnel and related expenses for our sales and marketing team, including salaries, benefits, incentive compensation, commissions, stock-based compensation, and travel costs; costs associated with consumer marketing, such as traffic acquisition, brand building, and public relations activities; costs associated with dealer marketing, such as content marketing, customer and promotional events, and industry events; amortization of internal-use software; and allocated overhead costs. For periods subsequent to the adoption of ASC 606, a portion of our commissions that are related to obtaining a new contract is capitalized and amortized over the estimated benefit period of customer relationships. All other sales and marketing costs are expensed as incurred. We expect sales and marketing expenses to increase as we grow our audience and attempt to strengthen our brand awareness and, as informed by trends in our business and the competitive landscape of our market, fluctuate from quarter to quarter, which will impact our quarterly results of operations.

Product, Technology, and Development

Product, technology, and development expenses, which include research and development costs, consist primarily of personnel and related expenses for our development team, including salaries, benefits, incentive compensation, stock-based compensation and allocated overhead costs. Other than website development and internal-use software costs as well as other costs that qualify for capitalization, research and development costs are expensed as incurred. We expect product, technology, and development expenses to increase as we develop new solutions and make improvements to our existing platform.

General and Administrative

General and administrative expenses consist primarily of personnel and related expenses for our executive, finance, legal, human resources, and administrative teams, including salaries, benefits, incentive compensation, and stock-based compensation, in addition to the costs associated with professional fees for external legal, accounting and other consulting services, insurance premiums, payment processing and billing costs, and allocated overhead costs. We expect general and administrative expenses to increase as we grow our business.

Depreciation and Amortization

Depreciation and amortization expenses consist of depreciation on property and equipment, which includes leasehold improvements, and amortization of intangible assets.

Other Income, Net

Other income, net consists primarily of interest income earned on our cash, cash equivalents, and investments, sublease income and net foreign exchange gains and losses.

(Benefit from) Provision for Income Taxes

We are subject to federal and state income taxes in the United States and taxes in foreign jurisdictions in which we operate. We have recognized a benefit from income taxes for the years ended December 31, 2019 and 2018 as a result of stock-based compensation benefits recorded and a provision for income taxes for the year ended December 31, 2017 as a result of our consolidated taxable income position. We recognize deferred tax assets and liabilities based on temporary differences between the financial reporting and income tax bases of assets and liabilities using statutory rates. We regularly assess the need to record a valuation allowance against net deferred tax assets if, based upon the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. Our valuation allowance against our net deferred tax assets as of December 31, 2019 was immaterial. We have not provided a valuation allowance against our net deferred tax assets at December 31, 2018 or 2017.

Results of Operations

The following table sets forth our selected consolidated statements of operations data for each of the periods indicated. The period-to-period comparison of financial results is not necessarily indicative of future results.

	Year Ended December 31,					
	 2019	2018		2017		
D		(in thousands)				
Revenue:						
Marketplace subscription	\$ 526,043	\$ 405,780	\$	282,664		
Advertising and other	 62,873	48,306		34,197		
Total revenue	588,916	454,086		316,861		
Cost of revenue	36,300	24,811		17,609		
Gross profit	 552,616	429,275		299,252		
Operating expenses:						
Sales and marketing	393,844	315,939		236,165		
Product, technology, and development	69,462	47,866		22,470		
General and administrative	50,434	39,475		22,688		
Depreciation and amortization	4,554	2,804		2,655		
Total operating expenses	 518,294	406,084		283,978		
Income from operations	 34,322	23,191		15,274		
Other income, net:						
Interest income	2,984	2,283		869		
Other income (expense), net	1,399	10		(306)		
Total other income, net	 4,383	2,293		563		
Income before income taxes	38,705	25,484		15,837		
(Benefit from) provision for income taxes	(3,441)	(39,686)		2,638		
Net income	\$ 42,146	\$ 65,170	\$	13,199		

	Year Ended December 31,						
	 2019 2018		2018		2017		
		(in	thousands)				
Additional Financial Data							
Revenue							
United States	\$ 555,007	\$	437,166	\$	307,472		
International	33,909		16,920		9,389		
Total	\$ 588,916	\$	454,086	\$	316,861		
Income (Loss) from Operations	 						
United States	\$ 73,872	\$	58,387	\$	41,586		
International	(39,550)		(35,196)		(26,312)		
Total	\$ 34,322	\$	23,191	\$	15,274		

The following table sets forth our selected consolidated statements of operations data as a percentage of revenue for each of the periods indicated.

	Year I	Ended December 31,	
	2019	2018	2017
Revenue:			
Marketplace subscription	89%	89%	89%
Advertising and other	11	11	11
Total revenue	100%	100%	100%
Cost of revenue	6	5	6
Gross profit	94	95	94
Operating expenses:			
Sales and marketing	66	69	74
Product, technology, and development	12	11	7
General and administrative	9	9	7
Depreciation and amortization	1	1	1
Total operating expenses	88	90	89
Income from operations	6	5	5
Other income, net:			
Interest income	0	0	0
Other income (expense), net	0	0	(0)
Total other income, net	0	0	0
Income before income taxes	6	5	5
(Benefit from) provision for income taxes	(1)	(9)	1
Net income	7%	14%	4%

	Year Ended December 31,						
	2019	2018	2017				
Additional Financial Data							
Revenue							
United States	94%	96%	97%				
International	6	4	3				
Total	100%	100%	100%				
Income (Loss) from Operations							
United States	13%	13%	13%				
International	(7)	(8)	(8)				
Total	6%	5%	5%				

Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

Revenue

Revenue by Source

	Year Ended I	Decem	ber 31,		Cha	nge			
	2019		2018		Amount	%			
	 (dollars in thousands)								
Revenue									
Marketplace subscription	\$ 526,043	\$	405,780	\$	120,263		30%		
Advertising and other	62,873		48,306		14,567		30		
Total	\$ 588,916	\$	454,086	\$	134,830	. <u></u>	30%		
Percentage of total revenue:									
Marketplace subscription	89%	,	89%)					
Advertising and other	11		11						
Total	 100%	,	100%)					



Overall revenue increased \$134.8 million, or 30%, in the year ended December 31, 2019 compared to the year ended December 31, 2018. Both marketplace subscription revenue and advertising and other revenue increased by 30%.

Marketplace subscription revenue increased \$120.3 million in the year ended December 31, 2019 compared to the year ended December 31, 2018 and represented 89% of total revenue in both 2019 and 2018. This increase in marketplace subscription revenue was attributable primarily to a 19% growth in our AARSD for United States dealers to \$17,576 as of December 31, 2019 from \$14,819 as of December 31, 2018 and to a 15% growth in the number of United States and International paying dealers, to 36,115 as of December 31, 2019 from 31,472 as of December 31, 2018. The increase in our AARSD for United States dealers was driven by new products, unit pricing and packaging as well as the investments made in building our brand and growing our audience, which resulted in growth in volume of connections. The increase in paying dealers was driven by the efforts of our sales and marketing teams to subscribe dealers to our Listings packages as well as by the acquisition of PistonHeads.

Advertising and other revenue increased \$14.6 million in the year ended December 31, 2019 compared to the year ended December 31, 2018 and represented 11% of total revenue in both 2019 and 2018. The increase in advertising and other revenue was driven by a 31% increase in the number of impressions delivered, which was partially offset by a 12% decline in the average price per thousand impressions over the same period. The increase was also attributable to a \$5.0 million increase in revenue earned from partnerships with financing services companies.

Revenue by Segment

Year Ended December 31,			Change		
 2019		2018		Amount	%
		(dollars in t	housai	ıds)	
\$ 555,007	\$	437,166	\$	117,841	27%
33,909		16,920		16,989	100
\$ 588,916	\$	454,086	\$	134,830	30%
94%)	96%)		
6		4			
 100%)	100%)		
\$ 	2019 \$ 555,007 33,909 \$ 588,916 94% 6	2019 \$ 555,007 \$ 33,909 \$ 588,916 \$ 94%	2019 2018 (dollars in t \$ 555,007 \$ 437,166 33,909 16,920 \$ 588,916 \$ 454,086 94% 96% 6 4	2019 2018 (dollars in thousand the state of th	2019 2018 Amount (dollars in thousands) \$ 555,007 \$ 437,166 \$ 117,841 33,909 16,920 16,989 \$ 588,916 \$ 454,086 \$ 134,830 94% 96% 6 4

United States revenue increased \$117.8 million, or 27%, in the year ended December 31, 2019 compared to the year ended December 31, 2018, due primarily to a 19% increase in AARSD for United States dealers and a 5% increase in the number of United States paying dealers.

International revenue increased \$17.0 million, or 100%, in the year ended December 31, 2019 compared to the year ended December 31, 2018, due primarily to an 81% increase in the number of International paying dealers and a 13% increase in AARSD for International dealers. The increase in International revenue was also partially attributable to revenue from PistonHeads, which was acquired in January 2019.

Cost of Revenue

	Year Ended I	Decen	ıber 31,		Change	2	
	2019 2018		2018		Amount	%	
			(dollars in t	nousa	nds)		
Cost of revenue	\$ 36,300	\$	24,811	\$	11,489		46%
Percentage of total revenue	6%		5%				

Cost of revenue increased \$11.5 million, or 46%, in the year ended December 31, 2019 compared to the year ended December 31, 2018. The increase was due primarily to a \$4.4 million increase in fees related to provisioning advertising campaigns on our websites, a \$3.1 million increase in data center and hosting costs, a \$1.9 million increase in costs related to connecting consumers with dealers through a variety of methods, including phone calls, email, and managed text and chat, a \$1.0 million increase in costs to improve the content on our websites and a \$1.0 million increase in amortization and depreciation.

Operating Expenses

Sales and Marketing Expenses

		Year Ended	Decem	ber 31,		2					
	2019		2019 2018		2018		9 2018			Amount	%
				(dollars in t	housai	nds)					
Sales and marketing	\$	393,844	\$	315,939	\$	77,905	25%				
Percentage of total revenue		66%		69%							

Sales and marketing expenses increased \$77.9 million, or 25%, in the year ended December 31, 2019 compared to the year ended December 31, 2018. This increase was due primarily to an increase in advertising and search engine marketing costs of \$48.5 million as well as an increase of \$11.6 million in salaries and employee-related costs, exclusive of stock-based compensation expense and commissions expense, which increased \$4.9 million and \$4.5 million, respectively. The increase in salaries and employee-related costs, stock-based compensation expense and commissions expense was due primarily to a 25% increase in headcount. This increase for the year ended December 31, 2019 was also due in part to a \$2.4 million increase in marketing events and market research due to efforts to increase brand awareness, a \$1.9 million increase in consulting fees, a \$1.6 million increase in software subscriptions, and a \$0.9 million increase in lease costs due to new office facilities at 121 First St. in Cambridge, Massachusetts. The increase for the year ended December 31, 2019 was also partially attributable to sales and marketing expenses associated with the acquisition of PistonHeads.

Product, Technology, and Development Expenses

	Year Ended December 31, 2019 2018 (dollars in thousa \$ 69,462 \$ 47,866 \$			Change			
	 2019		2018		Amount	%	
			(dollars in t	housai	nds)		
Product, technology, and development	\$ 69,462	\$	47,866	\$	21,596	4	5%
Percentage of total revenue	12%)	11%	1			

Product, technology, and development expenses increased \$21.6 million, or 45%, in the year ended December 31, 2019 compared to the year ended December 31, 2018. The increase was due primarily to a \$13.7 million increase in salaries and employee-related costs, exclusive of stock-based compensation expense, which increased \$5.3 million. The increase in salaries and employee-related costs and stock-based compensation expense was due primarily to a \$12% increase in headcount to support our growth and product innovations. This increase for the year ended December 31, 2019 was also due in part to a \$1.2 million increase in lease costs due to new office facilities at 121 First St. in Cambridge, Massachusetts, and a \$0.9 million increase in software subscriptions. The increase for the year ended December 31, 2019 was also partially attributable to product, technology, and development expenses associated with the acquisition of PistonHeads.

General and Administrative Expenses

	 Year Ended	Year Ended December 31, 2019 2018 (dollars in the 50,434 \$ 39,475 9% 9%			Change	2
	 2019		2018		Amount	%
			(dollars in t	housa	nds)	
General and administrative	\$ 50,434	\$	39,475	\$	10,959	28%
Percentage of total revenue	9%)	9%			

General and administrative expenses increased \$11.0 million, or 28%, in the year ended December 31, 2019 compared to the year ended December 31, 2018. The increase was due to a \$3.7 million increase in salaries and employee-related costs, exclusive of stock-based compensation expense, which increased \$3.3 million. The increase in salaries and employee-related costs and stock-based compensation expense was due primarily to a 30% increase in headcount to support our expanded operations as we continue to grow our business. This increase for the year ended December 31, 2019 was also due in part to a \$2.1 million increase in payment processing and billing costs due to increased customer transactions driven by an increase in number of paying dealers, a \$1.3 million increase in recruiting, insurance, and professional service fees, a \$0.7 million increase in software subscriptions, and a \$0.5 million increase in lease costs due to new office facilities at 121 First St. in Cambridge, Massachusetts, offset by a \$0.6 million decrease in bad debt expense due to improved collections and focus on reducing churn.

	 Year Ended	Decem	ber 31,			
	 2019		2018 Amount		Amount	%
			(dollars in t	hous	sands)	
Depreciation and amortization	\$ 4,554	\$	2,804	\$	1,750	62%
Percentage of total revenue	1%)	1%			

Depreciation and amortization expenses increased \$1.8 million, or 62%, in the year ended December 31, 2019 compared to the year ended December 31, 2018, due primarily to an increase in depreciation related to the additional leasehold improvements required for new office facilities at 121 First St. in Cambridge, Massachusetts as well as amortization of intangible assets.

Other Income, net

		Year Ended December 31,				Change					
		2019 20		2018	Amount		%				
	(dollars in thousands)										
Other income, net											
Interest income	\$	2,984	\$	2,283	\$	701	31%				
Other income		1,399		10		1,389	NM				
Total other income, net	\$	4,383	\$	2,293	\$	2,090	91%				
Percentage of total revenue:											
Interest income		0%)	0%	,)						
Other income		0		0							
Total other income, net		0%)	0%	,)						

NM — Not Meaningful

Other income, net increased \$2.1 million, or 91%, in the year ended December 31, 2019 compared to the year ended December 31, 2018. The \$0.7 million increase in interest income is primarily due to the higher monthly average of investment of cash in certificates of deposit and money market funds over the course of 2019 arising from our increased cash from operations. The \$1.4 million increase in other income, net was primarily due to \$0.8 million of sublease income, as well as a \$0.6 million increase in realized foreign currency gain mainly resulting from the settlement of an intercompany note payable in connection with the PistonHeads acquisition during the year ended December 31, 2019.

Benefit from Income Taxes

		Year Ended D	eceml	oer 31,		Change	
	2019 2018 Amount		2018		Amount	%	
				(dollars in th	ousan	ds)	
Benefit from income taxes	\$	(3,441)	\$	(39,686)	\$	(36,245)	(91)%
ercentage of total revenue		(1)%		(9)%			

The difference in benefit from income taxes recorded during the years ended December 31, 2019 and 2018, was principally due to \$40.8 million of tax benefits related to excess stock-based compensation benefits recorded during the year ended December 31 2018, as compared to \$10.9 million of tax benefits related to excess stock-based compensation benefits recorded during 2019, as well as an increase in federal and state research and development tax credits during 2019 as compared to 2018.

Income (Loss) from Operations by Segment

	Year Ended December 31,				Char	ıge					
	2019		2018		2018		201			Amount	%
		(dollars in thousands)									
United States	\$	73,872	\$	58,387	\$	15,485	27%				
International		(39,550)		(35,196)		(4,354)	(12)				
Total	\$	34,322	\$	23,191	\$	11,131	48%				
Percentage of segment revenue:											
United States		13%		13%	,						
International		NM		NM							

NM — Not Meaningful

United States income from operations increased \$15.5 million, or 27%, in the year ended December 31, 2019 compared to the year ended December 31, 2018. This increase was due to an increase in revenue of \$117.8 million, offset in part by the increases in operating expenses of \$92.5 million and cost of revenue of \$9.8 million.

International loss from operations increased \$4.4 million, or 12% in the year ended December 31, 2019 compared to the year ended December 31, 2018. The increase in International loss from operations reflects our continued investment into international markets.

Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

Revenue

Revenue by Source

		Year l Decem		,	_	Chan	ge			
		2018		2017		Amount	%			
	(dollars in thousands)									
Revenue										
Marketplace subscription	\$	405,780	\$	282,664	\$	123,116	44	4%		
Advertising and other		48,306		34,197		14,109	4	1		
Total	\$	454,086	\$	316,861	\$	137,225	43	13%		
Percentage of total revenue:								-		
Marketplace subscription		89%	,	89%						
Advertising and other		11		11						
Total		100%	,	100%						

Overall revenue increased \$137.2 million, or 43%, in the year ended December 31, 2018 compared to the year ended December 31, 2017. Marketplace subscription revenue increased by 44% while advertising and other revenue grew by 41%.

Marketplace subscription revenue increased \$123.1 million in the year ended December 31, 2018 compared to the year ended December 31, 2017, and represented 89% of total revenue in both 2018 and 2017. This increase in marketplace subscription revenue was attributable primarily to a 14% growth in the number of United States and International paying dealers, to 31,472 as of December 31, 2018 from 27,670 as of December 31, 2017, and to a 23% growth in our AARSD for United States dealers to \$14,819 as of December 31, 2018 from \$12,055 as of December 31, 2017. The increase in paying dealers was driven by the efforts of our sales and marketing teams to subscribe dealers to our Listings packages. The increase in our AARSD for United States dealers was driven by the investments made in building our brand and growing our audience which resulted in growth in volume of connections.

Advertising and other revenue increased \$14.1 million in the year ended December 31, 2018 compared to the year ended December 31, 2017, and represented 11% of total revenue in 2018 and 2017. The increase in advertising and other revenue was due primarily to a 70% increase in the number of impressions, which was partially offset by a 17% decrease in the average price per thousand impressions, in 2018 compared to 2017.

		Year Decem	Ended ber 31			Cha	nge
	2018			2017	Amount		%
				(dollars in t	housar	ıds)	
Revenue							
United States	\$	437,166	\$	307,472	\$	129,694	42%
International		16,920		9,389		7,531	80
Total	\$	454,086	\$	316,861	\$	137,225	43%
Percentage of total revenue:							
United States		96%)	97%			
International		4		3			
Total		100%	,	100%			

United States revenue increased \$129.7 million, or 42%, in the year ended December 31, 2018 compared to the year ended December 31, 2017, due primarily to a 10% increase in the number of United States paying dealers and a 23% increase in AARSD for United States dealers.

International revenue increased \$7.5 million, or 80%, in the year ended December 31, 2018 compared to the year ended December 31, 2017, due primarily to a 55% increase in the number of International paying dealers. International paying dealers grew to 3,938 at December 31, 2018 from 2,548 at December 31, 2017.

Cost of Revenue

	Year l Decem	Ended ber 31,			Change			
	2018		2017		Amount	%		
	 (dollars in thou				ıds)			
Cost of revenue	\$ 24,811	\$	17,609	\$	7,202	41%		
Percentage of total revenue	5%)	6%					

Cost of revenue increased \$7.2 million, or 41%, in the year ended December 31, 2018 compared to the year ended December 31, 2017. The increase was due primarily to a \$2.7 million increase in costs related to connecting consumers with dealers through a variety of methods, including phone calls, email, and managed text and chat, a \$1.7 million increase in fees related to provisioning advertising campaigns on our websites, a \$1.4 million increase in data center and hosting costs, and a \$1.2 million increase in amortization and depreciation.

Operating Expenses

Sales and Marketing Expenses

	Year Decem	Ended ber 31,			Change		
	 2018		2017	Amount		%	
	 (dollars in thous				ds)		
s and marketing	\$ 315,939	\$	236,165	\$	79,774	349	
ntage of total revenue	69%		74%				

Sales and marketing expenses increased \$79.8 million, or 34%, in the year ended December 31, 2018 compared to the year ended December 31, 2017. The increase was due primarily to an increase in advertising costs of \$65.5 million as well as an increase of \$8.1 million in salaries and employee-related costs (excluding commission expense) resulting from a 25% increase in headcount and payroll taxes of \$0.9 million driven by the employer portion of FICA taxes on the exercise of stock awards and vesting of restricted stock units, or RSUs. This increase for the year ended December 31, 2018 was also due in part to a \$3.2 million increase in stock-based compensation expense related to RSUs resulting from the increase in headcount, a \$1.7 million increase in marketing events and market research due to efforts to increase brand awareness, a \$0.8 million increase in rent due to a new office building in Cambridge and rent increase in Ireland, and a \$0.8 million increase in

software subscriptions. These increases were partially offset by a \$2.7 million decrease in commission expense driven by our adoption of Accounting Standards Codification, or ASC, Topic 606, *Revenue from Contracts with Customers*, or ASC 606, during the year ended December 31, 2018.

Product, Technology, and Development Expenses

		Ended ber 31,			Change		
	2018		2017		Amount	%	
		ds)					
Product, technology, and development	\$ 47,866	\$	22,470	\$	25,396	113%	
Percentage of total revenue	11%)	7%				

Product, technology, and development expenses increased \$25.4 million, or 113%, in the year ended December 31, 2018 compared to the year ended December 31, 2017. The increase was due primarily to a \$13.8 million increase in salaries and employee-related costs resulting from a 59% increase in headcount and payroll taxes of \$1.2 million driven by the employer portion of FICA taxes on the exercise of stock awards and vesting of RSUs. This increase for the year ended December 31, 2018 was also due in part to an \$8.1 million increase in stock-based compensation expense related to RSUs resulting from the increase in headcount, \$0.8 million increase in rent due to a new office building in Cambridge, a \$0.5 million increase in software subscriptions and a \$0.5 million increase in consulting fees.

General and Administrative Expenses

	Year l Decem	Ended ber 31,			Change		
	 2018		2017	Amount		%	
			(dollars in t	ds)			
General and administrative	\$ 39,475	\$	22,688	\$	16,787	74%	
Percentage of total revenue	9%		7%				

General and administrative expenses increased \$16.8 million, or 74%, in the year ended December 31, 2018 compared to the year ended December 31, 2017. The increase was due primarily to an increase of \$4.7 million of insurance, legal, consulting and external reporting fees driven by costs incurred to comply with public company requirements as well as an increase of \$4.4 million in salaries and employee-related costs resulting from a 45% increase in headcount and payroll taxes of \$0.3 million driven by the employer portion of FICA taxes on the exercise of stock awards and vesting of RSUs. This increase for the year ended December 31, 2018 was also due in part to a \$4.1 million increase in stock-based compensation expense related to RSUs due to the increase in headcount, a \$1.8 million increase in payment processing and billing costs due to increased customer transactions with higher billings resulting from revenue growth and a \$0.6 million increase in bad debt expense.

Depreciation and Amortization Expenses

	Year Decem	Ended ber 31,			Change			
	 2018		2017	A	mount	%		
			(dollars in t	housand	s)			
n and amortization	\$ 2,804	\$	2,655	\$	149	6%		
e of total revenue	1%		1%					

Depreciation and amortization expenses increased \$0.1 million, or 6%, in the year ended December 31, 2018 compared to the year ended December 31, 2017.

Other Income, net

	Year Decem	Ended ber 31,			Chang	e
	2018	2017		Amount		%
			(dollars in t	housan	ds)	
Other income, net						
Interest income	\$ 2,283	\$	869	\$	1,414	163%
Other income (expense)	10		(306)		316	103
Total other income, net	\$ 2,293	\$	563	\$	1,730	307%
Percentage of total revenue:						
Interest income	0%)	0%			
Other income (expense)	0		(0)			
Total other income, net	0%	,	0%			

Other income, net increased \$1.7 million, or 307%, in the year ended December 31, 2018 compared to the year ended December 31, 2017. The \$1.4 million increase in interest income is primarily due to the investment of cash in certificates of deposit, money market funds arising from our increased cash from operations, and an increase in interest rates. The \$0.3 million increase in other income (expense) is primarily due the Euro strengthening against the U.S. Dollar in 2017 and remaining relatively flat in 2018.

(Benefit from) Provision for Income Taxes

	Year E Deceml				Change			
	 2018		2017	017 Amount		%		
	 (dollars in the				usands)			
(Benefit from) provision for income taxes	\$ (39,686)	\$	2,638	\$	(42,324)	NM		
Percentage of total revenue	(9)%		1%					

NM — Not Meaningful

The benefit from income taxes recorded during the year ended December 31, 2018, as compared to the provision for income taxes recorded during the year ended December 31, 2017, was principally due to \$40.8 million in stock-based compensation benefits recorded during the year ended December 31, 2018, as well as an increase in federal and state research and development tax credits and a lower federal statutory tax rate due to The Tax Cuts and Jobs Act, or the TCJA, as compared to year ended December 31, 2017.

Income (Loss) from Operations by Segment

	Year E Decemi		,		Change				
	2018	2017			Amount	%			
			(dollars in t	housan	ds)				
United States	\$ 58,387	\$	41,586	\$	16,801	40%			
International	(35,196)		(26,312)		(8,884)	(34)			
Total	\$ 23,191	\$	15,274	\$	7,917	52%			
Percentage of segment revenue:									
United States	13%		14%						
International	NM		NM						

NM — Not Meaningful

United States income from operations increased \$16.8 million, or 40%, in the year ended December 31, 2018 compared to the year ended December 31, 2017. This increase was due to an increase in revenue of \$129.7 million, offset in part by the increases in cost of revenue of \$6.8 million and operating expenses of \$106.1 million.

International loss from operations increased \$8.9 million, or 34% in the year ended December 31, 2018 compared to the year ended December 31, 2017. The increase in International loss from operations reflects our continued investment into international markets and expansion into new countries.

Liquidity and Capital Resources

Cash, Cash Equivalents and Investments

At December 31, 2019 and 2018, our principal sources of liquidity were cash and cash equivalents of \$59.9 million and \$34.9 million, respectively, and investments in certificates of deposit with terms of greater than 90 days but less than one year of \$111.7 million and \$122.8 million, respectively.

Sources and Uses of Cash

Our cash flows from operating, investing, and financing activities, as reflected in the Consolidated Statements of Cash Flows, are summarized in the following table:

	Year Ended December 31,								
	2019			2018		2017			
			(in	thousands)					
Net cash provided by operating activities	\$	70,116	\$	51,723	\$	25,691			
Net cash used in investing activities		(22,257)		(80,278)		(12,598)			
Net cash (used in) provided by financing activities		(14,693)		(23,395)		44,780			
Impact of foreign currency on cash		(1)		(44)		159			
Net increase (decrease) in cash, cash equivalents, and									
restricted cash	\$	33,165	\$	(51,994)	\$	58,032			

Our operations have been financed primarily from operating activities and our IPO. We generated cash from operating activities of \$70.1 million during 2019, \$51.7 million during 2018, and \$25.7 million during 2017, and we expect to generate cash from operations for the foreseeable future.

We believe that our existing sources of liquidity will be sufficient to fund our operations for at least the next 12 months from the date of the filing of this Annual Report on Form 10-K. However, our future capital requirements will depend on many factors, including our rate of revenue growth, the expansion of our sales and marketing activities, the support of our product, technology, and development efforts, the timing and extent of our investment in international markets and mergers and acquisitions. To the extent that existing cash, cash equivalents, and investments and cash from operations are insufficient to fund our future activities, we may need to raise additional funds through a public or private equity or debt financing. Additional funds may not be available on terms favorable to us, or at all.

Operating Activities

Cash provided by operating activities of \$70.1 million during 2019 was due primarily to net income of \$42.1 million, adjusted for \$34.3 million of stock-based compensation expense, \$8.4 million of amortization of deferred contract costs and \$7.8 million of depreciation and amortization, partially offset by \$3.7 million of deferred taxes. Cash provided by operating activities was also attributable to a \$4.3 million increase in accounts payable, a \$2.2 million increase in accounts payable, a \$2.2 million increase in deferred revenue, partially offset by a \$16.0 million increase in deferred contract costs, a \$9.6 million increase in accounts receivable, and a \$1.5 million decrease in lease obligations.

Cash provided by operating activities of \$51.7 million during 2018 was due primarily to net income of \$65.2 million, adjusted for \$20.8 million of stock-based compensation expense, \$5.0 million of depreciation and amortization and \$3.7 of amortization of deferred contract costs, partially offset by \$39.0 million of deferred taxes. Cash provided by operating activities was also attributable to a \$9.3 million increase in accounts payable, a \$4.5 million increase in deferred revenue, a \$4.3 million increase in lease obligations, a \$2.7 million increase in accrued expenses, accrued income taxes, and other current liabilities, partially offset by a \$13.0 million increase in deferred contract costs, and an \$11.8 million increase prepaid expenses, prepaid income taxes, and other assets.

Cash provided by operating activities of \$25.7 million during 2017 was due primarily to net income of \$13.2 million, adjusted for \$5.0 million of stock-based compensation expense and \$3.8 million of depreciation and amortization, partially offset by \$1.1 million of deferred taxes. Cash provided by operating activities was also attributable to a \$6.2 million increase in accounts payable and a \$5.2 million increase in accrued expenses, accrued income taxes and other current liabilities, partially offset by a \$7.0 million increase in accounts receivable and a \$2.3 million increase in prepaid expenses, prepaid income taxes, and other assets.

Investing Activities

Cash used in investing activities of \$22.3 million during 2019 was due to \$19.2 million of acquisition cash payments, \$11.2 million of purchases of property and equipment and \$3.0 million related to the capitalization of website development costs. This was offset by \$188.9 million of maturities of certificates of deposit, net of investments in certificates of deposit of \$177.8 million.

Cash used in investing activities of \$80.3 million during 2018 was due to \$212.8 million of investments in certificates of deposit, net of maturities of \$140.0 million, \$6.0 million of purchases of property and equipment, and \$1.5 million related to the capitalization of website development costs.

Cash used in investing activities of \$12.6 million during 2017 was due to \$50.0 million of investments in certificates of deposit, net of maturities of \$44.8 million, \$5.2 million of purchases of property and equipment, and \$2.2 million related to the capitalization of website development costs.

Financing Activities

Cash used in financing activities of \$14.7 million during 2019 was due primarily to the payment of withholding taxes and option costs on net share settlements of restricted stock units and stock options of \$16.5 million, partially offset by \$1.8 million related to the proceeds from the exercise of stock options.

Cash used in financing activities of \$23.4 million during 2018 reflects \$25.9 million of payment of withholding taxes on net share settlements of restricted stock units, and a \$1.1 million payment of IPO costs, partially offset by \$3.6 million related to the proceeds from the exercise of stock options.

Cash provided by financing activities of \$44.8 million during 2017 primarily reflects \$44.4 million of IPO proceeds, net of offering costs, and \$0.4 million related to the proceeds from the exercise of stock options.

Contractual Obligations and Known Future Cash Requirements

Our operating lease obligations consist of various leases for office space in: Boston, Massachusetts; Cambridge, Massachusetts; Detroit, Michigan; Los Angeles, California; Dublin, Ireland; and London, United Kingdom with various lease terms expected to continue through 2038. The terms of our Massachusetts lease agreements provide for rental payments that increase on an annual basis. We recognize rent expense on a straight-line basis over the lease period.

We do not have any debt or material finance obligations as of December 31, 2019. All of our property, equipment, and internal-use software have been purchased with cash, with the exception of \$0.6 million of unpaid property and equipment and immaterial amounts related to obligations under one finance lease as of December 31, 2019. We have no material long-term purchase obligations outstanding with any vendors or third parties.

Set forth below is information concerning our known contractual obligations at December 31, 2019 that are fixed and determinable.

	Less than Total 1 year 1 to 3 years 3 to 5 years							More than 5 years		
	 IUldi		1 year		thousands)	3	to 5 years		Jyears	
Operating lease obligations	\$ 409,257	\$	13,150	\$	30,521	\$	44,981	\$	320,605	
Total contractual obligations	\$ 409,257	\$	13,150	\$	30,521	\$	44,981	\$	320,605	

The table above includes leases signed but not yet commenced as of December 31, 2019 and is based on expected commencement dates.

On January 16, 2020 we completed an acquisition which is described in Note 16 of our consolidated financial statements included in Item 8 of this Annual Report on Form 10-K.

Off-Balance Sheet Arrangements

As of December 31, 2019 and 2018, we did not have any off-balance sheet arrangements, other than those entered into prior to the adoption of ASC 842 and leases that are less than twelve months in duration, that have or are reasonably likely to have a current or future material effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures, or capital resources.

Critical Accounting Policies and Significant Estimates

In preparing our consolidated financial statements in accordance with GAAP, we are required to make estimates and assumptions that affect the amounts of assets, liabilities, revenue, costs and expenses, and disclosure of contingent assets and liabilities that are reported in the consolidated financial statements and accompanying disclosures. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates.

We believe that of our significant accounting policies, which are described in Note 2 to the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K, the following accounting policies involve a greater degree of judgment and complexity. Accordingly, these are the policies we believe are the most critical to aid in fully understanding and evaluating our consolidated financial condition and results of our operations.

Revenue Recognition

We derive revenue from two primary sources: (1) marketplace subscription revenue, which consists primarily of Listings, and Dealer Display subscriptions, and (2) advertising and other revenue, which consists primarily of display advertising revenue from auto manufacturers and other auto-related brand advertisers as well as partnerships with financing services companies.

Marketplace Subscription Revenue

We offer multiple types of marketplace Listings packages to our dealers through our platform: Restricted Listings (formerly referred to as Basic Listings), which is free; and various levels of Listings packages, which each require a paid subscription under a monthly, quarterly, semiannual, or annual subscription basis. Contractual subscriptions for customers generally auto-renew on a monthly basis and are cancellable by dealers with 30 days' advance notice at the end of the committed term. We also offer all dealers on our platform access to our Dealer Dashboard, which includes a performance summary, Dealer Insights tool, and user review management platform. Dealers subscribing to a paid Listings package also have access to the Pricing Tool and Market Analysis tool are available only to paying dealers. Subscription pricing is determined based on a dealer's inventory size, region, and our assessment of the connections and ROI the platform will provide them.

Customers do not have the right to take possession of our software.

In addition to listing inventory in our marketplace and providing access to the Dealer Dashboard, we offer dealers subscribing to one of our Enhanced, Featured, or Featured Priority Listings packages other subscription advertising and customer acquisition products, including Dealer Display, pursuant to which dealers can buy display advertising that appears in our marketplace, and on other sites on the internet, and for which such advertisements can be targeted by the user's geography, search history, CarGurus website activity (including showing users relevant vehicles from a dealer's inventory that they have not yet discovered on our marketplace), and a number of other targeting factors, allowing dealers to increase their visibility with in-market consumers and drive qualified traffic for dealers.

Payment is typically due on first day of each calendar month and is recorded as accounts receivable or short-term deferred revenue when payment is received in advance of services being delivered to the customers.

Advertising and Other Revenue

Advertising and other revenue consists primarily of non-dealer display advertising revenue from auto manufacturers and other auto-related brand advertisers sold on a cost per thousand impressions, or CPM, basis. An impression is an advertisement loaded on a web page. In addition to advertising sold on a CPM basis, we also have advertising sold on a cost per click basis. Auto manufacturers and other brand advertisers can execute advertising campaigns that are targeted across a wide variety of parameters, including demographic groups, behavioral characteristics, specific auto brands, categories such as Certified Pre-Owned, and segments such as hybrid vehicles. We do not provide minimum impression guarantees or other types of minimum guarantees in our contracts with customers. Pricing is primarily based on advertisement size and position on our websites and mobile applications, and fees are billed monthly in arrears. Unbilled accounts receivables relate to services rendered in the current period, but generally not invoiced until the subsequent period.

We sell advertising directly to auto manufacturers and other auto related brand advertisers, as well as indirectly through revenue sharing arrangements with advertising exchange partners. Company-sold advertising is not subject to revenue sharing arrangements. Company-sold advertising revenue is recognized based on the gross amount charged to the advertiser. Partner-sold advertising revenue is recognized based on the net amount of revenue received from the content partners.

Revenue from advertising sold directly by us is recorded on a gross basis because we are the principal in the arrangement, control the ad placement and timing of the campaign, and establish the selling price. We enter into contractual arrangements directly with advertisers and are directly responsible for the fulfillment of the contractual terms including any remedy for issues with such fulfillment.

Advertising revenue subject to revenue sharing agreements between us and advertising exchange partners is recognized based on the net amount of revenue received from the partner. The advertising partner is responsible for fulfillment, including the acceptability of the services delivered. In partner-sold advertising arrangements, the advertising partner has a direct contractual relationship with the advertiser. There is no contractual relationship between us and the advertiser for partner-sold transactions. When an advertising partner sells advertisements, the partner is responsible for fulfilling the advertisements, and accordingly, we have determined the advertising partner is the principal in the arrangement. Additionally, for auction-based partner agreements, we have latitude in establishing the floor price, but the final price established by the exchange server is at market rates.

Customers are billed monthly in arrears and payment terms are generally thirty to sixty days from the date invoiced.

Advertising and other revenue also includes revenue from partnerships with certain financing services companies pursuant to which we enable eligible consumers on our United States website to pre-qualify for financing on cars from dealerships that offer financing through such companies. Our revenues from these financing partnerships are based on a funded-loan basis.

Prior to adoption of ASC 606

We recognize revenue when all of the following conditions are satisfied: (1) there is persuasive evidence of an arrangement; (2) the service has been provided to the customer; (3) the collection of fees is reasonably assured; and (4) the amount of fees to be paid by the customer is fixed or determinable.

We recognize marketplace subscription revenue on a monthly basis as revenue is earned and advertising and other revenue as impressions are delivered. Revenue is presented net of any taxes collected from customers.

We assess arrangements with multiple deliverables under ASU No. 2009-13, Revenue Recognition (Topic 605), *Multiple-Deliverable Revenue Arrangements* — *a Consensus of the FASB Emerging Issues Task Force*. Pursuant to ASU 2009-13, in order to treat deliverables in a multiple-element arrangement as separate units of accounting, the deliverables must have stand-alone value upon delivery. If the deliverables have stand-alone value upon delivery, we account for each deliverable separately. We have concluded that each element in the arrangement has stand-alone value as the individual services can be sold separately. In addition, there is no right of refund once a service has been delivered. Therefore, we have concluded that each element of the arrangement is a separate unit of accounting. While these arrangements are considered multiple element-arrangements, the recognition of the units of accounting follow a consistent ratable recognition given the pattern over which services are provided.

We establish sales allowances at the time of revenue recognition based on our history of adjustments and credits provided to our customers. Sales allowances relate primarily to credits issued for service interruption. In assessing the adequacy of the sales allowance, we evaluate our history of adjustments and credits made through the date of the issuance of the financial statements. Estimated sales adjustments and credits and ultimate losses may vary from actual results which could be material to the financial statements; however, to date, actual sales allowances have been materially consistent with our estimates. Sales allowances are recorded as a reduction to revenue in the consolidated statements of operations.

Following adoption of ASC 606

In May 2014, the Financial Accounting Standards Board, or FASB, issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which modifies how all entities recognize revenue, and consolidates revenue recognition guidance into one ASC Topic (ASC Topic 606, *Revenue from Contracts with Customers*). Since we ceased to be an emerging growth company as of December 31, 2018, we adopted the standard during the fourth quarter of 2018 and applied the modified retrospective method of adoption with a cumulative catch-up adjustment to the opening balance of retained earnings at January 1, 2018. Under this method, we applied the revised guidance for the year of adoption and applied ASC Topic 605, *Revenue Recognition*, in the prior years. As a result, we applied ASC 606 only to contracts that were not yet completed as of January 1, 2018. We recognized a cumulative catch-up adjustment to the opening balance of retained earnings at the effective date for contracts that still required performance by us on January 1, 2018. For contracts that were modified before the effective date, we exercised the use of the practical expedient and reflected the aggregate effect of all modifications when identifying performance obligations, determining the transaction price and allocating transaction price, which did not have a material effect on the adjustment to retained earnings.

ASC 606 outlines a comprehensive five-step revenue recognition model based on the principle that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. To achieve this core principle, we apply the following five steps:

- 1) Identify the contract with a customer
- 2) Identify the performance obligations in the contract
- 3) Determine the transaction price
- 4) Allocate the transaction price to performance obligations in the contract
- 5) Recognize revenue when or as we satisfy a performance obligation

Disaggregation of Revenue

The following table summarizes revenue from contracts with customers by revenue source for the years ended December 31, 2019, 2018 and 2017.

	2019	 2018	2017
Revenue by Revenue Stream			
Marketplace subscription revenue	\$ 526,043	\$ 405,780	\$ 282,664
Advertising and other revenue	62,873	48,306	34,197
Total	\$ 588,916	\$ 454,086	\$ 316,861

We provide disaggregation of revenue based on the marketplace subscription versus advertising and other revenue classification in the table above and based on geographic region (see Note 13) as we believe these categories best depict how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors.

Marketplace Subscription Revenue

For dealer listings, we provide a single similar service each day for a period of time. Each time increment (i.e. day), rather than the underlying activities, is distinct and substantially the same and therefore our performance obligation is to provide a series of daily activities over the contract term. Similar to the dealer listings, the dealer display advertising is considered a promise to provide a single similar service each day. Each time increment is distinct and substantially the same and therefore our performance obligation is to provide a series of daily activities over the contract term.



Total consideration for marketplace subscription revenue is stated within the contracts. There are no contractual cash refund rights, but credits may be issued to a customer at our sole discretion. At an individual contract level, there is also no variable consideration, such as sales allowance, that needs to be included in the transaction price. However, at a portfolio level, we recognize that there are times when there is a customer satisfaction issue or other circumstance that will lead to a credit. Due to the known possibility of future credits, a monthly sales allowance review is performed to defer revenue at a portfolio level for such future adjustments in the period of incurrence. We establish sales allowances at the time of revenue recognition based on our history of adjustments and credits provided to our customers. In assessing the adequacy of the sales allowance, we evaluate our history of adjustments and credits made through the date of the issuance of the financial statements. Estimated sales adjustments, credits and losses may vary from actual results which could lead to material adjustments to the financial statements. To date, actual sales allowances have been materially consistent with our estimates. Sales allowances are recorded as a reduction to revenue in the consolidated statements of operations.

Performance obligations are satisfied over time as the customer simultaneously receives and consumes the benefit of the service. Revenue is recognized ratably over the subscription period beginning on the date we start providing services to the customer under the contract. Revenue is presented net of any taxes collected from customers.

Advertising and Other Revenue

For advertising revenue, the performance obligation is to publish the agreed upon campaign on our websites and load the related impressions.

Advertising contracts state the transaction price within the agreement with payment being based on the number of clicks or impressions delivered on our websites. Total consideration is based on output and deemed variable consideration constrained by an agreed upon delivery schedule. Additionally, there are generally no contractual cash refund rights. Certain contracts do contain the right for credits in situations in which impressions are not displayed in compliance with contractual specifications. At an individual contract level, we may give a credit for a customer satisfaction issue or other circumstance. Due to the known possibility of future credits, a monthly review is performed to defer revenue at an individual contract level for such future adjustments in the period of incurrence.

As consideration is driven by the number of impressions delivered on the CarGurus websites, the consideration for each period is allocated to the period in which the service was rendered.

Performance obligations for company-sold advertising revenue and partner-sold advertising revenue are satisfied over time as impressions are delivered. Revenue is recognized based on the total number of impressions delivered within the specified period. Revenue from advertising sold directly by us is recognized based on the gross amount charged to the advertiser and advertising revenue sold by partners is recognized based on the net amount of revenue received from the content partners. Revenue is presented net of any taxes collected from customers.

Other revenue includes revenue from contracts for which the performance obligation is a series of distinct services with the same level of effort daily. For these contracts, we estimate the value of the variable consideration in determining the transaction price and allocates it to the performance obligation. Revenue is estimated and recognized on a ratable basis over the contractual term. We reassess the estimate of variable consideration at each reporting period.

Contracts with Multiple Performance Obligations

We periodically enter into arrangements that include Listings and Dealer Display within marketplace subscription revenue. These contracts include multiple promises that we evaluate to determine if the promises are separate performance obligations. Performance obligations are identified based on services to be transferred to a customer that are distinct within the context of the contractual terms. Once the performance obligations have been identified, we determine the transaction price, which includes estimating the amount of variable consideration to be included in the transaction price, if any. If required, the transaction price is allocated to each performance obligation in the contract based on a relative standalone selling price ("SSP") method as the performance obligation is being satisfied. For our arrangements that include Listings and Dealer Display, the performance obligations were satisfied over a consistent period of time and therefore the allocations did not impact the revenue recognized.

Costs to Obtain a Contract

Commissions paid to sales representatives and payroll taxes are considered costs to obtain a contract. Under ASC 606, the costs to obtain a contract require capitalization and amortization of those costs over the period of benefit. Although the guidance specifies the accounting for an individual contract with a customer, as a practical expedient, we have opted to apply the guidance to a portfolio of contracts with similar characteristics. We have opted to apply another practical expedient to immediately expense the incremental cost of obtaining a contract when the underlying related asset would have been amortized over one year or less. As such, we applied this practical expedient to advertising contracts as the term is one year or less and these contracts do not renew automatically. The practical expedient is not applicable to marketplace subscription contracts as the period of benefit including renewals is anticipated to be greater than one year as commissions paid on contract renewals are not commensurate with the commissions paid on the initial contract. The assets are periodically assessed for impairment.

For marketplace subscription customers, the commissions paid on contracts with new customers, in addition to any commission amount related to incremental sales, are capitalized and amortized over the estimated benefit period of the customer relationship taking into account factors such as peer estimates of technology lives and customer lives as well as our own historical data. Commissions paid that are not directly related to obtaining a new contract are expensed as incurred.

Additionally, we allocate employer payroll tax expense to the commission expense in proportion to the overall payroll taxes paid during the respective period. As such, capitalized payroll taxes are amortized in the same manner as the underlying capitalized commissions.

The assets recognized for costs to obtain a contract were \$3.2 million, \$12.5 million and \$20.1 million as of January 1, 2018, December 31, 2018 and December 31, 2019, respectively. Amortization expense recognized during the years ended December 31, 2019 and 2018 related to costs to obtain a contract was \$8.4 million and \$3.7 million, respectively.

Capitalized Website Development and Internal-Use Software Costs

We capitalize certain costs associated with the development of our websites and internal-use software products after the preliminary project stage is complete and until the software is ready for its intended use. Research and development costs incurred during the preliminary project stage or costs incurred for data conversion activities, training, maintenance, and general and administrative or overhead costs are expensed as incurred. Capitalization begins when the preliminary project stage is complete, management authorizes and commits to the funding of the software project with the required authority, it is probable the project will be completed, the software will be used to perform the functions intended and certain functional and quality standards have been met. Qualified costs incurred during the operating stage of our software applications relating to upgrades and enhancements are capitalized to the extent it is probable that they will result in added functionality, while costs that cannot be separated between maintenance of, and minor upgrades and enhancements to, internal-use software are expensed as incurred.

Capitalized website and software development costs are amortized on a straight-line basis over their estimated useful life of three years beginning with the time when it is ready for intended use. Capitalized internal-use software costs are amortized on a straight-line basis over their estimated useful life of the term of the hosting arrangement, taking into consideration several other factors such as, but not limited to, options to extend the hosting arrangement or options to terminate the hosting arrangement, beginning with the time when it is ready for intended use. Amounts amortized are presented through operating expense, rather than depreciation or amortization. Management evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.

During the years ended December 31, 2019 and 2018, we capitalized \$4.2 million and \$2.0 million of website development costs, respectively. We recorded amortization expense associated with our capitalized website development costs of \$1.6 million, \$1.5 million and \$0.8 million for the years ended December 31, 2019, 2018, and 2017, respectively.

During the year ended December 31, 2019, we capitalized \$2.6 million and \$0.6 million of internal-use software in other non-current assets and in prepaid expenses and prepaid income taxes, respectively. We recorded amortization expense associated with its internal-use software of \$0.1 million for the year ended December 31, 2019.

Business Combinations

Valuation of Acquired Assets and Liabilities

We measure all consideration transferred in a business combination at its acquisition-date fair value. Consideration transferred is determined by the acquisition-date fair value of assets transferred, liabilities assumed, including contingent consideration obligations, as applicable. We measure goodwill as the excess of the consideration transferred over the net of the acquisition-date amounts of assets acquired less liabilities assumed.

We make significant assumptions and estimates in determining the fair value of the acquired assets and liabilities as of the acquisition date, especially the valuation of intangible assets and certain tax positions. We record estimates as of the acquisition date and reassess the estimates at each reporting period up to one year after the acquisition date. Changes in estimates made prior to finalization of purchase accounting are recorded to goodwill.

Intangible Assets

Intangible assets are recorded at their estimated fair value at the date of acquisition. We amortize intangible assets over their estimated useful lives on a straight-line basis. Amortization is recorded over the relevant estimated useful lives ranging from three to eleven years.

We evaluate the useful lives of these assets on an annual basis and test for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets. If the estimate of an intangible asset's remaining useful life is changed, we amortize the remaining carrying value of the intangible asset prospectively over the revised remaining useful life.

For the year ended December 31, 2019, we did not identify any impairment of our intangible assets. We did not have intangible assets prior to the closing of the PistonHeads acquisition on January 8, 2019.

Goodwill

Goodwill is recorded when consideration paid in a purchase acquisition exceeds the fair value of the net assets acquired. Goodwill is not amortized, but rather is tested for impairment annually or more frequently if facts and circumstances warrant a review. Conditions that could trigger a more frequent impairment assessment include, but are not limited to, a significant adverse change in certain agreements, significant underperformance relative to historical or projected future operating results, an economic downturn affecting automotive marketplaces, increased competition, a significant reduction in our stock price for a sustained period or a reduction of our market capitalization relative to net book value.

We have determined that we have two reporting units, United States and International, as of and for the year ended December 31, 2019. We evaluate impairment annually on October 1 by comparing the estimated fair value of each reporting unit to its carrying value. We estimate fair value using a discounted cash flow model based on our most recent forecast at the time of our annual impairment test.

For the year ended December 31, 2019, we did not recognize an impairment charge. We did not have goodwill prior to the closing of the PistonHeads acquisition on January 8, 2019.

Income Taxes

We account for income taxes in accordance with the liability method. Under this method, deferred tax assets and liabilities are recognized based on temporary differences between the financial reporting and income tax bases of assets and liabilities using statutory rates. In addition, this method requires a valuation allowance against net deferred tax assets if, based upon the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

We account for uncertain tax positions recognized in the consolidated financial statements by prescribing a more-likely-than-not threshold for financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. Interest and penalties, if applicable, related to uncertain tax positions would be recognized as a component of income tax expense. We have no recorded liabilities for uncertain tax positions as of December 31, 2019 or 2018.

The Tax Cuts and Jobs Act subjects a U.S. shareholder to tax on global intangible low-taxed income, or GILTI, earned by certain foreign subsidiaries. An entity can make an accounting policy election, per the FASB Staff Q&A, Topic 740, No. 5, Accounting for Global Intangible Low-Taxed Income, either to recognize deferred taxes for temporary basis differences expected to reverse as GILTI in future years or to provide for the tax expense related to GILTI in the year the tax is incurred as a period expense only. We elected to account for GILTI as a period cost in the year the tax is incurred.

Stock-Based Compensation

For stock-based awards issued under our stock-based compensation plans, the fair value of each award is determined on the date of grant. We recognize compensation expense for service-based awards on a straight-line basis over the requisite service period for each separate vesting portion of the award, with the amount of compensation expense recognized at any date at least equaling the portion of the grant-date fair value of the award that is vested at that date.

Certain awards granted prior to the IPO were subject to service-based vesting conditions and a performance-based vesting condition achieved upon a liquidity event, defined as either a change of control or an initial public offering. The SEC's declaration of effectiveness of the registration statement on Form S-1 on October 11, 2017 satisfied the liquidity event performance condition. Upon the achievement of the liquidity event, we recorded previously unrecognized cumulative stock-based compensation expense of \$2.5 million related to these awards. Although the performance-based vesting condition was satisfied, under the terms of the awards, the settlement of such vested RSUs and the issuance of common stock with respect to such vested RSUs, occurred on April 10, 2018, one hundred eighty-one days after the satisfaction of the performance condition.

Given the absence of an active market for our common stock prior to the IPO, our board of directors was required to estimate the fair value of our stock at the time of each grant of a stock-based award. We believe that the members of our board of directors at all relevant times had sufficient business, finance or venture capital experience to make such estimates. We and our board of directors utilized various valuation methodologies in accordance with the framework of the American Institute of Certified Public Accountants' Technical Practice Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*, to estimate the fair value of our common stock. Each valuation methodology includes estimates and assumptions that required judgment. These estimates and assumptions include a number of objective and subjective factors used to determine the value of our common stock at each grant date, including the following factors: (1) prices paid for our convertible preferred stock, which we had sold to outside investors in arm's-length transactions, and the rights, preferences, and privileges of our convertible preferred stock and common stock; (2) valuations performed by an independent valuation specialist; (3) our stage of development and revenue growth; (4) the fact that the grants of stock-based awards involved illiquid securities in a private company; and (5) the likelihood of achieving a liquidity event for the common stock underlying the stock-based awards, such as an IPO or sale of the Company, given prevailing market conditions.

We believe this methodology was reasonable based upon our internal peer company analyses, and further supported by arm's-length transactions involving our convertible preferred stock. As our common stock was not actively traded, the determination of fair value involved assumptions, judgments, and estimates. If different assumptions had been made, stock-based compensation expense, consolidated net income, and consolidated net income per share could have been significantly different.

For RSUs issued under the stock-based compensation plans prior to the IPO, the fair value of each grant was calculated based on the estimated fair value of our common stock on the date of grant. We estimated the fair value of most stock option awards on the date of grant using the Black-Scholes option-pricing model.

For RSUs granted subsequent to the IPO, the fair value is determined based on the closing price of our Class A common stock as reported on the Nasdaq Global Select Market on the date of grant.

We issue shares for stock option exercises and RSUs out of our shares available for issuance. No options were granted during the years ended December 31, 2019, 2018, and 2017.

We account for forfeitures when they occur. The tax effect of differences between tax deductions related to stock compensation and the corresponding financial statement expense compensation are recorded to tax expense. Excess tax benefits recognized on stock-based compensation expense are classified as an operating activity in the consolidated statements of cash flows.

During 2019, 2018 and 2017, we recorded tax benefits of \$11.1 million, \$40.8 million and \$0.7 million, respectively, related to differences between tax deductions related to stock compensation and the corresponding financial statement expense compensation.

Recently Issued Accounting Pronouncements

Information concerning recently issued accounting pronouncements may be found in Note 2 to our consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

Market risk represents the risk of loss that may affect our financial position due to adverse changes in financial market prices and rates. We are exposed to market risks as described below.

Interest Rate Risk

We did not have any long-term borrowings as of December 31, 2019 or 2018.

We had cash, cash equivalents, and investments of \$171.6 million and \$157.7 million at December 31, 2019 and 2018, respectively, which consist of bank deposits, money market funds and certificates of deposit with maturity dates ranging from six to nine months. Such interest-earning instruments carry a degree of interest rate risk. To date, fluctuations in interest income have not been material to the operations of the business.

We do not enter into investments for trading or speculative purposes and have not used any derivative financial instruments to manage our interest rate risk exposure.

Inflation Risk

We do not believe that inflation has had a material effect on our business, financial condition, or results of operations to date. However, if our costs were to become subject to significant inflationary pressures, we may not be able to fully offset such higher costs through price increases. Our inability or failure to do so could harm our business, operating results, and financial condition.

Foreign Currency Exchange Risk

Historically, because our operations and sales have been primarily in the United States, we have not faced any significant foreign currency risk. As of December 31, 2019 and 2018, we have foreign currency exposures in the British pound, the Euro and the Canadian dollar, although such exposure is not significant. During the year ended December 31, 2019, our foreign currency exposure increased due to an intercompany note payable in connection with the PistonHeads acquisition. The intercompany note payable was settled during the year ended December 31, 2019.

Our foreign subsidiaries have intercompany accounts that are eliminated upon consolidation, and these accounts expose us to foreign currency exchange rate fluctuations. Exchange rate fluctuations on short-term intercompany accounts are recorded in our consolidated statements of operations under the heading other income (expense), net. Long-term intercompany accounts are recorded at their historical rates.

As we expand internationally, our risks associated with fluctuation in currency rates will become greater, and we will continue to reassess our approach to managing these risks.

Item 8. Financial Statements and Supplementary Data.

CarGurus, Inc.

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Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of CarGurus, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of CarGurus, Inc. (the Company) as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income, convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 14, 2020 expressed an unqualified opinion thereon.

Adoption of New Accounting Standards

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for leases in 2019 due to the adoption of Accounting Standards Update (ASU) No. 2016-02, Leases (Topic 842), and the related amendments.

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for revenue and the capitalization and amortization of certain contract acquisition costs in 2018 due to the adoption of Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606), and the related amendments.

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 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. 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.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Revenue Recognition

Description of the Matter For the year ended December 31, 2019, the Company recognized revenue of \$588.9 million. As explained in Note 2 to the consolidated financial statements, the Company recognizes revenue in accordance with ASC Topic 606, *Revenue from Contracts with Customers*, upon transfer of control of promised services to customers in an amount that reflects the consideration the Company expects to receive in exchange for those services.

Auditing management's recognition of revenue was challenging because of the higher extent of audit effort and because the amounts are material to the consolidated financial statements and related disclosures. During our risk assessment process, we identified a higher inherent risk related to revenue primarily due to the size of the account and the volume of activity, as well as the focus on revenue from readers of the financial statements.

How We Addressed the
Matter in Our AuditWe obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's revenue
recognition process, including controls designed to mitigate the risk of override of controls. This included testing controls over
management's review of manual journal entries and revenue related account reconciliations.

We substantively tested the Company's revenue recognized for the year ended December 31, 2019, through a combination of data analytics and tests of details. Our audit procedures included, among others, performing a correlation analysis between the related accounts (i.e., revenue, deferred revenue, account receivables, and cash) and testing the existence of cash receipts tied to revenue recognition. Additionally, we reconciled revenue recognized to the Company's general ledger to test completeness and performed substantive test of details over significant customers deemed to be key items and a representative sample of the remaining transactions.

Realizability of Deferred Tax Assets

Description of the As explained in Note 12 to the consolidated financial statements, the Company had gross deferred tax assets of \$68.6 million and gross deferred tax liabilities of \$26.1 million, resulting in net deferred tax assets of \$42.5 million as of December 31, 2019. As of December 31, 2019, the Company has significant deferred tax assets, including those generated as a result of excess tax deductions related to stock-based compensation awards. Deferred tax assets are reduced by a valuation allowance if, based upon the weight of all available evidence, it is more likely than not that some portion, or all, of the deferred tax assets will not be realized. Based upon the level of historical U.S. earnings and future projections over the period in which the net deferred tax assets are deductible, at this time, management believes it is more likely than not that the Company will realize the benefits of these deductible differences.

Auditing management's assessment of the realizability of its deferred tax assets (including the recognition, measurement, and disclosure of deferred tax assets) was subjective because the assessment process is complex, involves judgment and includes assumptions about the Company's ability to generate sufficient taxable income in future periods to realize these benefits. The Company's ability to generate taxable income may be impacted by various economic and industry conditions.

How We Addressed the Matter in Our Audit We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's income tax process, including the Company's assessment of the realizability of deferred tax assets. This included testing controls over management's review of the deferred tax rollforward and valuation allowance position.

We tested management's assessment of the realizability of deferred tax assets, including future taxable income exclusive of reversing temporary differences and carryforwards. Audit procedures performed, among others, included evaluating the assumptions used by the Company to determine the projections of future taxable income by jurisdiction and testing the completeness and accuracy of the underlying data used in its projections. For example, we tested the Company's scheduling of the reversal of existing temporary taxable differences and compared the projections of future taxable income with the actual results of prior periods as well as management's consideration of current industry and economic trends. In addition, we also assessed the historical accuracy of management's projections and reconciled the projections of future taxable income with other forecasted consolidated financial information prepared by the Company. This analysis is subjective because of the Company's limited history and limited opportunity to implement tax planning strategies at this point in the life cycle of the Company. In addition, we involved our tax professionals to evaluate the application of tax law in the Company's projections of future taxable income.

Business Combinations

Description of the As described in Note 3 to the consolidated financial statements, the Company completed one acquisition during fiscal year 2019 for net consideration of \$19.1 million. The acquisition of PistonHeads Holdco Limited consisted of acquiring the entire issued share capital of Haymarket New4 Ltd. (a company incorporated in England & Wales and now known as PistonHeads Holdco Limited) from Haymarket Media Group Ltd. The transaction was accounted for as a business combination whereby the total purchase price was allocated to assets acquired and liabilities assumed based on the respective fair values.

Auditing the Company's accounting for its acquisition of PistonHeads was complex due to the significant estimation uncertainty in the Company's determination of the fair value of identified intangible assets of \$4.5 million, which consisted of brand name and customer relationships. The significant estimation uncertainty was primarily due to the complexity of the valuation models prepared by management to measure the fair value of the intangible assets and the sensitivity of the respective fair values to the significant underlying assumptions. The significant assumptions used to estimate the fair value of the intangible assets included the discount rates and revenue growth rates. These significant assumptions are especially challenging to audit as they are forward looking and could be affected by future economic and market conditions.

How We Addressed the
Matter in Our AuditWe obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's
valuation of acquired intangible assets. This included testing controls over the Company's estimation process supporting the
recognition and measurement of intangible assets, as well as controls over management's judgments and evaluation of underlying
assumptions regarding the valuation.

Our audit procedures to test the estimated fair value of the acquired intangible assets included, among others, evaluating the Company's valuation methodology used to estimate the fair value of the brand name and customer relationship intangible assets. We involved our valuation professionals to assist with our evaluation of the methodology used by the Company and certain assumptions included in the fair value estimates. For example, our valuation professionals performed independent comparative calculations to estimate the acquired entities' discount rate. Additionally, we evaluated the significant assumptions used by the Company, primarily consisting of projected financial information of the acquired entity (e.g., revenue growth rates), and evaluated the completeness and accuracy of the underlying data supporting the significant assumptions and estimates. Specifically, when evaluating the assumptions related to the revenue growth rates and changes in the business that would drive these forecasted growth rates, we compared the assumptions to historical results of the acquired entity and current industry and economic trends.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2016.

Boston, Massachusetts February 14, 2020

CarGurus, Inc.

Consolidated Balance Sheets

(in thousands, except share and per share data)

		At December 31,		
		2019		2018
Assets				
Current assets:				
Cash and cash equivalents	\$	59,920	\$	34,887
Investments		111,692		122,800
Accounts receivable, net of allowance for doubtful accounts of \$240 and				
\$479, respectively		22,124		13,614
Prepaid expenses and prepaid income taxes		10,452		10,144
Deferred contract costs		9,544		5,253
Other current assets		4,972		7,410
Restricted cash		250		750
Total current assets		218,954		194,858
Property and equipment, net		27,950		24,269
Intangible assets		3,920		_
Goodwill		15,207		—
Operating lease right-of-use assets		59,986		—
Restricted cash		10,553		1,921
Deferred tax assets		42,713		38,886
Deferred contract costs, net of current portion		10,514		7,252
Other non-current assets		3,826		1,104
Total assets	\$	393,623	\$	268,290
Liabilities and stockholders' equity				
Current liabilities:				
Accounts payable	\$	36,731	\$	34,345
Accrued expenses, accrued income taxes and other current liabilities		18,262		18,654
Deferred revenue		9,984		8,811
Deferred rent		_		1,693
Operating lease liabilities		8,781		_
Total current liabilities		73,758		63,503
Deferred rent				9,395
Operating lease liabilities		60,818		
Deferred tax liabilities		284		_
Other non–current liabilities		1,908		1,281
Total liabilities		136,768		74,179
Commitments and contingencies (Note 8)		150,700		, 1,1,5
Stockholders' equity:				
Preferred stock, \$0.001 par value; 10,000,000 shares authorized;				
no shares issued and outstanding		_		_
Class A common stock, \$0.001 par value; 500,000,000 shares authorized;				
91,819,649 and 89,728,223 shares issued and outstanding at				
December 31, 2019 and 2018, respectively		92		90
Class B common stock, \$0.001 par value; 100,000,000 shares authorized;				
20,314,644 and 20,702,084 shares issued and outstanding at				
December 31, 2019 and 2018, respectively		20		21
Additional paid-in capital		205,234		184,216
Retained earnings		51,859		9,713
Accumulated other comprehensive (loss) income		(350)		71
Total stockholders' equity		256,855		194,111
Total liabilities and stockholders' equity	\$	393,623	\$	268,290
	9	333,320	÷	200,200

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

Consolidated Statements of Operations

(in thousands, except share and per share data)

		2019	 2018	 2017
Revenue	\$	588,916	\$ 454,086	\$ 316,861
Cost of revenue(1)		36,300	 24,811	 17,609
Gross profit		552,616	429,275	299,252
Operating expenses:				
Sales and marketing		393,844	315,939	236,165
Product, technology, and development		69,462	47,866	22,470
General and administrative		50,434	39,475	22,688
Depreciation and amortization		4,554	 2,804	 2,655
Total operating expenses		518,294	 406,084	 283,978
Income from operations		34,322	23,191	15,274
Other income, net:				
Interest income		2,984	2,283	869
Other income (expense), net		1,399	10	 (306)
Total other income, net		4,383	 2,293	563
Income before income taxes		38,705	25,484	15,837
(Benefit from) provision for income taxes		(3,441)	(39,686)	2,638
Net income	\$	42,146	\$ 65,170	\$ 13,199
Reconciliation of net income to net income attributable to common stockholders:				
Net income	\$	42,146	\$ 65,170	\$ 13,199
Net income attributable to participating securities				(6,098)
Net income attributable to common stockholders — basic	\$	42,146	\$ 65,170	\$ 7,101
Net income	\$	42,146	\$ 65,170	\$ 13,199
Net income attributable to participating securities		_	_	(5,829)
Net income attributable to common stockholders — diluted	\$	42,146	\$ 65,170	\$ 7,370
Net income per share attributable to common stockholders: (Note 11)				
Basic	\$	0.38	\$ 0.60	\$ 0.13
Diluted	\$	0.37	\$ 0.57	\$ 0.12
Weighted–average number of shares of common stock used in computing net income per share attributable to common stockholders:			 	
Basic		111,450,443	108,833,028	55,835,265
Diluted		113,431,850	113,364,712	60,637,584

(1) Includes depreciation and amortization expense for the years ended December 31, 2019, 2018, and 2017 of \$3,263 \$2,225, and \$1,140, respectively.

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

Consolidated Statements of Comprehensive Income

(in thousands)

	 Year Ended December 31,							
	2019		2018		2017			
Net income	\$ 42,146	\$	65,170	\$	13,199			
Other comprehensive (loss) income:								
Foreign currency translation adjustment	(421)		(157)		258			
Comprehensive income	\$ 41,725	\$	65,013	\$	13,457			

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

Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)

(in thousands, except share data)

	Series Preferred	Stock	Series Preferred	Stock	Series Preferred	Stock	Series Preferred	Stock	Series Preferred	Stock	Class Common	Stock	Class E Common S	tock	Additional Paid—in		Retained Earnings (Accumulated	
Balance at	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Capital	(Loss) Income	Deficit)	Equity
December 31, 2017 Net income	2,824,703	\$ 1,483	2,938,486	\$ 2,295	1,550,612	\$ 1,316	1,673,105	\$ 67,872	1,107,202	\$ 59,732 	14,022,132	\$ 14 	28,044,264	\$28 	\$ 3,714	\$ (30) _	\$ (71,698) \$ 13,199	67,972) 13,199
Stock-based compensation																		
expense Issuance of common stock upon exercise of stock options	_	_	_	_	_	_	_	_	_	_	92,944	_	181,840	_	5,204	_	_	5,204
Issuance of common stock from public offering, net of																		
offering costs	-	_	-	—	—	—	_	—	—	—	3,205,000	3	-	—	43,237	_	—	43,240
Conversion of preferred stock Foreign currency	(2,824,703)	(1,483)	(2,938,486)	(2,295)	(1,550,612)	(1,316)	(1,673,105)	(67,872)	(1,107,202)	(59,732)	60,564,678	61	_	-	132,637	_	_	132,698
translation adjustment																258		258
Balance at December 31, 2017	_	_	_	_	_	_	_	_	_	_	77,884,754	78	28,226,104	28	185,190	228	(58,499) 65,170	127,025 65,170
Net income Stock-based compensation	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	65,170	
expense Issuance of common stock	_	_	_	_	_	_	_	_	_	_	_	_	_	_	21,284	_	_	21,284
upon exercise of stock options	_	_	_	_	_	_	_	_	_	_	3,186,489	3	10,690	_	3,629	_	_	3,632
Issuance of common stock upon vesting of restricted stock													10,050					5,002
units Payment of withholding taxes on net share settlements of											1,781,201	2	_	_	(2)		_	_
equity awards Cumulative adjustment from adoption of revenue recognition	_	_	_	_	_	_	_	-	_	-	(658,931)	_	_	_	(25,885)	_	_	(25,885)
standard Conversion of common stock	_	_	_	_	_	_	_	_	_	_	7,534,710	7	(7,534,710)	(7)	_	_	3,042	3,042
Foreign currency translation																		
adjustment Balance at																(157)		(157)
December 31, 2018 Net income	_	_	_	_	_	_	_	_	_	_	89,728,223	90	20,702,084	21	184,216	71 —	9,713 42,146	194,111 42,146
Stock-based compensation expense	_	_	_	_	_	_	_	_	_	_	_	_	_	_	35,682	_	_	35,682
Issuance of common stock upon exercise of stock											838,928				1,807			1,807
options Issuance of common stock upon vesting of											030,020				1,007			1,007
restricted stock units Payment of	_	_	_	_	_	_	_	_	_	_	1,317,736	1	_	_	(1)	_	_	_
withholding taxes and option costs on net share settlement of restricted stock units and stock																		
options Conversion of common stock	_	_	_	_	_	_	_	_	_	_	(452,678)	1	(387,440)	(1)	(16,470)	_	_	(16,470)
Foreign currency translation											367,440	1	(307,440)	(1)		(101)		(101)
adjustment Balance at																(421)		(421)
December 31, 2019		\$		<u>\$ </u>	_	<u>\$ </u>		\$ _	_	<u>\$ </u>	91,819,649	\$ 92	20,314,644	\$ 20	\$ 205,234	\$ (350)	\$ 51,859	256,855

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

Consolidated Statements of Cash Flows

(in thousands)

		Year Ended December 31,					
		2019		2018		2017	
Operating Activities							
Net income	\$	42,146	\$	65,170	\$	13,199	
Adjustments to reconcile net income to net cash provided by operating activities:							
Depreciation and amortization		7,817		5,029		3,795	
Currency (gain) loss on foreign denominated transactions		(690)		(190)		128	
Deferred taxes		(3,734)		(39,040)		(1,117	
Provision for doubtful accounts		1,091		1,680		1,117	
Stock-based compensation expense		34,301		20,794		5,028	
Amortization of deferred contract costs		8,416		3,689			
Changes in operating assets and liabilities:							
Accounts receivable, net		(9,608)		(1,911)		(7,039	
Prepaid expenses, prepaid income taxes, and other assets		(378)		(11,753)		(2,287	
Deferred contracts costs		(15,979)		(12,987)			
Accounts payable		4,268		9,345		6,244	
Accrued expenses, accrued income taxes and other current liabilities		2,151		2,695		5,191	
Deferred revenue		1,174		4,508		962	
Deferred rent		—		4,289		227	
Lease obligations		(1,468)					
Other non–current liabilities	. <u></u>	609		405		243	
Net cash provided by operating activities		70,116		51,723		25,691	
Investing Activities							
Purchases of property and equipment		(11,205)		(5,956)		(5,157	
Capitalization of website development costs		(3,021)		(1,522)		(2,215	
Cash paid for acquisition		(19,139)					
Investments in certificates of deposit		(177,808)		(212,800)		(50,000	
Maturities of certificates of deposit		188,916		140,000		44,774	
Net cash used in investing activities		(22,257)		(80,278)		(12,598	
Financing Activities							
Initial public offering proceeds		_		_		47,690	
Payment of initial public offering costs				(1,142)		(3,308	
Proceeds from exercise of stock options		1,807		3,632		398	
Financing cash flows from finance leases		(30)					
Payment of withholding taxes and option costs on net share settlement of							
restricted stock units and stock options		(16,470)	_	(25,885)			
Net cash (used in) provided by financing activities		(14,693)		(23,395)		44,780	
Impact of foreign currency on cash, cash equivalents, and restricted cash		(1)		(44)		159	
Net increase (decrease) in cash, cash equivalents, and restricted cash		33,165		(51,994)		58,032	
Cash, cash equivalents, and restricted cash at beginning of period		37,558		89,552		31,520	
Cash, cash equivalents, and restricted cash at end of period	\$	70,723	\$	37,558	\$	89,552	
Supplemental disclosure of cash flow information:							
Cash paid for income taxes	\$	300	\$	2,308	\$	4,393	
			-				
Unpaid purchases of property and equipment	\$	647	\$	5,287	\$	510	
Unpaid initial public offering costs	\$		\$		\$	1,142	
Capitalized stock-based compensation expense in website development and							
internal-use software costs	\$	1,381	\$	490	\$	176	
Cash paid for operating lease liabilities	\$	10,906					

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

Notes to Consolidated Financial Statements

(in thousands, except share and per share data, unless otherwise noted)

1. Organization and Business Description

CarGurus, Inc. (the "Company"), is a global, online automotive marketplace connecting buyers and sellers of new and used cars. Using proprietary technology, search algorithms, and innovative data analytics, the Company provides information and analysis that create a differentiated automotive search experience for consumers. The Company's marketplace empowers users worldwide with unbiased third-party validation on pricing and dealer reputation, as well as other useful information that aids them in finding "Great Deals from Top-Rated Dealers."

The Company is headquartered in Cambridge, Massachusetts and was incorporated in the State of Delaware on June 26, 2015. The Company operates principally in the United States and has also launched online marketplaces under the CarGurus brand in Canada, the United Kingdom, Germany, Italy, and Spain. The Company has subsidiaries in the United States, Canada, Ireland, and the United Kingdom. In the United Kingdom, the Company also operates the PistonHeads online marketplace as an independent brand.

On October 16, 2017, the Company completed its initial public offering ("IPO"), in which the Company issued and sold 3,205,000 shares of its Class A common stock, including the full exercise by the underwriters of their option to purchase 705,000 shares of Class A common stock, at a public offering price of \$16.00 per share for aggregate gross proceeds of \$51.3 million. The Company received \$43.2 million in net proceeds after deducting \$3.6 million of underwriting discounts and commissions and \$4.5 million in offering costs. In addition to shares of Class A common stock issued and sold by the Company, certain selling stockholders sold an aggregate of 7,605,000 shares of Class A common stock, including the full exercise by the underwriters of their option to purchase 705,000 shares of Class A common stock, as part of the IPO. Upon the closing of the IPO, all of the outstanding shares of convertible preferred stock automatically converted into 20,188,226 shares of Class A common stock and 40,376,452 shares of Class B common stock. The 40,376,452 shares of Class B common stock subsequently converted into 40,376,452 shares of Class A common stock resulting in a total conversion of all outstanding shares of convertible preferred stock outstanding.

The Company is subject to a number of risks and uncertainties common to companies in its and similar industries and stages of development including, but not limited to, rapid technological changes, competition from substitute products and services from larger companies, management of international activities, protection of proprietary rights, patent litigation, and dependence on key individuals.

2. Summary of Significant Accounting Policies

The accompanying consolidated financial statements reflect the application of certain significant accounting policies as described below and elsewhere in these notes to the consolidated financial statements. The Company believes that a significant accounting policy is one that is both important to the portrayal of the Company's financial condition and results, and requires management's most difficult, subjective, or complex judgments, often as the result of the need to make estimates about the effect of matters that are inherently uncertain.

Basis of Presentation

The accompanying consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP"). Any reference in these notes to applicable guidance is meant to refer to the authoritative U.S. generally accepted accounting principles as found in the Accounting Standards Codification ("ASC") and Accounting Standards Update ("ASU") of the Financial Accounting Standards Board ("FASB").

Due to the adoption of ASC Topic 606, *Revenue from Contracts with Customers* ("ASC 606"), which is discussed further in this Note 2, the consolidated balance sheets and the consolidated statements of operations, comprehensive income, convertible preferred stock and stockholders' equity (deficit), and cash flows for the years ended December 31, 2019 and 2018 are not comparative to prior years.

Due to the adoption of ASC Topic 842, *Leases* ("ASC 842"), which is discussed further in this Note 2, the consolidated balance sheet for the year ended December 31, 2019 is not comparative to prior years.

Principles of Consolidation

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

Subsequent Event Considerations

The Company considers events or transactions that occur after the balance sheet date but prior to the issuance of the financial statements to provide additional evidence for certain estimates or to identify matters that require additional disclosure. Subsequent events have been evaluated as required. The Company has evaluated all subsequent events and determined that there are no material recognized or unrecognized subsequent events requiring disclosure, other than those disclosed in Note 16 of these consolidated financial statements.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period.

Significant estimates relied upon in preparing these consolidated financial statements include revenue recognition and sales allowances, variable consideration, the valuation of goodwill and intangible assets, the expensing and capitalization of product, technology, and development costs for website development and internal-use software, and the recoverability of the Company's net deferred tax assets and related valuation allowance.

Although the Company regularly assesses these estimates, actual results could differ materially from these estimates. Changes in estimates are recorded in the period in which they become known. The Company bases its estimates on historical experience and various other assumptions that it believes to be reasonable under the circumstances. Actual results may differ from management's estimates if these results differ from historical experience, or other assumptions do not turn out to be substantially accurate, even if such assumptions are reasonable when made.

Revenue Recognition

The Company derives its revenue from two primary sources: (1) marketplace subscription revenue, which consists primarily of Listings, and Dealer Display subscriptions, and (2) advertising and other revenue, which consists primarily of display advertising revenue from auto manufacturers and other auto-related brand advertisers as well as partnerships with financing services companies.

Marketplace Subscription Revenue

The Company offers multiple types of marketplace Listings packages to its dealers through its platform: Restricted Listings (formerly referred to as Basic Listings), which is free; and various levels of Listings packages, which each require a paid subscription under a monthly, quarterly, semiannual, or annual subscription basis. Contractual subscriptions for customers generally auto-renew on a monthly basis and are cancellable by dealers with 30 days' advance notice at the end of the committed term. The Company also offers all dealers on the its platform access to a Dealer Dashboard, which includes a performance summary, Dealer Insights tool, and user review management platform. Dealers subscribing to a paid Listings package also have access to the Pricing Tool and Market Analysis tool. The Pricing Tool and Market Analysis tool are available only to paying dealers. Subscription pricing is determined based on a dealer's inventory size, region, and the Company's assessment of the connections and Return on Investment ("ROI") the platform will provide them.

Customers do not have the right to take possession of the Company's software.

In addition to listing inventory in the Company's marketplace and providing access to the Dealer Dashboard, the Company offers dealers subscribing to one of its Enhanced, Featured, or Featured Priority Listings packages other subscription advertising and customer acquisition products, including Dealer Display, pursuant to which dealers can buy display advertising that appears in the Company's marketplace, and on other sites on the internet, and for which such advertisements can be targeted by the user's geography, search history, CarGurus website activity (including showing users relevant vehicles from a dealer's inventory that they have not yet discovered on the Company's marketplace), and a number of other targeting factors, allowing dealers to increase their visibility with in-market consumers and drive qualified traffic for dealers.

Payment is typically due on first day of each calendar month and is recorded as accounts receivable or short-term deferred revenue when payment is received in advance of services being delivered to the customers.

Advertising and Other Revenue

Advertising and other revenue consists primarily of non-dealer display advertising revenue from auto manufacturers and other auto-related brand advertisers sold on a cost per thousand impressions ("CPM") basis. An impression is an advertisement loaded on a web page. In addition to advertising sold on a CPM basis, the Company also has advertising sold on a cost per click basis. Auto manufacturers and other brand advertisers can execute advertising campaigns that are targeted across a wide variety of parameters, including demographic groups, behavioral characteristics, specific auto brands, categories such as Certified Pre-Owned, and segments such as hybrid vehicles. The Company does not provide minimum impression guarantees or other types of minimum guarantees in its contracts with customers. Pricing is primarily based on advertisement size and position on the Company's websites and mobile applications, and fees are billed monthly in arrears. Unbilled accounts receivables relate to services rendered in the current period, but generally not invoiced until the subsequent period.

The Company sells advertising directly to auto manufacturers and other auto related brand advertisers, as well as indirectly through revenue sharing arrangements with advertising exchange partners. Company-sold advertising is not subject to revenue sharing arrangements. Company-sold advertising revenue is recognized based on the gross amount charged to the advertiser. Partner-sold advertising revenue is recognized based on the net amount of revenue received from the content partners.

Revenue from advertising sold directly by the Company is recorded on a gross basis because the Company is the principal in the arrangement, controls the ad placement and timing of the campaign, and establishes the selling price. The Company enters into contractual arrangements directly with advertisers and is directly responsible for the fulfillment of the contractual terms including any remedy for issues with such fulfillment.

Advertising revenue subject to revenue sharing agreements between the Company and advertising exchange partners is recognized based on the net amount of revenue received from the partner. The advertising partner is responsible for fulfillment, including the acceptability of the services delivered. In partner-sold advertising arrangements, the advertising partner has a direct contractual relationship with the advertiser. There is no contractual relationship between the Company and the advertiser for partner-sold transactions. When an advertising exchange partner sells advertisements, the partner is responsible for fulfilling the advertisements, and accordingly, the Company has determined the advertising partner is the principal in the arrangement. Additionally, for auction-based partner agreements, the Company has latitude in establishing the floor price, but the final price established by the exchange server is at market rates.

Customers are billed monthly in arrears and payment terms are generally thirty to sixty days from the date invoiced.

Advertising and other revenue also includes revenue from partnerships with certain financing services companies pursuant to which the Company enables eligible consumers on the Company's United States website to pre-qualify for financing on cars from dealerships that offer financing through such companies. The Company's revenues from these financing partnerships are based on a funded-loan basis.

Prior to adoption of ASC 606

The Company recognizes revenue when all of the following conditions are satisfied: (1) there is persuasive evidence of an arrangement; (2) the service has been provided to the customer; (3) the collection of fees is reasonably assured; and (4) the amount of fees to be paid by the customer is fixed or determinable.

The Company recognizes marketplace subscription revenue on a monthly basis as revenue is earned and advertising and other revenue as impressions are delivered. Revenue is presented net of any taxes collected from customers.

The Company assesses arrangements with multiple deliverables under ASU No. 2009-13, Revenue Recognition (Topic 605), *Multiple-Deliverable Revenue Arrangements* — *a Consensus of the FASB Emerging Issues Task Force*. Pursuant to ASU 2009-13, in order to treat deliverables in a multiple-element arrangement as separate units of accounting, the deliverables must have stand-alone value upon delivery. If the deliverables have stand-alone value upon delivery, the Company accounts for each deliverable separately. The Company has concluded that each element in the arrangement has stand-alone value as the individual services can be sold separately. In addition, there is no right of refund once a service has been delivered. Therefore, the Company has concluded that each element of the arrangement is a separate unit of accounting. While these arrangements are considered multiple element-arrangements, the recognition of the units of accounting follow a consistent ratable recognition given the pattern over which services are provided.

The Company establishes sales allowances at the time of revenue recognition based on its history of adjustments and credits provided to its customers. Sales allowances relate primarily to credits issued for service interruption. In assessing the adequacy of the sales allowance, the Company evaluates its history of adjustments and credits made through the date of the issuance of the financial statements. Estimated sales adjustments and credits and ultimate losses may vary from actual results which could be material to the financial statements; however, to date, actual sales allowances have been materially consistent with the Company's estimates. Sales allowances are recorded as a reduction to revenue in the consolidated statements of operations.

Following adoption of ASC 606

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which modifies how all entities recognize revenue, and consolidates revenue recognition guidance into one ASC Topic (ASC Topic 606, *Revenue from Contracts with Customers*) ("ASC 606"). Since the Company ceased to be an emerging growth company as of December 31, 2018, the Company adopted the standard during the fourth quarter of 2018 and applied the modified retrospective method of adoption with a cumulative catch-up adjustment to the opening balance of retained earnings at January 1, 2018. Under this method, the Company applied the revised guidance for the year of adoption and applied ASC Topic 605, *Revenue Recognition* ("ASC 605"), in the prior years. As a result, the Company applied ASC 606 only to contracts that were not yet completed as of January 1, 2018. The Company recognized a cumulative catch-up adjustment to the opening balance of retained earnings at January 1, 2018. For contracts that were modified before the effective date, the Company exercised the use of the practical expedient and reflected the aggregate effect of all modifications when identifying performance obligations, determining the transaction price and allocating transaction price, which did not have a material effect on the adjustment to retained earnings.

ASC 606 outlines a comprehensive five-step revenue recognition model based on the principle that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. To achieve this core principle, the Company applies the following five steps:

- 1) Identify the contract with a customer
- 2) Identify the performance obligations in the contract
- 3) Determine the transaction price
- 4) Allocate the transaction price to performance obligations in the contract
- 5) Recognize revenue when or as the Company satisfies a performance obligation

Disaggregation of Revenue

The following table summarizes revenue from contracts with customers by revenue source for the years ended December 31, 2019, 2018 and 2017.

	 2019	2018	 2017
Revenue by Revenue Stream			
Marketplace subscription revenue	\$ 526,043	\$ 405,780	\$ 282,664
Advertising and other revenue	62,873	48,306	34,197
Total	\$ 588,916	\$ 454,086	\$ 316,861

The Company provides disaggregation of revenue based on the marketplace subscription versus advertising and other revenue classification in the table above and based on geographic region (see Note 13) as it believes these categories best depict how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors.

Marketplace Subscription Revenue

For dealer listings, the Company provides a single similar service each day for a period of time. Each time increment (i.e. day), rather than the underlying activities, is distinct and substantially the same and therefore the performance obligation of the Company is to provide a series of daily activities over the contract term. Similar to the dealer listings, the dealer display advertising is considered a promise to provide a single similar service each day. Each time increment is distinct and substantially the same and therefore the performance obligation of the Company is to provide a series of daily activities over the contract term.

Total consideration for marketplace subscription revenue is stated within the contracts. There are no contractual cash refund rights, but credits may be issued to a customer at the sole discretion of the Company. At an individual contract level, there is also no variable consideration, such as sales allowance, that needs to be included in the transaction price. However, at a portfolio level, the Company recognizes that there are times when there is a customer satisfaction issue or other circumstance that will lead to a credit. Due to the known possibility of future credits, a monthly sales allowance review is performed to defer revenue at a portfolio level for such future adjustments in the period of incurrence. The Company establishes sales allowances at the time of revenue recognition based on its history of adjustments and credits provided to its customers. In assessing the adequacy of the sales allowance, the Company evaluates its history of adjustments and credits made through the date of the issuance of the financial statements. Estimated sales adjustments, credits and losses may vary from actual results which could lead to material adjustments to the financial statements. To date, actual sales allowances have been materially consistent with the Company's estimates. Sales allowances are recorded as a reduction to revenue in the consolidated statements of operations.

Performance obligations are satisfied over time as the customer simultaneously receives and consumes the benefit of the service. Revenue is recognized ratably over the subscription period beginning on the date the Company starts providing services to the customer under the contract. Revenue is presented net of any taxes collected from customers.

Advertising and Other Revenue

For advertising revenue, the performance obligation is to publish the agreed upon campaign on the Company's websites and load the related impressions.

Advertising contracts state the transaction price within the agreement with payment being based on the number of clicks or impressions delivered on the Company's websites. Total consideration is based on output and deemed variable consideration constrained by an agreed upon delivery schedule. Additionally, there are generally no contractual cash refund rights. Certain contracts do contain the right for credits in situations in which impressions are not displayed in compliance with contractual specifications. At an individual contract level, the Company may give a credit for a customer satisfaction issue or other circumstance. Due to the known possibility of future credits, a monthly review is performed to defer revenue at an individual contract level for such future adjustments in the period of incurrence.

As consideration is driven by the number of impressions delivered on the CarGurus websites, the consideration for each period is allocated to the period in which the service was rendered.



Performance obligations for company-sold advertising revenue and partner-sold advertising revenue are satisfied over time as impressions are delivered. Revenue is recognized based on the total number of impressions delivered within the specified period. Revenue from advertising sold directly by the Company is recognized based on the gross amount charged to the advertiser and advertising revenue sold by partners is recognized based on the net amount of revenue received from the content partners. Revenue is presented net of any taxes collected from customers.

Other revenue includes revenue from contracts for which the performance obligation is a series of distinct services with the same level of effort daily. For these contracts, the Company estimates the value of the variable consideration in determining the transaction price and allocates it to the performance obligation. Revenue is estimated and recognized on a ratable basis over the contractual term. The Company reassesses the estimate of variable consideration at each reporting period.

Contracts with Multiple Performance Obligations

The Company periodically enters into arrangements that include Listings and Dealer Display within marketplace subscription revenue. These contracts include multiple promises that the Company evaluates to determine if the promises are separate performance obligations. Performance obligations are identified based on services to be transferred to a customer that are distinct within the context of the contractual terms. Once the performance obligations have been identified, the Company determines the transaction price, which includes estimating the amount of variable consideration to be included in the transaction price, if any. If required, the transaction price is allocated to each performance obligation in the contract based on a relative standalone selling price ("SSP") method as the performance obligation is being satisfied. For the Company's arrangements that include Listings and Dealer Display, the performance obligations were satisfied over a consistent period of time and therefore the allocations did not impact the revenue recognized.

Costs to Obtain a Contract

Commissions paid to sales representatives and payroll taxes are considered costs to obtain a contract. Under ASC 606, the costs to obtain a contract require capitalization and amortization of those costs over the period of benefit. Although the guidance specifies the accounting for an individual contract with a customer, as a practical expedient, the Company has opted to apply the guidance to a portfolio of contracts with similar characteristics. The Company has opted to apply another practical expedient to immediately expense the incremental cost of obtaining a contract when the underlying related asset would have been amortized over one year or less. As such, the Company applied this practical expedient to advertising contracts as the term is one year or less and these contracts do not renew automatically. The practical expedient is not applicable to marketplace subscription contracts as the period of benefit including renewals is anticipated to be greater than one year as commissions paid on contract renewals are not commensurate with the commissions paid on the initial contract. The assets are periodically assessed for impairment.

For marketplace subscription customers, the commissions paid on contracts with new customers, in addition to any commission amount related to incremental sales, are capitalized and amortized over the estimated benefit period of the customer relationship taking into account factors such as peer estimates of technology lives and customer lives as well as the Company's own historical data. Commissions paid that are not directly related to obtaining a new contract are expensed as incurred.

Additionally, the Company allocates employer payroll tax expense to the commission expense in proportion to the overall payroll taxes paid during the respective period. As such, capitalized payroll taxes are amortized in the same manner as the underlying capitalized commissions.

The assets recognized for costs to obtain a contract were \$3,207, \$12,505 and \$20,058 as of January 1, 2018, December 31, 2018 and December 31, 2019, respectively. Amortization expense recognized during the years ended December 31, 2019 and 2018 related to costs to obtain a contract was \$8,416 and \$3,689, respectively.

Financial Statement Impact of Adopting ASC 606

The cumulative effect of applying the new guidance to all contracts with customers that were not completed as of January 1, 2018 was recorded as an adjustment to accumulated deficit as of the adoption date. As a result of applying the modified retrospective method to adopt the new revenue guidance, the following adjustments were made on the consolidated balance sheet as of January 1, 2018.

	I	As Reported		tments		As Adjusted
	De	cember 31, 2017	Marketplace Subscription Revenue	Costs to Obtain a Contract	J	January 1, 2018
Assets			· · · · · · · · · · · · · · · · · · ·			
Current assets:						
Cash and cash equivalents	\$	87,709			\$	87,709
Investments		50,000				50,000
Accounts receivable, net		12,577	813			13,390
Prepaid expenses and prepaid income taxes		5,313				5,313
Deferred contract costs				1,424		1,424
Other current assets		1,605				1,605
Restricted cash						
Total current assets		157,204	813	1,424		159,441
Property and equipment, net		16,563				16,563
Restricted cash		1,843				1,843
Deferred tax assets		825	(190)	(635)		_
Deferred contract costs, net of current portion				1,783		1,783
Other long–term assets		159				159
Total assets	\$	176,594	\$ 623	\$ 2,572	\$	179,789
Liabilities and stockholders' equity						
Current liabilities:						
Accounts payable	\$	23,908			\$	23,908
Accrued expenses, accrued income taxes and other		-,			-	- ,
current liabilities		13,588				13,588
Deferred revenue		4,305				4,305
Deferred tax liabilities				153		153
Deferred rent		1,165				1,165
Total current liabilities		42,966		153		43,119
Deferred rent, net of current portion		5,648				5,648
Other non–current liabilities		955				955
Total liabilities		49,569		153		49,722
Commitments and contingencies		- ,				- ,
Stockholders' equity:						
Preferred stock						
Class A common stock		78				78
Class B common stock		28				28
Additional paid-in capital		185,190				185,190
Accumulated deficit		(58,499)	623	2,419		(55,457)
Accumulated other comprehensive income		228				228
Total stockholders' equity		127,025	623	2,419		130,067
Total liabilities and stockholders' equity	\$	176,594	\$ 623	\$ 2,572	\$	179,789
Total habilities and stockholders equity	Ψ	170,004	φ 025	φ 2,072	Ψ	1/5,/05

Marketplace Subscription Revenue

Under ASC 606, the Company's accounting for contracts containing discounts resulted in accelerated revenue recognition. The cumulative impact of this change to the Company's accounts receivable on January 1, 2018 was \$813.

Costs to Obtain a Contract

As described above, under the new guidance, the capitalized commission expense is amortized over the estimated customer relationship period. The net impact of this change resulted in a \$3,207 reduction to accumulated deficit for contracts that still require performance by the Company at the date of adoption.

Income Taxes

The adoption of ASC 606 primarily resulted in an acceleration of revenue and the reduction of expense, which in turn generated additional deferred tax liabilities that ultimately reduced the Company's net deferred tax asset position. The cumulative impact resulted in a reduction to deferred tax assets of \$978 which put the Company in a net deferred tax liability position on January 1, 2018.

Impact of New Revenue Guidance on Financial Statement Line Items

The following tables compare the reported consolidated balance sheet, statement of operations and cash flows, as of and for the year ended December 31, 2018, to the pro-forma amounts had the previous guidance been in effect.

		As of December 31, 2018							
Balance Sheet		As Reported	Marketplace Subscription Revenue	Costs to Obtain a Contract		Pro forma as if the previous accounting guidance was in effect			
Assets									
Current assets:									
Cash and cash equivalents	\$	34,887			\$	34,887			
Investments		122,800				122,800			
Accounts receivable, net		13,614	939			12,675			
Prepaid income taxes and prepaid income taxes		10,144				10,144			
Deferred contract costs		5,253		5,253					
Other current assets		7,410				7,410			
Restricted cash		750				750			
Total current assets		194,858	939	5,253		188,666			
Property and equipment, net		24,269				24,269			
Restricted cash		1,921				1,921			
Deferred tax assets		38,886	(227)	(3,187)		42,300			
Deferred contract costs, net of current portion		7,252		7,252					
Other long–term assets		1,104				1,104			
Total assets	\$	268,290	\$ 712	\$ 9,318	\$	258,260			
Liabilities and stockholders' equity									
Current liabilities:									
Accounts payable	\$	34,345			\$	34,345			
Accrued expenses, accrued income taxes and other current liabilities		18,654				18.654			
Deferred revenue		8,811				8,811			
Deferred rent		1,693				1,693			
Total current liabilities	· · · · · · · · · · · · · · · · · · ·	63,503				63,503			
Deferred rent, net of current portion		9,395				9,395			
Other non–current liabilities		1,281				1,281			
Total liabilities		74,179			_	74,179			
Commitments and contingencies		, ,,,,,,				7 1,270			
Stockholders' equity:									
Preferred stock									
Class A common stock		90				90			
Class B common stock		21				21			
Additional paid–in capital		184,216				184,216			
Retained earnings (accumulated deficit)		9,713	712	9,318		(317)			
Accumulated other comprehensive income		5,715	/12	5,510		(317)			
Total stockholders' equity		194,111	712	9,318		184,081			
	ر			\$ 9,318	\$	258,260			
Total liabilities and stockholders' equity	\$	268,290	\$ 712	ə 9,318	Э	258,260			

Total reported assets were \$10,030 greater than the pro-forma balance sheet, which assumes the previous guidance remained in effect as of December 31, 2018. This was largely due to the impact of \$12,505 related to costs to obtain a contract.

There were no changes to liabilities as of December 31, 2018 as a result of the adoption of ASC 606.

The following summarizes the significant changes on the Company's consolidated statement of operations for the year ended December 31, 2018 as a result of the adoption of ASC 606 on January 1, 2018 compared to the pro-forma amounts had the Company continued to recognize revenue under ASC 605.

	Year Ended December 31, 2018							
Statement of Operations		As Reported		Marketplace Subscription Revenue	Costs to Obtain a Contract			Pro forma as if the previous accounting guidance was in effect
Revenue	\$	454,086	\$	126			\$	453,960
Cost of revenue		24,811					_	24,811
Gross profit		429,275		126		—		429,149
Operating expenses:								
Sales and marketing		315,939			(9,2	298)		325,237
Product, technology, and development		47,866						47,866
General and administrative		39,475						39,475
Depreciation and amortization		2,804						2,804
Total operating expenses	_	406,084			(9,2	298)	_	415,382
Income from operations		23,191		126	9,2	298		13,767
Other income, net:								
Interest income		2,283						2,283
Other income (expense)		10						10
Total other income, net		2,293				—		2,293
Income before income taxes		25,484		126	9,2	298		16,060
Provision for (Benefit from) income taxes		(39,686)		37	2,3	399		(42,122)
Net income	\$	65,170	\$	89	\$ 6,8	899	\$	58,182
Basic	\$	0.60	\$		\$ 0	.07	\$	0.53
Diluted	\$	0.57	\$		\$ 0	.06	\$	0.51

The adoption of ASC 606 resulted in an increase to revenue of \$126 during the year ended December 31, 2018 due to accelerated revenue recognition for contracts containing discounts. The adoption of ASC 606 also resulted in a \$9,298 reduction in sales and marketing expense during the year ended December 31, 2018 as a result of capitalizing a portion of commission expense, which was previously expensed under the previous guidance. During the year ended December 31, 2018, the cumulative impact of these changes was a \$9,424 increase in income from operations which resulted in a \$2,436 reduction to the benefit from income taxes. Additionally, the adoption of ASC 606 resulted in the Company's basic and diluted EPS for the year ended December 31, 2018 increasing \$0.07 and \$0.06, respectively.

The following summarizes the significant changes on the Company's consolidated statement of cash flows for the year ended December 31, 2018 as a result of the adoption of ASC 606 on January 1, 2018 compared to the pro-forma amounts had the Company continued to recognize revenue under ASC 605.

	Year Ended December 31, 2018							
Statement of Cash Flows	Marketplace As Subscription Reported Revenue			bscription		Costs to Obtain a Contract		Pro forma as if the previous accounting guidance was in effect
Operating Activities								
Net income	\$	65,170	\$	89	\$	6,899	\$	58,182
Adjustments to reconcile net income to net cash provided by operating activities:								
Depreciation and amortization		5,029						5,029
Currency (gain) loss on foreign denominated transactions		(190)						(190)
Deferred taxes		(39,040)		37		2,399		(41,476)
Provision for doubtful accounts		1,680						1,680
Stock-based compensation expense		20,794						20,794
Amortization of deferred contract costs		3,689				3,689		—
Changes in operating assets and liabilities:								
Accounts receivable, net		(1,911)		(126)				(1,785)
Prepaid expenses, prepaid income taxes, and other								
assets		(11,753)						(11,753)
Deferred contracts costs		(12,987)				(12,987)		
Accounts payable		9,345						9,345
Accrued expenses, accrued income taxes and other								
current liabilities		2,695						2,695
Deferred revenue		4,508						4,508
Deferred rent		4,289						4,289
Other non-current liabilities		405			-			405
Net cash provided by operating activities	\$	51,723	\$		\$		\$	51,723

The adoption of ASC 606 had no impact on the Company's cash flows from operations. The aforementioned impacts resulted in offsetting shifts in cash flows between net income and various working capital balances.

Contract Balances

The following tables summarize the opening and closing balances of receivables and contract assets from contracts with customers as of January 1, 2018, December 31, 2018 and December 31, 2019.

	Accounts Receivable, net	Contract Assets (current)		 ontract Assets non-current)
Balance at January 1, 2018	\$ 13,390	\$	1,424	\$ 1,782
Balance at December 31, 2018	13,614		5,253	7,252
Balance at December 31, 2019	22,124		9,544	10,514

Revenue recognized during the year ended December 31, 2019 and 2018 from amounts included in deferred revenue at the beginning of the period was approximately \$8,811 and \$4,305, respectively.

Transaction Price Allocated to Future Performance Obligations

Topic 606 requires that the Company disclose the aggregate amount of transaction price that is allocated to performance obligations that have not yet been satisfied as of December 31, 2019.



For contracts with an original expected duration greater than one year, the aggregate amount of the transaction price allocated to the performance obligations that were unsatisfied as of December 31, 2019 is approximately \$35.0 million, which the Company expects to recognize over the next twelve months.

For contracts with an original expected duration of one year or less, the Company has applied the practical expedient available under Topic 606 to not disclose the amount of transaction price allocated to unsatisfied performance obligations as of December 31, 2019. For performance obligations not satisfied as of December 31, 2019, and to which this expedient applies, the nature of the performance obligations, the variable consideration and any consideration from contracts with customers not included in the transaction price is consistent with performance obligations satisfied as of December 31, 2019. The remaining duration is less than one year.

From time to time, the Company may enter into contracts that include variable consideration, for which the Company estimates the value of the variable consideration in determining the transaction price and allocates it to the appropriate performance obligation(s). The Company reassesses any estimates of variable consideration at each reporting period.

Deferred Revenue

Deferred revenue primarily consists of payments received in advance of revenue recognition from the Company's marketplace revenue and is recognized as the revenue recognition criteria are met. The Company generally invoices its customers monthly. Accordingly, the deferred revenue balances do not represent the total contract value of annual or multiyear subscription agreements. Deferred revenue that is expected to be recognized during the succeeding 12-month period is recorded as current deferred revenue and the remaining portion is recorded as noncurrent in the consolidated balance sheets. All deferred revenue was recorded as current for all periods presented.

Cost of Revenue

Cost of revenue primarily consists of costs related to supporting and hosting the Company's product offerings. These costs include salaries, benefits, incentive compensation and stock-based compensation for the Company's customer support team, and third-party service provider costs such as data center and networking expenses, allocated overhead costs, depreciation and amortization expense associated with the Company's property and equipment, and amortization of capitalized website development costs.

Concentration of Credit Risk

The Company has no significant off-balance sheet risk, such as foreign exchange contracts, option contracts, or other foreign hedging arrangements. Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash, cash equivalents, investments, and trade accounts receivable.

The Company maintains its cash, cash equivalents, and investments principally with accredited financial institutions of high credit standing. Although the Company deposits its cash and investments with multiple financial institutions, its deposits, at times, may exceed governmental insured limits.

Credit risk with respect to accounts receivable is dispersed due to the large number of customers. The Company routinely assesses the creditworthiness of its customers. The Company generally has not experienced any material losses related to receivables from individual customers, or groups of customers. The Company does not require collateral. Due to these factors, no additional credit risk beyond amounts provided for collection losses is believed by management to be probable in the Company's accounts receivable.

For the years ended December 31, 2019, 2018 and 2017, no individual customer accounted for more than 10% of total revenue.

As of December 31, 2019, one customer accounted for 18% of net accounts receivable. As of December 31, 2018, two customers accounted for 21% and 14% of net accounts receivable, respectively. No other individual customer accounted for more than 10% of net accounts receivable at December 31, 2019 or 2018.

Included in net accounts receivable at December 31, 2019 and 2018, is \$8,880 and \$5,814 of unbilled accounts receivables related to advertising customers billed within a quarter subsequent to services rendered.

Cash, Cash Equivalents, and Investments

The Company considers all highly liquid investments with an original maturity of three months or less at the date of purchase to be cash equivalents. Investments not classified as cash equivalents with maturities less than one year from the balance sheet date are classified as short-term investments, while investments with maturities in excess of one year from the balance sheet date are classified as long-term investments. Management determines the appropriate classification of investments at the time of purchase, and re-evaluates such determination at each balance sheet date.

Cash and cash equivalents primarily consist of cash on deposit with banks, and amounts held in interest-bearing money market accounts. Cash equivalents are carried at cost, which approximates their fair market value.

The Company's investment policy, which was approved by the Audit Committee of the Company's board of directors (the "Board"), permits investments in fixed income securities, including U.S. government and agency securities, non-U.S. government securities, money market instruments, commercial paper, certificates of deposit, corporate bonds, and asset-backed securities.

As of December 31, 2019 and 2018, investments consisted of U.S. certificates of deposit ("CDs") with remaining maturities of less than twelve months. The Company classifies CDs with readily determinable market values as held-to-maturity, because it is the Company's intention to hold such investments until they mature. As such, investments were recorded at amortized cost at December 31, 2019 and 2018. The Company adjusts the cost of investments for amortization of premiums and accretion of discounts to maturity, if any. For the years ended December 31, 2019, 2018 and 2017, the Company did not have any premiums or discounts.

Realized gains and losses from sales of the Company's investments are included in other income (expense), net. There were no realized gains or losses on investments for the years ended December 31, 2019, 2018 or 2017.

The Company reviews investments for other-than-temporary impairment whenever the fair value of an investment is less than the amortized cost and evidence indicates that an investment's carrying amount is not recoverable within a reasonable period of time. Other-than-temporary impairments of investments are recognized in the consolidated statements of operations if the Company has experienced a credit loss, has the intent to sell the investment, or if it is more likely than not that the Company will be required to sell the investment before recovery of the amortized cost basis. Evidence considered in this assessment includes reasons for the impairment, compliance with the Company's investment policy, the severity and duration of the impairment, and changes in value subsequent to the end of the period. As of December 31, 2019 and 2018, the Company determined that no other-than-temporary impairments were required to be recognized in the consolidated statements of operations.

Restricted Cash

At December 31, 2019 and 2018, restricted cash was \$10,803 and \$2,671, respectively, and primarily related to cash held at a financial institution in an interest-bearing cash account as collateral for four letters of credit in 2019 and three letters of credit in 2018 related to the contractual provisions for the Company's building leases.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded based on the amount due from the customer and do not generally bear interest. The Company offsets gross trade accounts receivable with an allowance for doubtful accounts. The allowance for doubtful accounts is the Company's best estimate of the amount of probable credit losses in the Company's existing accounts receivable and is based upon historical loss patterns, the number of days that billings are past due, and an evaluation of the potential risk of loss associated with specific accounts. Account balances are charged against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote. The Company does not have any off-balance sheet credit exposure related to its customers. Provisions for allowances for doubtful accounts are recorded in general and administrative expense.

Unbilled accounts receivables are recorded for services rendered in the current period, but generally not invoiced until the subsequent period.

The Company considers current economic trends when evaluating the adequacy of the allowance for doubtful accounts. If circumstances relating to specific customers change, or unanticipated changes occur in the general business environment, particularly as it affects auto dealers, the Company's estimates of the recoverability of receivables could be further adjusted.

Below is a summary of the changes in the Company's allowance for doubtful accounts for the years ended December 31, 2019, 2018, and 2017:

	Balance at Beginning of Period	Provision	Write–offs, net of recoveries	Balance at Id of Period
Year ended December 31, 2019	\$ 479	\$ 1,091	\$ (1,330)	\$ 240
Year ended December 31, 2018	494	1,680	(1,695)	479
Year ended December 31, 2017	164	1,117	(787)	494

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation and amortization using the straight-line method over the estimated useful lives of the assets. Leasehold improvements are amortized over the shorter of the lease term or the estimated useful life of the related asset. The estimated useful lives of the Company's property and equipment are as follows:

	Estimated Useful Life (In Years)
Capitalized equipment	3
Capitalized software	3
Capitalized website development	3
Furniture and fixtures	5
Leasehold improvements	Lesser of asset life or lease term

Expenditures for repairs and maintenance are charged to expense as incurred, whereas major betterments are capitalized as additions to property and equipment.

Impairment of Long-Lived Assets

The Company evaluates the recoverability of long-lived assets, such as property and equipment and intangible assets, for impairment at least annually and whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. During this review, the Company re-evaluates the significant assumptions used in determining the original cost and estimated lives of long-lived assets. Although the assumptions may vary from asset to asset, they generally include operating results, changes in the use of the asset, cash flows, and other indicators of value. Management then determines whether the remaining useful life continues to be appropriate, or whether there has been an impairment of long-lived assets based primarily upon whether expected future undiscounted cash flows are sufficient to support the assets' recovery. Recoverability of these assets is measured by comparison of the carrying amount of the asset to the future undiscounted cash flows the asset is expected to generate. If the asset is considered to be impaired, the amount of any impairment is measured as the difference between the carrying value and the fair value of the impaired asset.

For the years ended December 31, 2019, 2018, and 2017, the Company did not identify any impairment of its long-lived assets.

Business Combinations

Valuation of Acquired Assets and Liabilities

The Company measures all consideration transferred in a business combination at its acquisition-date fair value. Consideration transferred is determined by the acquisition-date fair value of assets transferred, liabilities assumed, including contingent consideration obligations, as applicable. The Company measures goodwill as the excess of the consideration transferred over the net of the acquisition-date amounts of assets acquired less liabilities assumed.

The Company makes significant assumptions and estimates in determining the fair value of the acquired assets and liabilities as of the acquisition date, especially the valuation of intangible assets and certain tax positions. The Company records estimates as of the acquisition date and reassess the estimates at each reporting period up to one year after the acquisition date. Changes in estimates made prior to finalization of purchase accounting are recorded to goodwill.

Intangible Assets

Intangible assets are recorded at their estimated fair value at the date of acquisition. The Company amortizes intangible assets over their estimated useful lives on a straight-line basis. Amortization is recorded over the relevant estimated useful lives ranging from three to eleven years.

The Company evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets. If the estimate of an intangible asset's remaining useful life is changed, the Company amortizes the remaining carrying value of the intangible asset prospectively over the revised remaining useful life.

Goodwill

Goodwill is recorded when consideration paid in a purchase acquisition exceeds the fair value of the net assets acquired. Goodwill is not amortized, but rather is tested for impairment annually or more frequently if facts and circumstances warrant a review. Conditions that could trigger a more frequent impairment assessment include, but are not limited to, a significant adverse change in certain agreements, significant underperformance relative to historical or projected future operating results, an economic downturn affecting automotive marketplaces, increased competition, a significant reduction in our stock price for a sustained period or a reduction of our market capitalization relative to net book value.

The Company has determined that it had two reporting units, United States and International, as of and for the year ended December 31, 2019. The Company evaluates impairment annually on October 1 by comparing the estimated fair value of each reporting unit to its carrying value. The Company estimates fair value using a discounted cash flow model based on our most recent forecast at the time of its annual impairment test.

Capitalized Website Development and Internal-Use Software Costs

The Company capitalizes certain costs associated with the development of its websites and internal-use software products after the preliminary project stage is complete and until the software is ready for its intended use. Research and development costs incurred during the preliminary project stage or costs incurred for data conversion activities, training, maintenance, and general and administrative or overhead costs are expensed as incurred. Capitalization begins when the preliminary project stage is complete, management authorizes and commits to the funding of the software project with the required authority, it is probable the project will be completed, the software will be used to perform the functions intended and certain functional and quality standards have been met. Qualified costs incurred during the operating stage of our software applications relating to upgrades and enhancements are capitalized to the extent it is probable that they will result in added functionality, while costs that cannot be separated between maintenance of, and minor upgrades and enhancements to, internal-use software are expensed as incurred.

Capitalized website and software development costs are amortized on a straight-line basis over their estimated useful life of three years beginning with the time when it is ready for intended use. Capitalized internal-use software costs are amortized on a straight-line basis over their estimated useful life of the term of the hosting arrangement, taking into consideration several other factors such as, but not limited to, options to extend the hosting arrangement or options to terminate the hosting arrangement, beginning with the time when it is ready for intended use. Amounts amortized are presented through operating expense, rather than depreciation or amortization. Management evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.

During the years ended December 31, 2019 and 2018, the Company capitalized \$4,176 and \$2,012 of website development costs, respectively. The Company recorded amortization expense associated with its capitalized website development costs of \$1,643, \$1,508 and \$812 for the years ended December 31, 2019, 2018, and 2017, respectively.

During the year ended December 31, 2019, the Company capitalized \$2,615 and \$616 of internal-use software in other non-current assets and in prepaid expenses and prepaid income taxes, respectively. The Company recorded amortization expense associated with its internal-use software of \$132 for the year ended December 31, 2019.

Foreign Currency Translation

The reporting currency of the Company is the U.S. dollar. The functional currency of the Company's foreign subsidiaries is the local currency of each subsidiary. All assets and liabilities in the balance sheets of entities whose functional currency is a currency other than the U.S. dollar are translated into U.S. dollar equivalents at exchange rates as follows: (1) asset and liability accounts at period-end rates; (2) income statement accounts at weighted-average exchange rates for the period; and (3) stockholders' equity accounts at historical exchange rates. The resulting translation adjustments are excluded from net income and reflected as a separate component of stockholders' equity (deficit). Foreign currency transaction gains and losses are included in net income for the period. The Company may periodically have certain intercompany foreign currency transactions that are deemed to be of a long-term investment nature; exchange adjustments related to those transactions are made directly to a separate component of stockholders' equity (deficit).

Income Taxes

The Company accounts for income taxes in accordance with the asset and liability method. Under this method, deferred tax assets and liabilities are recognized based on temporary differences between the financial reporting and income tax bases of assets and liabilities using statutory rates. In addition, this method requires a valuation allowance against net deferred tax assets if, based upon the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

The Company accounts for uncertain tax positions recognized in the consolidated financial statements by prescribing a more-likely-than-not threshold for financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. Interest and penalties, if applicable, related to uncertain tax positions would be recognized as a component of income tax expense. The Company has no recorded liabilities for uncertain tax positions as of December 31, 2019 and 2018.

The Tax Cuts and Jobs Act subjects a U.S. shareholder to tax on global intangible low-taxed income ("GILTI") earned by certain foreign subsidiaries. An entity can make an accounting policy election, per the FASB Staff Q&A, Topic 740, No. 5, Accounting for Global Intangible Low-Taxed Income, either to recognize deferred taxes for temporary basis differences expected to reverse as GILTI in future years or to provide for the tax expense related to GILTI in the year the tax is incurred as a period expense only. The Company has elected to account for GILTI as a period cost in the year the tax is incurred.

Disclosure of Fair Value of Financial Instruments

The carrying amounts of the Company's financial instruments, which include cash and cash equivalents, investments, accounts receivable, accounts payable, and accrued expenses, approximated their fair values at December 31, 2019 and 2018 due to the short-term nature of these instruments.

The Company has evaluated the estimated fair value of financial instruments using available market information. The use of different market assumptions, estimation methodologies, or both, could have a significant effect on the estimated fair value amounts. See Note 4 for further discussion.

Stock-Based Compensation

For stock-based awards issued under the Company's stock-based compensation plans, which are more fully described in Note 10, the fair value of each award is determined on the date of grant. The Company recognizes compensation expense for service-based awards on a straight-line basis over the requisite service period for each separate vesting portion of the award, with the amount of compensation expense recognized at any date at least equaling the portion of the grant-date fair value of the award that is vested at that date.

Certain awards granted by the Company prior to the IPO were subject to service-based vesting conditions and a performance-based vesting condition achieved upon a liquidity event, defined as either a change of control or an initial public offering. The Securities and Exchange Commission's declaration of effectiveness of the Company's registration statement on Form S-1 on October 11, 2017 satisfied the liquidity event performance condition. Upon the achievement of the liquidity



event, the Company recorded previously unrecognized cumulative stock-based compensation expense of \$2.5 million related to these awards. Although the performance-based vesting condition was satisfied, under the terms of the awards, the settlement of such vested RSUs and the issuance of common stock with respect to such vested RSUs occurred on April 10, 2018, one hundred eighty-one days after the satisfaction of the performance condition.

Given the absence of an active market for the Company's common stock prior to the IPO, the Board was required to estimate the fair value of the Company's common stock at the time of each grant of a stock-based award. The Company believes that the members of its Board at all relevant times had sufficient business, finance or venture capital experience to make such estimates. The Company and the Board utilized various valuation methodologies in accordance with the framework of the American Institute of Certified Public Accountants' Technical Practice Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*, to estimate the fair value of its common stock. Each valuation methodology includes estimates and assumptions that required judgment. These estimates and assumptions include a number of objective and subjective factors used to determine the value of the Company's common stock at each grant date, including the following factors: (1) prices paid for the Company's convertible preferred stock, which the Company had sold to outside investors in arm's-length transactions, and the rights, preferences, and privileges of the Company's convertible preferred stock and common stock; (2) valuations performed by an independent valuation specialist; (3) the Company's stage of development and revenue growth; (4) the fact that the grants of stock-based awards involved illiquid securities in a private company; and (5) the likelihood of achieving a liquidity event for the common stock underlying the stock-based awards, such as an IPO or sale of the Company, given prevailing market conditions.

The Company believes this methodology was reasonable based upon the Company's internal peer company analyses, and further supported by arm's-length transactions involving the Company's convertible preferred stock. As the Company's common stock was not actively traded, the determination of fair value involved assumptions, judgments, and estimates. If different assumptions had been made, stock-based compensation expense, consolidated net income, and consolidated net income per share could have been significantly different.

For RSUs issued under the Company's stock-based compensation plans prior to the IPO, the fair value of each grant was calculated based on the estimated fair value of the Company's common stock on the date of grant. The Company estimated the fair value of most stock option awards on the date of grant using the Black-Scholes option-pricing model.

For RSUs granted subsequent to the IPO, the fair value is determined based on the closing price of the Company's Class A common stock as reported on the Nasdaq Global Select Market on the date of grant.

The Company issues shares for stock option exercises and RSUs out of its shares available for issuance. No options were granted during the years ended December 31, 2019, 2018, and 2017.

The Company accounts for forfeitures when they occur. The tax effect of differences between tax deductions related to stock compensation and the corresponding financial statement expense compensation are recorded to tax expense. Excess tax benefits recognized on stock-based compensation expense are classified as an operating activity in the consolidated statements of cash flows.

During 2019, 2018 and 2017, the Company recorded tax benefits of \$11,115, \$40,765 and \$681, respectively, related to differences between tax deductions related to stock compensation and the corresponding financial statement expense compensation.

See Note 10 for a summary of the stock option and RSU activity for the year ended December 31, 2019.

Advertising Costs

Advertising costs are expensed as incurred. Advertising expense, which is included within sales and marketing expense in the consolidated statements of operations, was \$287,107, \$238,640, and \$173,186 for the years ended December 31, 2019, 2018, and 2017, respectively.

Comprehensive Income

Comprehensive income is defined as the change in stockholders' equity (deficit) of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. Comprehensive income consists of net income and other comprehensive (loss) income, which includes certain changes in equity that are excluded from net income. Specifically, cumulative foreign currency translation adjustments are included in accumulated other comprehensive (loss) income. As of December 31, 2019 and 2018 accumulated other comprehensive (loss) income is presented separately on the consolidated balance sheets and consists entirely of cumulative foreign currency translation adjustments.

Contingent Liabilities

The Company has certain contingent liabilities that arise in the ordinary course of business activities. The Company accrues for loss contingencies when losses become probable and are reasonably estimable. If the reasonable estimate of the loss is a range and no amount within the range is a better estimate, the minimum amount of the range is recorded as a liability. The Company does not accrue for contingent losses that, in its judgment, are considered to be reasonably possible, but not probable; however, it discloses the range of such reasonably possible losses.

Recent Adopted Accounting Pronouncements

Lease Accounting

In February 2016, the FASB issued ASC 842, which requires a lessee to recognize most leases on the consolidated balance sheet but recognize expenses on the consolidated income statement in a manner similar to current practice. The update states that a lessee will recognize a lease liability for the obligation to make lease payments and a right-of-use asset for the right to use the underlying assets for the lease term. The Company adopted ASC 842 as of January 1, 2019, using the additional transition method offered through ASU No. 2018-11. This approach provides a method for recording existing leases at the adoption date and recognizing a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption.

Lease Overview

The Company's operating lease obligations consist of various leases for office space in: Boston, Massachusetts; Cambridge, Massachusetts; Detroit, Michigan; Los Angeles, California; Dublin, Ireland; and London, United Kingdom. The Detroit, Los Angeles and London leases are immaterial to the Company. The Company also has an operating lease obligation for data center space in Needham, Massachusetts.

On December 19, 2019, the Company entered into an operating lease for the lease of 273,595 square feet of office space in Boston, Massachusetts at 1001 Boylston Street. The lease provides for leasehold improvement incentives and provides for annual rent increases through the term of the lease. The "Commencement Date" of the lease term is the earlier to occur of (i) the date that is twelve months following the Delivery Date (as defined in the lease) and (ii) the date that the Company first occupies the premises for the normal conduct of business for the Permitted Use (as defined in the lease). The initial term will commence on the Commencement Date and expire on the date that is one hundred and eighty full calendar months after the Commencement Date (plus the partial month, if any, immediately following the Commencement Date). The lease provides for the option to terminate early under certain circumstances including if there is a material delay in construction (subject to the terms and conditions of the lease), and contains two Company options to extend the lease term (including for a portion of the office space thereunder) for an additional period of five years.

On August 30, 2019, the Company amended its operating lease agreement in Cambridge, Massachusetts at 55 Cambridge Parkway, which was originally entered into on March 11, 2016 and subsequently amended on July 30, 2016, for the lease of 51,923 square feet of office space. The 2019 amendment granted the Company an additional 36,689 square feet of office space and extended the non-cancellable lease term through 2025 for the office space currently occupied. The Company accounted for the additional 36,689 square feet of office space as a new lease as it provides an additional right-of-use asset that is not included in the original lease and the additional lease payments were determined to be commensurate with the standalone price of the additional space. The non-cancellable lease term of the additional space ends in 2025, with a portion ending in 2023. The term extension of the existing 51,923 square feet of office space was recorded as a lease modification within the consolidated balance sheet as of December 31, 2019. The lease, as amended, provides for (i) an option to extend the lease term with respect to a portion of the office space for an additional period of five years, (ii) leasehold improvement incentives and (iii) annual rent increases through the term of the lease.

On May 1, 2019, the Company entered into an operating lease in Needham, Massachusetts for the lease of data center space with a non-cancellable term through 2022 with automatic renewal for one year thereafter if not terminated. The lease provides for annual rent increases through the term of the lease.

On June 19, 2018, the Company entered into an operating lease in Cambridge, Massachusetts at 121 First Street for the lease of 48,393 square feet of office space with a non-cancellable lease term through 2033 with an option to extend the lease term for two additional periods of five years each. The lease provided for leasehold improvement incentives and provides for annual rent increases through the term of the lease. The Company subleases the fifth floor and records the sublease income in other income (expense), net within the consolidated income statement. The sublease income is immaterial as of December 31, 2019.

On September 26, 2017, the Company assumed an operating lease, which was entered into by the original lessee on August 12, 2013, for the lease of 13,345 square feet of office space in Dublin, Ireland at Styne House, Upper Hatch Street with a non-cancellable term through 2023. The lease provided for a rent increase at the end of year five of the original lease term.

On October 8, 2014, the Company entered into an operating lease in Cambridge, Massachusetts at 2 Canal Park for the lease of 48,059 square feet of office space with a non-cancellable lease term through 2022 with an option to extend the lease term for one additional period of five years. The lease provided for leasehold improvement incentives and provides for annual rent increases through the term of the lease.

The Company's financing lease obligations consist of a lease for office equipment and are immaterial.

The leases in Boston Massachusetts and Cambridge, Massachusetts have associated letters of credit, which are recorded as restricted cash within the consolidated balance sheet. At December 31, 2019 and 2018, restricted cash was \$10,803 and \$2,671, respectively, and primarily related to cash held at a financial institution in an interest-bearing cash account as collateral for the letters of credit related to the contractual provisions for the Company's building leases. At December 31, 2019 and 2018, portions of restricted cash were classified as a short-term asset and long-term asset. Additionally, the 121 First Street lease agreement has an associated security deposit, which is recorded in other non-current assets, net within the consolidated balance sheet.

Prior to adoption of ASC 842

Prior to the adoption of ASC 842, the Company categorized leases at their inception as either operating or capital leases. On certain lease arrangements, the Company may have received rent holidays or other incentives. The Company recognized lease costs on a straight-line basis once it achieved control of the space, without regard to deferred payment terms, such as rent holidays, that deferred the commencement date of required payments or escalating payment amounts. The Company recorded the difference between required lease payments and rent expense as deferred rent. Additionally, incentives received were treated as a reduction of costs over the term of the agreement, as they were considered an inseparable part of the lease agreement.

As of December 31, 2018, the Company had deferred rent and rent incentives of \$11,088, of which \$1,693 and \$9,395, respectively, are classified as a short-term liability and a long-term liability in the corresponding consolidated balance sheet. Rent expense related to the operating leases for the years ended December 31, 2018 and 2017 was \$7,711 and \$5,994, respectively.

Following adoption of ASC 842

Upon adoption of ASC 842, the Company elected the transition relief package, permitted within the standard, pursuant to which the Company did not reassess the classification of existing leases, whether any expired or existing contracts contain a lease, and whether existing leases have any initial direct costs. The Company also elected the practical expedient of not separating lease components from non-lease components for all leases. There was no cumulative-effective adjustment to the opening balance of retained earnings. The Company reviews all material contracts for embedded leases to determine if they have a right-of-use asset.

The Company recognizes rent expense on a straight-line basis over the lease period. The depreciable life of assets and leasehold improvement are limited by the expected lease term, unless there is a transfer of title or purchase option reasonably certain of exercise.

Variable lease payments that depend on an index or a rate are included in the lease payments and are measured using the prevailing index or rate at the measurement date. Variable lease payments not based on an index or a rate are excluded from lease payments and are expensed as incurred.

The Company also made an accounting policy election to not recognize a lease liability or right-of-use asset on its consolidated balance sheet for leases with an initial term of twelve months or less, and instead to recognize lease payments on the consolidated income statement on a straight-line basis over the lease term and variable lease payments that do not depend on an index or rate as expense in the period in which the achievement of the specified target that triggers the variable lease payments becomes probable.

Adoption of the new standard resulted in the recording of net lease assets and lease liabilities of \$52,334 and \$63,280, respectively, as of January 1, 2019. The standard did not materially impact the consolidated statement of cash flows and had no impact on the consolidated income statement.

During the years ended December 31, 2019 and 2018, the Company recognized \$10,260 and \$7,711, respectively, of lease costs for leases that have commenced. The Company allocates lease costs across all departments based on headcount in the respective location.

For leases commenced, as of December 31, 2019, the weighted average remaining lease term was 8.8 years and the weighted average discount rate was 5.2%. As most of the Company's leases do not provide an implicit rate, the Company uses an estimated incremental borrowing rate based on the information available at lease commencement in determining the present value of lease payments. The Company estimated the incremental borrowing rate based on the rate of interest the Company would have to pay to borrow a similar amount on a collateralized basis over a similar term. The Company has no historical debt transactions and a collateralized rate is estimated based on a group of peer companies. The Company used the incremental borrowing rate on January 1, 2019 for leases that commenced prior to that date.

Future minimum lease payments as of December 31, 2019 are as follows:

Year Ending December 31,	Operating Lease Commitments
2020	\$ 12,201
2021	13,088
2022	13,016
2023	9,858
2024	8,835
Thereafter	34,423
Total lease payments	91,421
Less imputed interest	(21,822)
Total	\$ 69,599

The chart above does not include options to extend lease terms that are not reasonably certain of being exercised or leases signed but not yet commenced as of December 31, 2019. Total estimated future minimum lease payments for leases signed but not yet commenced as of December 31, 2019, which includes 1001 Boylston Street and portions of 55 Cambridge Parkway, are estimated to be \$317,837 and have expected commencement dates ranging from February 2020 to January 2022.

Stock-Based Compensation

In June 2018, the FASB issued ASU 2018-07, *Compensation—Stock Compensation (Topic 718)* ("ASU 2018-07"). ASU 2018-07 expands the scope of Topic 718, *Compensation—Stock Compensation*, to include share-based payment transactions for acquiring goods and services from non-employees. The amendments in this update state that an entity should apply the requirements of Topic 718 to non-employee awards except for specific guidance on inputs to an option pricing model and the attribution of cost (that is, the period of time over which share-based payment awards vest and the pattern of cost recognition over that period). The amendments specify that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor's own operations by issuing share-based payment awards. The amendments also clarify that Topic 718 does not apply to share-based payments used to effectively provide (1) financing to the issuer or (2) awards granted in conjunction with selling goods or services to customers as part of

a contract accounted for under Topic 606. The amendments in this update are effective for public business entities for fiscal years beginning after December 15, 2018, including interim periods within that fiscal year. For all other entities, the amendments are effective for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. Early adoption is permitted, but no earlier than an entity's adoption date of Topic 606. The Company has assessed the impact of this guidance on its consolidated financial statements and does not deem it to be material. The Company adopted the guidance on January 1, 2019 prospectively.

Internal-Use Software

In August 2018, the FASB issued ASU 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.* This update aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs over the term of the hosting arrangement. Amounts amortized would be presented through operating expense, rather than depreciation or amortization. Accounting for the service component of a hosting arrangement remains unchanged. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted and an entity can elect to apply the new guidance on a prospective or retrospective basis. The Company adopted this standard effective January 1, 2019 and applied the guidance using a prospective transition method for each period presented.

Recent Accounting Pronouncements Not Yet Adopted

From time to time, new accounting pronouncements are issued by the FASB or other standard-setting bodies and adopted by the Company on or prior to the specified effective date. Unless otherwise discussed, the Company believes that the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes – Simplifying the Accounting for Income Taxes*. The new guidance simplifies the accounting for income taxes by removing several exceptions in the current standard and adding guidance to reduce complexity in certain areas, such as requiring that an entity reflect the effect of an enacted change in tax laws or rates in the annual effective tax rate computation in the interim period that includes the enactment date. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020, with early adoption permitted. The Company is currently assessing the impact that adopting this guidance will have on its consolidated financial statements.

In January 2017, the FASB issued ASU 2017-04, *Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment.* The new guidance simplifies the accounting for goodwill impairment by eliminating Step 2 of the goodwill impairment test. Under current guidance, Step 2 of the goodwill impairment test requires entities to calculate the implied fair value of goodwill in the same manner as the amount of goodwill recognized in a business combination by assigning the fair value of a reporting unit to all of the assets and liabilities of the reporting unit. The carrying value in excess of the implied fair value is recognized as goodwill impairment. Under the new standard, goodwill impairment is recognized based on Step 1 of the current guidance, which calculates the carrying value in excess of the reporting unit's fair value. The new standard is effective beginning in January 2020, with early adoption permitted. The Company does not expect the impact of adopting this guidance to be material to its consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. ASU 2016-13 and its subsequent related updates establish a new forward-looking "expected loss model" that requires entities to estimate current expected credit losses on accounts receivable and financial instruments by using all practical and relevant information. The new standard and its subsequent related updates are effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, with early adoption permitted. The Company is currently assessing the impact that adopting this guidance will have on its consolidated financial statements, but does not expect it to be material.

3. Acquisitions

On January 8, 2019, the Company, through CarGurus U.K. Limited, a company incorporated in England & Wales and a wholly owned subsidiary of CarGurus Ireland Limited, a company incorporated in Ireland and a wholly owned subsidiary of the Company (the "Purchaser"), completed its acquisition of PistonHeads, a U.K.-based automotive website ("PistonHeads"), by acquiring the entire issued share capital of Haymarket New4 Ltd., a company incorporated in England & Wales and now known as PistonHeads Holdco Limited ("NewCo"), from Haymarket Media Group Ltd., a company incorporated in England & Wales (the "Seller"), on the terms and subject to the conditions set forth in the Put and Call Option Agreement dated December 3, 2018, by and among the Purchaser, the Seller and Haymarket Group Limited, a company incorporated in England & Wales. The PistonHeads website hosts used car classifieds, articles and user forums. The Purchaser paid an aggregate of 15,000 GBP, or approximately \$19,139, to acquire the business, inclusive of 1,000 GBP, or approximately \$1,276, being held in escrow to secure post-closing claims, subject to the terms and conditions of an escrow agreement among the escrow agents, the Purchaser and the Seller. Upon completion of the acquisition, NewCo became a wholly owned subsidiary of the Purchaser. The business combination was intended to expand the Company's consumer audience in the U.K. As of December 31, 2019, the Company has incurred total acquisition-related costs of \$779 related to the transaction.

The acquisition has been accounted for as a business combination under the acquisition method and, accordingly, the total purchase price is allocated to the intangible assets and goodwill. Acquired tangible assets and assumed liabilities are immaterial. The following table presents the purchase price allocation recorded in the Company's consolidated balance sheet as of the acquisition date, which was finalized as of December 31, 2019:

	Value	ated Fair e at Date quisition	Adju	stment	Va	ljusted Fair lue at Date Acquisition
Intangible assets (1)	\$	4,466	\$	_	\$	4,466
Goodwill ⁽²⁾		15,521		(655)		14,866
Deferred tax liabilities (3)		(848)		655		(193)
Total purchase price	\$	19,139	\$		\$	19,139

- (1) Identifiable definite-lived intangible assets were comprised of brand and customer relationships of \$3,445 and \$1,021, respectively, with estimated useful lives of 11 years and 3 years, respectively, which will be amortized on a straight-line basis over their estimated useful lives.
- (2) The goodwill represents the excess value of the purchase price over intangible assets acquired. The goodwill in this transaction is primarily attributable to future customer growth in the U.K. market as a result of acquiring an established platform and applying the Company's technology to help improve the website experience on such platform; thus, helping to drive additional traffic to the PistonHeads website in the future. All goodwill is assigned to the International segment. The acquisition of PistonHeads was a stock acquisition and as a result, goodwill is not deductible for tax purposes.
- (3) The deferred tax liability corresponds to the acquired intangible assets which do not have tax basis. As the Company evaluated its purchasing price accounting, it determined to reduce the deferred tax liability which resulted in an adjustment to goodwill, which was recorded during the second quarter of 2019.

Actual and pro forma results for this acquisition have not been presented as the financial impact to the Company's consolidated financial statements is not material.

4. Fair Value of Financial Instruments Including Cash, Cash Equivalents and Investments

ASC 820, *Fair Value Measurements and Disclosures*, establishes a three-level valuation hierarchy for instruments measured at fair value that distinguishes between assumptions based on market data (observable inputs) and the Company's own assumptions (unobservable inputs). Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability, and are developed based on the best information available in the circumstances.

ASC 820 identifies fair value as the exchange price, or exit price, representing the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants based on the highest and best use of the asset or liability. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. The Company uses valuation techniques to measure fair value that maximize the use of observable inputs and minimize the use of unobservable inputs. These inputs are prioritized as follows:

Level 1 — Quoted unadjusted prices for identical instruments in active markets.

Level 2 — Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-derived valuations in which all observable inputs and significant value drivers are observable in active markets.

Level 3 — Model-derived valuations in which one or more significant inputs or significant value drivers are unobservable, including assumptions developed by the Company.

The following tables present, for each of the fair value levels, the Company's assets that are measured at fair value on a recurring basis at December 31, 2019 and 2018:

		December 31, 2019						
	Quoted Prices in Active Markets for Identical Assets (Level 1 Inputs)	Significant Other Observable Inputs (Level 2 Inputs)	Significant Unobservable Inputs (Level 3 Inputs)		Total			
Cash equivalents:								
Money market funds	\$ 29,196	\$ —	\$ —	\$	29,196			
Investments:								
Certificates of deposit		111,692			111,692			
Total	\$ 29,196	\$ 111,692	\$ —	\$	140,888			
		Decembe	er 31, 2018					
	Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs					
	<u>(Level 1 Inputs)</u>	(Level 2 Inputs)	(Level 3 Inputs)		Total			
Cash equivalents:	, , , , , , , , , , , , , , , , , , ,	A	*					
Money market funds	\$ 24	\$ —	\$ —	\$	24			
Investments:								
Certificates of deposit		122,800			122,800			
Total	\$ 24	\$ 122,800	\$ —	\$	122,824			

The Company measures eligible assets and liabilities at fair value with changes in value recognized in earnings. There were no liabilities that were measured at fair value as of December 31, 2019 and 2018. Fair value treatment may be elected either upon initial recognition of an eligible asset or liability or, for an existing asset or liability, if an event triggers a new basis of accounting. The Company did not elect to remeasure any of its existing financial assets and did not elect the fair value option for any financial assets transacted during the year ended December 31, 2019 or the year ended December 31, 2018.

The following is a summary of cash, cash equivalents, and investments as of December 31, 2019 and 2018.

	Amortized Cost		Gross Unrealized Gains		ealized Unrealize		Estimated Fair Value
December 31, 2019:							
Cash and cash equivalents due in 90 days or less	\$	59,920	\$	—	\$		\$ 59,920
Investments:							
Certificates of deposit due in one year or less		111,692		—			111,692
Total cash, cash equivalents, and investments	\$	171,612	\$		\$		\$ 171,612

	Amortized Cost		Gross Unrealized Gains		zed Unrealized		Estimated Fair Value
December 31, 2018:							
Cash and cash equivalents due in 90 days or less	\$	34,887	\$	—	\$	—	\$ 34,887
Investments:							
Certificates of deposit due in one year or less		122,800		_			122,800
Total cash, cash equivalents, and investments	\$	157,687	\$	_	\$	_	\$ 157,687

5. Property and Equipment, Net

Property and equipment, net consists of the following:

	At December 31,				
	2019		2018		
Capitalized equipment	\$ 7,923	\$	4,208		
Capitalized software	181		252		
Capitalized website development costs	11,083		6,907		
Furniture and fixtures	6,809		4,584		
Leasehold improvements	19,507		10,821		
Construction in progress	524		8,971		
Finance lease right-of-use assets	78		-		
	 46,105		35,743		
Less accumulated depreciation and amortization	(18,155)		(11,474)		
Property and equipment, net	\$ 27,950	\$	24,269		

Depreciation and amortization expense, excluding amortization of intangible assets, was \$7,168, \$5,029, and \$3,795 for the years ended December 31, 2019, 2018, and 2017, respectively. The increase of \$8,686 in leasehold improvements and the decrease of \$8,447 in construction in progress at December 31, 2019 was primarily due to costs incurred to build out the Company's new leased facility at 121 First Street in Cambridge, Massachusetts. The facility became occupied subsequent to December 31, 2018, at which time the assets ceased to be classified as construction in progress and became classified as leasehold improvement.

6. Goodwill and other intangible assets

Goodwill

The changes in the carrying value of goodwill were as follows:

Balance at December 31, 2018	\$ _
Initial value of PistonHeads acquisition	15,521
Foreign currency translation adjustment	341
Purchase price adjustment (1)	(655)
Balance at December 31, 2019	\$ 15,207

(1) The purchase price adjustment corresponds to an adjustment for the deferred tax liability as a result of the Company's evaluation of income tax treatment, which was recorded during the second quarter of 2019.

The Company did not have a goodwill balance prior to the closing of the PistonHeads acquisition on January 8, 2019. The Company tests goodwill for impairment at least annually or whenever events or changes in circumstances indicate that the carrying value may not be recoverable. The Company evaluated goodwill for impairment on October 1, 2019 and did not recognize an impairment charge.

Other Intangible Assets

Intangible assets as of December 31, 2019 consist of the following:

	Weighted Average Remaining Useful Life (years)	Gross Carrying Amount		rrying Accumulated			let Carrying Amount
Brand	10.0	\$	3,524	\$	313	\$	3,211
Customer relationships	2.0		1,045		336		709
Total		\$	4,569	\$	649	\$	3,920

The Company did not have intangible assets prior to the closing of the PistonHeads acquisition on January 8, 2019. The Company recorded amortization expense related to intangible assets of \$649 for the year ended December 31, 2019.

The estimated useful life of brand and customer relationships is 11 years and 3 years, respectively. The Company evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.

Estimated amortization expense of intangible assets for future periods as of December 31, 2019, is as follows:

Year Ending December 31,	rtization pense
2020	\$ 671
2021	671
2022	328
2023	320
2024	320
2025 and thereafter	1,610
Total	\$ 3,920

7. Accrued expenses, accrued income taxes and other current liabilities

Accrued expenses, accrued income taxes and other current liabilities consist of the following:

	 At December 31,				
	2019		2018		
Accrued bonus	\$ 8,637	\$	8,266		
Other accrued expenses, accrued income taxes and other					
current liabilities	9,625		10,388		
Total	\$ 18,262	\$	18,654		

8. Commitments and Contingencies

Contractual Obligations and Commitments

The Company's operating lease obligations are discussed in Note 2. All of the Company's property, equipment, and internal-use software have been purchased with cash with the exception of \$647 of unpaid property and equipment and immaterial amounts related to obligations under one finance lease as of December 31, 2019. The Company has no material long-term purchase obligations outstanding with any vendors or third parties.

Legal Matters

From time to time the Company may become involved in legal proceedings or be subject to claims arising in the ordinary course of its business. The Company is not presently subject to any pending or threatened litigation that it believes, if determined adversely to the Company, individually, or taken together, would reasonably be expected to have a material adverse effect on its business or financial results.

Guarantees and Indemnification Obligations

In the ordinary course of business, the Company enters into agreements with its customers that include commercial provisions with respect to licensing, infringement, indemnification, and other common provisions. The Company does not, in the ordinary course, agree to indemnification obligations for the Company under its contracts with customers. Based on historical experience and information known at December 31, 2019 and 2018, the Company has not incurred any costs for guarantees or indemnifies.

9. Convertible Preferred Stock and Stockholders' Equity

On June 21, 2017, the Company amended and restated its Certificate of Incorporation pursuant to the Third Amended and Restated Certificate of Incorporation. Under the Third Amended and Restated Certificate of Incorporation, the total number of shares of all classes of stock which the Company had authority to issue was (i) 120,020,700 shares of Class A common stock, par value \$0.001 per share, (ii) 80,013,800 shares of Class B common stock, par value \$0.001 per share, of which 3,333,000 shares were designated Series A Preferred Stock, 3,329,497 shares were designated Series B Preferred Stock, 1,648,978 shares were designated Series C Preferred Stock, 1,673,105 shares were designated Series D Preferred Stock, and 1,107,202 shares were designated Series E Preferred Stock. The Series A Preferred Stock, Series D Preferred Stock, and Series E Preferred Stock are referred to collectively as the Preferred Stock.

Upon the effectiveness of the Third Amended and Restated Certificate of Incorporation, (i) each share of Class A common stock issued and outstanding was recapitalized, reclassified, and reconstituted into two fully paid and non-assessable shares of outstanding Class A common stock and four fully paid and non-assessable shares of outstanding Class B common stock, and (ii) each share of Class B common stock of the Company issued and outstanding was recapitalized, reclassified, and reconstituted into two fully paid and non-assessable shares of outstanding Class A common stock and four fully paid and non-assessable shares of outstanding Class B common stock, and (ii) each share of outstanding Class A common stock and four fully paid and non-assessable shares of outstanding Class B common stock.

Further, upon the effectiveness of the Third Amended and Restated Certificate of Incorporation, the number of shares of common stock as to which each outstanding option to purchase common stock was exercisable for and each outstanding RSU was convertible into was adjusted such that upon exercise of outstanding stock options or vesting of outstanding RSUs, each holder would receive two fully paid and non-assessable shares of Class A common stock in respect of each share of common stock previously underlying such option or RSU. The exercise price per share of common stock underlying each outstanding option was adjusted upon the effectiveness of the Third Amended and Restated Certificate of Incorporation to be one-sixth of the exercise price per share in effect immediately prior to such adjustment and the fair market value per share of common stock issuable upon settlement of such RSU was adjusted to be one-sixth of the fair market value per share in effect immediately prior to the recapitalization.

All share and per share data shown in the accompanying consolidated financial statements and related notes have been retroactively revised to reflect the share recapitalization.

On October 16, 2017, in connection with the closing of the IPO, all of the outstanding shares of Preferred Stock automatically converted into 20,188,226 shares of Class A common stock and 40,376,452 shares of Class B common stock. The 40,376,452 shares of Class B common stock subsequently converted into 40,376,452 shares of Class A common stock resulting in a total conversion of all outstanding shares of Preferred Stock into 60,564,678 shares of Class A common stock. Subsequent to the closing of the IPO, there were no shares of Preferred Stock outstanding.

Immediately following such conversion, the Company's Fourth Amended and Restated Certificate of Incorporation became effective. Pursuant to the Fourth Amended and Restated Certificate of Incorporation, the Company is authorized to issue up to 500,000,000 shares of Class A common stock, 100,000,000 shares of Class B common stock, and 10,000,000 shares of Preferred Stock, all with a par value of \$0.001 per share. As of December 31, 2019, the Preferred Stock is undesignated and no Preferred Stock is outstanding.

In addition, pursuant to the Fourth Amended and Restated Certificate of Incorporation, all shares of Class B common stock will automatically convert into shares of Class A common stock, on a share for share basis, upon the date falling after the first to occur of (1) the death of Langley Steinert, the Company's Chief Executive Officer and Chairman, (2) his voluntary termination of all employment with the Company and service on the Company's board of directors, or (3) the sum of the number of shares of capital stock held by Langley Steinert, by any Family Member of Langley Steinert, and by any Permitted Entity of Langley Steinert (as such terms are defined in the Fourth Amended and Restated Certificate of Incorporation), assuming the exercise and settlement in full of all outstanding options and convertible securities and calculated on an as-converted to Class A



common stock basis, being less than 9,091,484. Shares of Class B common stock will not automatically convert into shares of Class A common stock upon the termination of Mr. Steinert's status as an officer and director, unless such termination is either made voluntarily by Mr. Steinert or due to Mr. Steinert's death. Once converted into Class A common stock, the converted shares of Class B common stock will not be reissued. In addition, if all shares of Class B common stock are converted into Class A common stock, then any outstanding options or convertible securities with the right to purchase or acquire shares of Class B common stock.

Common Stock

Each share of Class A common stock entitles the holder to one vote for each share on all matters submitted to a vote of the Company's stockholders at all meetings of stockholders and written actions in lieu of meetings. Each share of Class B common stock entitles the holder to ten votes for each share on all matters submitted to a vote of the Company's stockholders at all meetings of stockholders and written actions in lieu of meetings.

Holders of common stock are entitled to receive dividends, when and if declared by the Board.

At December 31, 2019, each share of Class B common stock was convertible into one share of Class A common stock at the option of the holder at any time. Automatic conversion of each share of Class B common stock will occur upon the occurrence of certain events, as described in the Fourth Amended and Restated Certificate of Incorporation.

Upon the effectiveness of the Company's Fourth Amended and Restated Certificate of Incorporation, additional terms of conversion and transfer were implemented as discussed above.

Preferred Stock

Prior to the Company's IPO, at which time all shares of Preferred Stock were converted into shares of common stock, the Company's Preferred Stock consisted of the following:

	Original Issue Price Per Share	Shares Authorized	Outstanding	Liquidation Amount	Carrying Value
Series A Preferred Stock	\$ 0.525053	3,333,000	2,824,703	\$ 1,483	\$ 1,483
Series B Preferred Stock	\$ 0.780899	3,329,497	2,938,486	2,295	2,295
Series C Preferred Stock	\$ 0.849012	1,648,978	1,550,612	1,316	1,316
Series D Preferred Stock	\$40.642989	1,673,105	1,673,105	68,000	67,872
Series E Preferred Stock	\$54.190650	1,107,202	1,107,202	60,000	59,732
		11,091,782	10,094,108	\$ 133,094	\$132,698

The holders of the Company's Preferred Stock had certain voting and dividend rights, as well as liquidation preferences and conversion privileges. All rights, preferences, and privileges associated with the Preferred Stock were terminated at the time of the Company's IPO in conjunction with the conversion of all outstanding shares of Preferred Stock into shares of common stock.

10. Stock-based Compensation

Equity Incentive Plans

The Company's Amended and Restated 2006 Equity Incentive Plan (the "2006 Plan") provided for the issuance of non-qualified stock options, restricted stock and stock awards to the Company's employees, officers, directors and consultants. The 2006 Plan authorized up to an aggregate of 3,444,668 shares of the Company's Class B common stock for such issuances. In conjunction with the effectiveness of the Company's 2015 Equity Incentive Plan (the "2015 Plan"), the Board voted that no further stock options or other equity-based awards may be granted under the 2006 Plan.

In 2015, the Board first adopted the 2015 Plan, which became effective on June 26, 2015. The 2015 Plan provided for the issuance of incentive stock options, non-qualified stock options, restricted stock, stock awards and restricted stock units ("RSUs") to employees, consultants and non-employee directors. As of the effective date of the 2015 Plan, up to 603,436 shares of common stock were authorized for issuance under the 2015 Plan. The 2015 Plan was amended and restated effective August 6, 2015 to permit the granting of RSUs under the 2015 Plan, remove Class B common stock from the pool

of shares available for issuance under the 2015 Plan and make certain other desired changes. The 2015 Plan was further amended and restated at October 15, 2015 to add a ten-year term and to make certain other desired changes.

The 2015 Plan was further amended and restated effective August 22, 2016 to merge the 2006 Plan into the 2015 Plan, to increase the number of shares of Class A common stock that may be issued under the 2015 Plan, and to lengthen the term of the 2015 Plan to expire on August 21, 2026. In addition, pursuant to this amendment and restatement of the 2015 Plan, prior to giving effect to the recapitalization that occurred on June 21, 2017, there were (i) 618,691 shares of Class A common stock, plus (ii) 802,562 shares of Class B common stock authorized under the 2015 Plan; provided, however, that (1) the number of shares of Class A common stock was increased, on a share for share basis, by the number of shares of Class B common stock that were (a) subject to outstanding options granted under the 2006 Plan that expired, terminated, or were cancelled for any reason without having been exercised, (b) surrendered in payment of the exercise price of outstanding options granted under the 2006 Plan or (c) withheld in satisfaction of tax withholding upon exercise of outstanding options granted under the 2006 Plan, and the number of shares of Class B common stock could be granted and restated 2015 Plan, and (3) except with respect to outstanding options granted under the 2006 Plan that were exercised on or after the date of the amendment and restatement, no Class B common stock could be issued under the 2015 Plan.

In connection with the recapitalization that occurred on June 21, 2017, the 2015 Plan was further amended and restated to account for each outstanding common stock option being adjusted such that each share of common stock underlying such option became two shares of Class A common stock and four shares of Class B common stock underlying such option, and each outstanding RSU being adjusted such that each share of common stock issuable upon settlement of such RSU became two shares of Class A common stock and four shares of Class B common stock issuable upon settlement of such RSU. Pursuant to the 2015 Plan as further amended in connection with the recapitalization, there were (i) 3,181,740 shares of Class A common stock and (ii) 5,161,644 shares of Class B common stock authorized for issuance under the 2015 Plan.

In connection with the IPO, in October 2017, the Board adopted, and the Company's stockholders approved, the Omnibus Equity Compensation Plan (the "2017 Plan") for the purpose of granting incentive stock options, non-qualified stock options, stock awards, stock units, other share-based awards and cash awards to employees, advisors and consultants to the Company and its subsidiaries and non-employee members of the Company's board of directors. The 2017 Plan is the successor to the 2015 Plan. The 2017 Plan authorizes the issuance or transfer of the sum of: (i) 7,800,000 shares of the Company's Class A common stock, plus (ii) the number of shares of our Class A common stock (up to 4,500,000 shares) equal to the sum of (x) the number of shares of Class A common stock and Class B common stock of the Company subject to outstanding awards under the 2015 Plan as of October 10, 2017 that terminate, expire or are cancelled, forfeited, exchanged, or surrendered on or after October 10, 2017 without having been exercised, vested, or paid prior to October 10, 2017, including shares tendered or withheld to satisfy tax withholding obligations with respect to outstanding grants under the Prior 2015 Plan, plus (y) the number of shares of Class A common stock reserved for issuance under the 2015 Plan that remain available for grant under the 2015 Plan as of the October 10, 2017. The aggregate number of shares of Class A common stock that may be issued or transferred under the 2017 Plan pursuant to incentive stock options will not exceed 12,300,000 shares of Class A common stock. Unless determined otherwise by the Compensation Committee of the Board, as of the first trading day of January of each calendar year during the term of the 2017 Plan (excluding any extensions), eligible beginning with calendar year 2019, an additional number of shares of Class A common stock will be added to the number of shares of the Company's Class A common stock authorized to be issued or transferred under the 2017 Plan and the number of shares authorized to be issued or transferred pursuant to incentive stock options, equal to 4% of the total number of shares of our Class A common stock outstanding on the last trading day in December of the immediately preceding calendar year, or 6,000,000 shares, whichever is less, or such lesser amount as determined by the Board (the "Evergreen Increase"). The Compensation Committee of the Board determined to not effectuate the Evergreen Increase that was otherwise scheduled to have occurred on each of January 2, 2019 and January 2, 2020. In conjunction with the adoption of the 2017 Plan, options and RSUs outstanding under the 2015 Plan will remain outstanding but no additional grants will be made from the 2015 Plan.

At December 31, 2019, 5,889,929 shares of Class A common stock were available for issuance under the 2017 Plan.

Stock Options

The following is a summary of the stock option activity for all stock-based compensation plans during the year ended December 31, 2019:

	Common Stock	Weighted- Average Exercise Price for Equity		Average Exercise Price for Equity		Weighted- Average Remaining Contractual Life (In Years)	Aggregate Intrinsic Value(1)
Outstanding, December 31, 2018	1,807,515	\$	2.35	5.9	\$ 56,716		
Granted							
Exercised	(838,928)		2.16		28,902		
Forfeited and cancelled	(25,702)		5.09				
Outstanding, December 31, 2019	942,885	\$	2.45	5.0	\$ 30,859		
Options exercisable at December 31, 2019	913,197	\$	2.31	5.0	\$ 30,016		

(1) The aggregate intrinsic value as of December 31, 2019 and 2018 was calculated based on the positive difference, if any, between the estimated fair value of our common stock on December 31, 2019 and 2018, respectively, or the date of exercise, as appropriate, and the exercise price of the underlying options.

There were no options granted in the years ended December 31, 2019, 2018 and 2017.

The aggregate intrinsic value for options exercised during the years ended December 31, 2018 and 2017 was \$111,227 and \$2,238, respectively.

As of December 31, 2019, there was \$16 of unrecognized stock-based compensation expense related to unvested stock options, which is expected to be recognized over a weighted-average period of 0.3 years.

Restricted Stock Units

The following is a summary of the RSU activity during the year ended December 31, 2019:

	Number of Shares	Avera	ighted- ige Grant Fair Value	Aggregate Intrinsic Value
Unvested outstanding, December 31, 2018	2,973,002	\$	26.06	\$ 100,279
Granted	1,811,208		39.07	
Vested	(1,317,736)		23.93	
Forfeited	(383,173)		31.70	
Unvested outstanding, December 31, 2019	3,083,301	\$	33.89	\$ 108,471

The weighted-average grant-date fair value of RSUs granted was \$35.79 and \$16.99 per share in 2018 and 2017, respectively.

RSUs that vested and settled during the year ended December 31, 2018 totaled 1,781,201, which included 1,087,279 and 693,922 RSUs that vested in 2018 and 2017, respectively. RSUs that vested prior to April 10, 2018 did not settle until the expiration of shareholder lock-up agreements on such date.

The total fair value of RSUs vested was \$31,533, \$15,994, and \$2,505 in the years ended December 31, 2019, 2018 and 2017, respectively.

As of December 31, 2019, there was \$92,700 of unrecognized stock-based compensation expense related to unvested RSUs that is expected to be recognized over a weighted-average period of 2.8 years.

Stock-based Compensation Expense

For the years ended December 31, 2019, 2018, and 2017, total stock-based compensation expense was \$34,301, \$20,794, and \$5,028, respectively. The following two tables show stock compensation expense by award type and where the stock compensation expense is recorded in the Company's consolidated statements of operations:

	Year Ended December 31,					
		2019		2018		2017
Options	\$	155	\$	247	\$	281
RSUs		34,146		20,547		4,747
Total stock-based compensation expense	\$	34,301	\$	20,794	\$	5,028
	Year Ended December 31,					
	2019 2018 2017					2017
Cost of revenue	\$	354	\$	354	\$	151
Sales and marketing expense		9,989		5,111		1,911
Product, technology, and development expense		15,159		9,865		1,637
General and administrative expense		8,799		5,464		1,329
Total stock-based compensation expense	\$	34,301	\$	20,794	\$	5,028

Excluded from stock-based compensation expense is \$1,381, \$490, and \$176 of capitalized software development costs and internal-use software costs in 2019, 2018 and 2017, respectively.

The income tax benefit from stock-based compensation expense was \$2,953, \$1,945, and \$1,301 in the years ended December 31, 2019, 2018, and 2017, respectively.

During the years ended December 31, 2019 and 2018, the Company withheld 452,678, and 658,931 shares of Class A common stock, respectively, to satisfy employee tax withholding requirements and option costs due to net share settlements. No shares were withheld during the year ended December 31, 2017. The shares withheld return to the authorized, but unissued, pool under the 2017 Plan and can be reissued by the Company. Total payments for the employees' tax obligations to the taxing authorities and for option costs due to net share settlements were \$16,470 and \$25,885 for the years ended December 31, 2019 and 2018, respectively, and are reflected as a financing activity within the consolidated statements of cash flows.

Common Stock Reserved for Future Issuance

At December 31, 2019, the Company had reserved the following shares of voting common stock for future issuance:

Common stock options outstanding	942,885
Restricted stock units outstanding	3,083,301
Shares available for issuance under the 2017 Plan	5,889,929
Total shares of authorized common stock reserved for	
future issuance	9,916,115

11. Earnings Per Share

Net income per share for the years ended December 31, 2019 and 2018 was computed by dividing net income by the weighted-average number of common shares outstanding during the reporting period. The Company computes the weighted-average number of common shares outstanding during the reporting period using the total number of shares of Class A common stock and Class B common stock outstanding as of the last day of the previous year end reporting period plus the weighted-average of any additional shares issued and outstanding during the reporting period.

Net income per share for the year ended December 31, 2017 was computed using the two-class method, which includes the weighted-average number of shares of common stock outstanding during the period and other securities that participate in dividends (a participating security). For periods during the year ended December 31, 2017, the Company had convertible Preferred Stock outstanding. The Company considered the convertible Preferred Stock to be participating securities because they included rights to participate in dividends with the common stock. On October 16, 2017, in connection with the closing

of the IPO, all of the outstanding shares of convertible Preferred Stock automatically converted into 20,188,226 shares of Class A common stock and 40,376,452 shares of Class B common stock, the latter of which subsequently converted in full into shares of Class A common stock. As a result, there were no shares of Preferred Stock outstanding at the closing of the IPO and the Company has not issued any new shares of Preferred Stock since such closing.

Under the two-class method, 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 shares of common stock outstanding during the period. Diluted net income per share attributable to common stockholders is computed using the more dilutive of (1) the two-class method or (2) the if-converted method. The Company allocated net income first to preferred stockholders based on dividend rights under the Company's certificate of incorporation that was in effect prior to the closing of the IPO and then to preferred and common stockholders based on ownership interests. Net losses are not allocated to preferred stockholders as they do not have an obligation to share in the Company's net losses.

The Company has two classes of common stock authorized: Class A common stock and Class B common stock. The rights of the holders of Class A and Class B common stock are identical, except with respect to voting and conversion. Each share of Class A common stock is entitled to one vote per share and each share of Class B common stock is entitled to ten votes per share. Each share of Class B common stock is convertible into one share of Class A common stock at the option of the holder at any time or automatically upon certain events described in the Company's amended and restated certificate of incorporation, including on either the death or voluntary termination of the Company's Chief Executive Officer. The Company allocates undistributed earnings attributable to common stock between the common stock classes on a one-to-one basis when computing net income per share. As a result, basic and diluted net income per share of Class A common stock and per share of Class B common stock are equivalent.

During the years ended December 31, 2019 and 2018, holders of Class B common stock converted 387,440 shares and 7,534,710 shares, respectively, of Class B common stock to Class A common stock.

Diluted net income per share gives effect to all potentially dilutive securities. Potential diluted securities for the years ended December 31, 2019, 2018 and 2017 consist of shares of common stock issuable upon the exercise of stock options and shares of common stock issuable upon the vesting of RSUs. Potential dilutive securities for the year ended December 31, 2017 also included shares of common stock issuable upon the conversion of the outstanding Preferred Stock. The dilutive effect of these common stock equivalents is reflected in diluted earnings per share by application of the treasury stock method.

For the years ended December 31, 2019 and 2018, dilutive net income per share was calculated by dividing net income by the weighted-average number of shares of common stock outstanding during the period plus the dilutive impact of stock options and shares of common stock issuable upon the vesting of RSUs. For the year ended December 31, 2017, the two-class method was used in the computation of diluted net income per share, which was equally as dilutive as the if-converted method.

	Year Ended December 31,					
	 2019	2018			2017	
Numerator:						
Net income	\$ 42,146	\$	65,170	\$	13,199	
Net income attributable to participating securities	 				(6,098)	
Net income attributable to common						
stockholders — basic	\$ 42,146	\$	65,170	\$	7,101	
Net income	\$ 42,146	\$	65,170	\$	13,199	
Net income attributable to participating securities	—		—		(5,829)	
Net income attributable to common						
stockholders — diluted	\$ 42,146	\$	65,170	\$	7,370	
Denominator:	 <u> </u>					
Weighted–average number of shares of common stock						
used in computing net income per share attributable to						
common stockholders — basic	111,450,443	1	.08,833,028		55,835,265	
Dilutive effect of share equivalents resulting from						
stock options	1,155,906		3,009,748		4,290,362	
Dilutive effect of share equivalents resulting from						
unvested restricted stock units	 825,501		1,521,936		511,957	
Weighted–average number of shares of common						
stock used in computing net income per share —						
diluted	113,431,850	1	.13,364,712		60,637,584	
Net income per share attributable to common						
stockholders:						
Basic	\$ 0.38	\$	0.60	\$	0.13	
Diluted	\$ 0.37	\$	0.57	\$	0.12	
		-				

The following potentially dilutive common stock equivalents have been excluded from the calculation of diluted weighted-average shares outstanding for the years ended December 31, 2019, 2018, and 2017, as their effect would have been anti-dilutive for the periods presented:

	Year	Year Ended December 31,			
	2019	2018	2017		
Restricted stock units outstanding	1,144,287	126,816	829		

12. Income Taxes

The domestic and foreign components of income before income taxes are as follows:

	 Year Ended December 31,					
	2019		2018		2017	
United States	\$ 37,476	\$	24,426	\$	15,543	
Foreign	1,229		1,058		294	
Income before income taxes	\$ 38,705	\$	25,484	\$	15,837	

The (benefit from) provision for income taxes contained the following components:

	Year Ended December 31,						
		2019		2018		2017	
Current (benefit) provision:							
Federal	\$	_	\$	(860)	\$	3,262	
State		(220)		92		431	
Foreign		513		122		62	
		293		(646)		3,755	
Deferred (benefit) provision:							
Federal		(2,377)		(27,675)		(755)	
State		(1,306)		(11,499)		(343)	
Foreign		(51)		134		(19)	
		(3,734)		(39,040)		(1,117)	
Income tax (benefit) provision	\$	(3,441)	\$	(39,686)	\$	2,638	

The Company's effective tax rates for the years ending December 31, 2019 and 2018 are less than the U.S. federal statutory rate due to excess tax deductions related to stock-based compensation awards and federal and state research and development credits. The Company's effective tax rate for the year ending December 31, 2017 is less than the U.S. federal statutory rate primarily due to federal and state research and development credits, excess tax deductions related to stock-based compensation awards, and tax deductions for fees incurred during the IPO process.

	Year Ended December 31,				
	2019	2018	2017		
U.S. federal taxes at statutory rate	21.0%	21.0%	35.0%		
State taxes, net of federal benefit	0.2	(25.6)	3.1		
Nondeductible expenses	2.9	4.1	1.2		
Tax deductible IPO costs	—		(9.3)		
Stock compensation	(22.0)	(127.2)	(4.4)		
Foreign rate differential	(0.3)	(0.4)	(0.4)		
Credits	(10.3)	(28.4)	(9.0)		
Other	(0.2)	0.7	0.5		
Total	(8.7)%	(155.8)%	16.7%		

The approximate income tax effect of each type of temporary difference and carryforward as of December 31, 2019 and 2018 is as follows:

	As of December 31,		
	 2019	2018	
Deferred tax assets:			
Net operating loss carryforwards	\$ 35,977	\$ 34,450	
Credit carryforwards	10,472	6,562	
Stock-based compensation	2,953	1,945	
Landlord allowance on leasehold improvements		1,908	
Lease liability	17,965		
Intangible Assets	62		
Deferred rent		873	
Accruals and reserves	1,185	1,074	
	68,614	46,812	
Valuation Allowance	(62)		
	68,552	46,812	
Deferred tax liabilities:	 		
Prepaid expenses	(1,523)	(931)	
Deferred commissions	(5,100)	(3,187)	
Right of use assets	(15,270)	_	
Unbilled revenue		(227)	
Fixed assets	(4,230)	(3,581)	
	(26,123)	(7,926)	
Net deferred tax assets	\$ 42,429	\$ 38,886	

The Company uses the asset and liability method to account for income taxes in accordance with ASC 740, Income Taxes. Under this method, deferred income taxes are recognized for the future tax consequences of differences between the tax and financial accounting bases of assets and liabilities at each reporting period. Deferred income taxes are based on enacted tax laws and statutory tax rates applicable to the period in which these differences are expected to affect taxable income. A valuation allowance is established when necessary to reduce deferred tax assets to the amounts expected to be realized.

The Company has provided an immaterial valuation allowance against its net deferred tax assets at December 31, 2019, but did not provided a valuation allowance against its net deferred tax assets at December 31, 2018. Based upon the level of historical U.S. earnings and future projections over the period in which the net deferred tax assets are deductible, at this time, management believes it is more likely than not that the Company will realize the benefits of these deductible differences, with the exception of the deferred tax asset related to intangible assets in Ireland. The change in the valuation allowance for the year ended December 31, 2019 was \$62.

As of December 31, 2019, the Company has federal and state net operating loss carryforwards of \$136,771 and \$114,459, respectively. The federal net operating losses carryforward indefinitely, subject to an annual limitation of 80% of taxable income. The state net operating losses, excluding Florida and Georgia which carryforward indefinitely, expire at various dates beginning in 2028. As of December 31, 2019, the Company has federal and state tax credit carryforwards of \$6,507 and \$5,018, respectively, available to reduce future tax liabilities that expire at various dates through 2039.

Utilization of the net operating losses and tax credit carryforwards, respectively, may be subject to an annual limitation due to ownership change limitations that have occurred previously or that could occur in the future, as provided by Section 382 of the Code, or Section 382, as well as similar state provisions. Ownership changes may limit the amount of net operating losses or tax credit carryforwards that can be utilized annually to offset future taxable income and tax, respectively. In general, an ownership change, as defined by Section 382, results from transactions that increase the ownership of five percent stockholders in the stock of a corporation by more than 50% in the aggregate over a three-year period.

At December 31, 2019 and 2018, the Company had no recorded liabilities for uncertain tax positions and had no accrued interest or penalties related to uncertain tax positions.

The Company permanently reinvests the earnings, if any, of its foreign subsidiaries and, therefore, does not provide for U.S. income taxes that could result from the distribution of those earnings to the U.S. parent. As of December 31, 2019, the amount of unrecognized deferred U.S. taxes on these earnings would be immaterial.

The Company and its subsidiaries are subject to various U.S. federal, state, and foreign income taxes. The Company is currently not subject to examination under the statute of limitations by the Internal Revenue Service and state jurisdictions for the tax years of 2015 and prior. The Company is currently open to examination in its foreign jurisdictions for tax years 2017 and after. In 2018, the Internal Revenue Service commenced a federal income tax audit with respect to the Company's 2016 tax year, which was concluded in October 2019 for an immaterial amount. In 2019, the Internal Revenue Service commenced a federal employment tax audit with respect to the 2018, 2017 and 2016 calendar years, which is still open.

13. Segment and Geographic Information

The Company has two reportable segments, United States and International. Segment information is presented in the same manner as the Company's chief operating decision maker, or CODM, reviews the Company's operating results in assessing performance and allocating resources. The CODM reviews revenue and operating income (loss) for each reportable segment as a proxy for the operating performance of the Company's United States and International operations. The Company's Chief Executive Officer is the CODM on behalf of both reportable segments.

The United States segment derives revenues from marketplace subscriptions, advertising services, and other revenues from customers within the United States. The International segment derives revenues from marketplace subscriptions, advertising services, and other revenues from customers outside of the United States. A majority of the Company's operational overhead expenses, including technology and personnel costs, and other general and administrative costs associated with running the Company's business, are incurred in the United States and not allocated to the International segment. Assets and costs discretely incurred by reportable segments, including depreciation and amortization, are included in the calculation of reportable segment income (loss) from operations. Segment operating income (loss) does not reflect the transfer pricing adjustments related to the Company's foreign subsidiaries, which are recorded for statutory reporting purposes. Asset information is assessed and reviewed on a global basis.

Information regarding the Company's operations by segment and geographical area is presented as follows:

	Year Ended December 31,					
		2019		2018		2017
Segment revenue:						
United States	\$	555,007	\$	437,166	\$	307,472
International		33,909		16,920		9,389
Total revenue	\$	588,916	\$	454,086	\$	316,861
			-		_	
		Ye	ar End	ded December :	31,	
		<u>Ye</u> 2019	ar End	ded December 2018	31,	2017
Segment income (loss) from operations:	_		ar Eno		31,	2017
Segment income (loss) from operations: United States	\$		ar End		31, 	2017 41,586
	\$	2019		2018		

As of December 31, 2019, total assets held outside of the United States were \$32,528, primarily attributable to \$15,207 of goodwill and \$3,920 of intangible assets. As of December 31, 2018, total assets held outside the United States were not material.

14. Employee Benefit Plans

The Company maintains a defined contribution savings plan for all eligible U.S. employees under Section 401(k) of the Code. Effective July 1, 2017, the Company implemented a matching policy, under which the Company matches 50% of an employee's annual contributions to the 401(k) plan, up to a maximum of the lesser of (i) 6% of the employee's base salary, bonus and commissions paid during the year or (ii) \$5,000. Matching contributions are subject to vesting based on the employee's start date and length of service. Employees can designate the investment of their 401(k) accounts into several mutual funds. The Company does not allow investment in its common stock through the 401(k) plan.

During the year ended December 31, 2017, the Company began matching employee 401(k) contributions up to a set limit. Total employer contributions were \$2,708, \$1,953, and \$724 during the years ended December 31, 2019, 2018 and 2017, respectively.

15. Quarterly Financial Results (unaudited)

The following table presents certain unaudited quarterly financial information for the eight quarters in the period ended December 31, 2019. This information has been prepared on the same basis as the audited financial statements and includes all adjustments (consisting only of normal recurring adjustments) necessary to present fairly the unaudited quarterly results of operations set forth herein.

	Fourth Quarter	Third Quarter	Second Quarter	First Quarter
Year ended December 31, 2019				
Revenue	\$ 158,153	\$ 150,462	\$ 145,031	\$ 135,270
Cost of revenue	10,560	9,392	8,628	7,720
Gross profit	147,593	141,070	136,403	127,550
Income from operations	13,635	9,704	3,548	7,435
Net income	13,171	10,384	6,007	12,584
Basic net income per share (1)	\$ 0.12	\$ 0.09	\$ 0.05	\$ 0.11
Diluted net income per share (1)	\$ 0.12	\$ 0.09	\$ 0.05	\$ 0.11
Year Ended December 31, 2018				
Revenue	\$ 126,090	\$ 119,125	\$ 110,296	\$ 98,575
Cost of revenue	6,871	6,412	5,959	5,569
Gross profit	119,219	112,713	104,337	93,006
Income from operations	6,902	5,877	3,953	6,459
Net income	12,450	13,882	33,343	5,495
Basic net income per share (1)	\$ 0.11	\$ 0.13	\$ 0.31	\$ 0.05
Diluted net income per share (1)	\$ 0.11	\$ 0.12	\$ 0.29	\$ 0.05

(1) The amounts were computed independently for each quarter, and the sum of the quarters may not total the annual amounts.

16. Subsequent Events

On January 16, 2020, the Company acquired Autolist, an automotive shopping platform based in San Francisco, California, pursuant to an Agreement and Plan of Merger by and among the Company, Alpine Merger Sub, Inc., a Delaware corporation and wholly-owned subsidiary of the Company ("Merger Sub"), Auto List, Inc., a Delaware corporation ("Target"), and the stockholder representative(s) named therein, pursuant to which, among other things, the Company acquired Target through the merger of Merger Sub with and into Target (the "Merger"), with Target surviving as a wholly owned subsidiary of the Company. The Company paid an aggregate of approximately \$22.0 million to consummate the Merger, inclusive of \$2.2 million that is held in escrow to secure post-closing claims. The Merger is intended to both expand the Company's consumer audience in the United States and enhance its value proposition for subscribing dealers. During the year ended December 31, 2019, the Company incurred total acquisition-related costs of \$0.4 million related to the transaction. As the transaction occurred subsequent to period-end, the Company is still evaluating the purchase price allocation of the transaction but expects the primary assets acquired to be intangible assets and goodwill. Acquired tangible assets and assumed liabilities are expected to be immaterial. The allocation is expected to be finalized during the first half of 2020.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a- 15(e) and 15d- 15(e) under the Securities Exchange Act of 1934, as amended, as of the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, our principal executive officer and principal financial officer have concluded that as of December 31, 2019, our disclosure controls and procedures were effective.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) or 15d-15(f) of the Exchange Act. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles, and includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;
- (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2019, using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in its Internal Control-Integrated Framework (2013). Based on this assessment and those criteria, management concluded that our internal control over financial reporting was effective as of December 31, 2019.

The effectiveness of our internal control over financial reporting as of December 31, 2019, has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report which is included herein.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the fourth quarter ended December 31, 2019 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of CarGurus, Inc.

Opinion on Internal Control over Financial Reporting

We have audited CarGurus, Inc.'s internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, CarGurus, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2019 consolidated financial statements of the Company and our report dated February 14, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Boston, Massachusetts February 14, 2020



Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this Item is incorporated herein by reference from the information in our Proxy Statement for our 2020 Annual Meeting of Stockholders, which we will file with the SEC within 120 days of the end of the fiscal year to which this Annual Report on Form 10-K relates.

Item 11. Executive Compensation.

The information required by this Item is incorporated herein by reference from the information in our Proxy Statement for our 2020 Annual Meeting of Stockholders, which we will file with the SEC within 120 days of the end of the fiscal year to which this Annual Report on Form 10-K relates.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this Item is incorporated herein by reference from the information in our Proxy Statement for our 2020 Annual Meeting of Stockholders, which we will file with the SEC within 120 days of the end of the fiscal year to which this Annual Report on Form 10-K relates.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this Item is incorporated herein by reference from the information in our Proxy Statement for our 2020 Annual Meeting of Stockholders, which we will file with the SEC within 120 days of the end of the fiscal year to which this Annual Report on Form 10-K relates.

Item 14. Principal Accountant Fees and Services.

The information required by this Item is incorporated herein by reference from the information in our Proxy Statement for our 2020 Annual Meeting of Stockholders, which we will file with the SEC within 120 days of the end of the fiscal year to which this Annual Report on Form 10-K relates.

Item 15. Exhibits, Financial Statement Schedules.

(a) Documents filed as a part of this Report:

(1) Financial Statements

The financial statements of CarGurus, Inc. are included in Item 8 of this Annual Report on Form 10-K.

(2) Financial Statement Schedules

All financial statements schedules are omitted as they are either not required or the information is otherwise included in the consolidated financial statements and related notes.

(3) Index to Exhibits

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

Item 16. Form 10-K Summary.

Not applicable.

EXHIBIT INDEX

nibit	•		Exhibit	- Filed		
mber	Exhibit Description	Form	File Number	Filing Date	Number	Herewi
3.1	Amended and Restated Certificate of Incorporation of the	8-K	001-38233	October 16, 2017	3.1	
	Registrant.					
3.2	Amended and Restated Bylaws of the Registrant.	8-K	001-38233	October 16, 2017	3.2	
4.1	Specimen Class A common stock certificate of the	S-1/A	333-220495	September 29,	4.1	
	Registrant.			2017		
4.2	Amended and Restated Investors' Rights Agreement, dated	S-1	333-220495	September 15,	4.2	
	August 23, 2016, by and among the Registrant and certain			2017		
	of its stockholders.					
4.3	Description of the Registrant's Securities Registered Under					Х
	Section 12 of the Securities Exchange Act of 1934.					
0.1	Form of Indemnification Agreement between the	S-1	333-220495	September 15,	10.1	
	Registrant and each of its directors and executive officers.			2017		
0.2#	Amended and Restated 2006 Equity Incentive Plan.	S-1	333-220495	September 15,	10.2	
				2017		
0.3#	Amended and Restated 2015 Equity Incentive Plan and	S-1/A	333-220495	September 29,	10.3	
	forms of agreements thereunder.			2017		
0.4#	Omnibus Incentive Compensation Plan and forms of	S-1/A	333-220495	September 29,	10.4	
	agreements thereunder.			2017		
0.5#	Offer Letter, dated March 17, 2006, by and between the	S-1	333-220495	September 15,	10.5	
	Registrant and Langley Steinert.			2017		
0.6#	<u>Offer Letter, dated August 10, 2015, by and between the</u>	S-1	333-220495	September 15,	10.6	
	<u>Registrant and Jason Trevisan.</u>			2017		
0.7#	<u>Offer Letter, dated October 24, 2014, by and between the</u>	S-1	333-220495	September 15,	10.7	
	Registrant and Samuel Zales.			2017		
0.8#	<u>Offer Letter, dated November 18, 2016, by and between the</u>	10-K	001-38233	February 28, 2019	10.8	
	Registrant and Thomas Caputo.					
0.9#	Offer Letter, dated August 2, 2017, by and between the	10-K	001-38233	February 28, 2019	10.9	
	Registrant and Kathleen Patton.					
0.10#	Offer Letter, dated March 7, 2008, by and between the	10-K	001-38233	February 28, 2019	10.10	
	Registrant and Oliver Chrzan.					
0.11	Lease, dated as of October 8, 2014, by and between the	S-1	333-220495	September 15,	10.8	
	Registrant and BCSP Cambridge Two Property LLC.			2017		
0.12	Office Lease Agreement, dated as of March 11, 2016, by	S-1	333-220495	September 15,	10.9	
	and between 55 Cambridge Parkway, LLC and the			2017		
0.40	Registrant.	6.4	222 220 405		10.10	
0.13	First Amendment to Lease, dated as of July 30, 2016 by	S-1	333-220495	September 15,	10.10	
	and between 55 Cambridge Parkway, LLC and the			2017		
0 1 4 //	Registrant.	0.17	001 20222	March 26, 2010	10.1	
0.14#	Form of Non-Employee Director Restricted Stock Unit	8-K	001-38233	March 26, 2018	10.1	
0.15#	Agreement.	0 12/1	001 20222	April 6 2019	10.1	
0.15#	<u>CarGurus, Inc. Annual Incentive Plan</u> .	8-K/A	001-38233	April 6, 2018	10.1	
0.16#	Form of Executive Restricted Stock Unit Agreement.	10-Q	001-38233	May 3, 2018	10.3	
0.17	Lease Agreement, dated as of June 19, 2018, by and	8-K	001-38233	June 20, 2018	10.1	
0.10//	between US Parcel A, LLC and the Registrant.	10.0	001 20222	A	10.4	
0.18#	Consulting Agreement, dated April 1, 2019, by and	10-Q	001-38233	August 6, 2019	10.1	
	between the Registrant and Oliver Chrzan.					

		Incorporated					
Exhibit Number		Г	File	Filing Date	Exhibit	Filed	
10.19	Exhibit Description Second Amendment to Lease, dated as of August 30, 2019	Form 10-Q	<u>Number</u> 001-38233	November 5,	Number 10.1	Herewith	
10.15	by and between 55 Cambridge Parkway, LLC and the	10-Q	001-50255	2019	10.1		
	Registrant.			2015			
10.20	Indenture of Lease between S&A P-12 Property LLC and	8-K	001-38233	December 20,	10.1		
10.20	the Registrant, dated as of December 19, 2019.	010	001 00200	2019	10.1		
21.1	List of Subsidiaries of the Registrant.			2010		Х	
23.1	Consent of Ernst & Young LLP, Independent Registered					X	
20.1	Public Accounting Firm.					24	
31.1	<u>Certification of Principal Executive Officer Pursuant to</u>					Х	
51.1	Rules 13a-14(a) and 15d-14(a) under the Securities					21	
	Exchange Act of 1934, as Adopted Pursuant to Section 302						
	of the Sarbanes-Oxley Act of 2002.						
31.2	Certification of Principal Financial Officer Pursuant to					х	
01.	Rules 13a-14(a) and 15d-14(a) under the Securities						
	Exchange Act of 1934, as Adopted Pursuant to Section 302						
	of the Sarbanes-Oxley Act of 2002.						
32.1*	Certification of Principal Executive Officer Pursuant to 18					Х	
	U.S.C. Section 1350, as Adopted Pursuant to Section 906						
	of the Sarbanes-Oxley Act of 2002.						
32.2*	Certification of Principal Financial Officer Pursuant to 18					Х	
	U.S.C. Section 1350, as Adopted Pursuant to Section 906						
	of the Sarbanes-Oxley Act of 2002.						
101.INS	Inline XBRL Instance Document- the instance document					Х	
	does not appear in the Interactive Data File because its						
	XBRL tags are embedded within the Inline XBRL						
	document.						
101.SCH	Inline XBRL Taxonomy Extension Schema Document.					Х	
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase					Х	
	Document.						
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase					Х	
	Document.						
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase					Х	
	Document.						
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase					Х	
	Document.						
104	The cover page from the Company's Annual Report on					Х	
	Form 10-K for the year ended December 31, 2019 has been						
	formatted in Inline XBRL.						

[#] Indicates a management contract or compensatory plan.

^{*} The certifications furnished in Exhibit 32.1 and Exhibit 32.2 hereto are deemed to accompany this Annual Report on Form 10-K and will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the Registrant specifically incorporates it by reference.

SIGNATURES

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

Date: February 14, 2020

CarGurus, Inc.

By: /s/ Langley Steinert

Langley Steinert Chief Executive Officer and Chairman of the Board of Directors

POWER OF ATTORNEY

Each person whose individual signature appears below hereby constitutes and appoints Langley Steinert and Jason Trevisan, and each of them, with full power of substitution and resubstitution and full power to act without the other, as his or her true and lawful attorney-in-fact and agent to act in his or her name, place and stead and to execute in the name and on behalf of each person, individually and in each capacity stated below, and to file any and all amendments to this Annual Report on Form 10-K, 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 and agents, and each of them, full power and authority to do and perform each and every act and thing, ratifying and confirming all that said attorneys-in-fact and agents or any of them or their or his substitute or substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this report has been signed below by the following persons on behalf of the registrant in the capacities and on the dates indicated.

Name	Title	Date
	Chief Executive Officer and Chairman	
/s/ Langley Steinert	(Principal Executive Officer)	February 14, 2020
Langley Steinert		
	Chief Financial Officer and President, International	
/s/ Jason Trevisan	(Principal Financial Officer and Principal Accounting Officer)	February 14, 2020
Jason Trevisan		
/s/ Steven Conine	Director	February 14, 2020
Steven Conine		
/s/ Lori Hickok	Director	February 14, 2020
Lori Hickok	—	
/s/ Stephen Kaufer	Director	February 14, 2020
Stephen Kaufer		
/s/ Anastasios Parafestas	Director	February 14, 2020
Anastasios Parafestas	—	
/s/ Greg Schwartz	Director	February 14, 2020
Greg Schwartz		
/s/ Ian Smith	Director	February 14, 2020
Ian Smith	_	

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

The following description sets forth certain material terms and provisions of CarGurus, Inc.'s ("CarGurus," "we," "us," and "our") securities that are registered under Section 12 of the Securities Exchange Act of 1934, as amended.

DESCRIPTION OF CAPITAL STOCK

The following description is a summary and does not purport to be complete. It is subject to, and qualified in its entirety by reference to, our Fourth Amended and Restated Certificate of Incorporation (our "Certificate of Incorporation") and our Amended and Restated Bylaws (our "Bylaws"), each of which are incorporated by reference as an exhibit to the Annual Report on Form 10-K of which this Exhibit 4.3 is a part. The terms of these securities also may be affected by Delaware law.

Authorized Capital Stock

We are authorized to issue a total of 610,000,000 shares of capital stock consisting of 500,000,000 shares of Class A common stock, par value \$0.001 per share, 100,000,000 shares of Class B common stock, par value \$0.001 per share, and 10,000,000 shares of preferred stock, par value \$0.001 per share. Our common stock is listed on the Nasdaq Global Select Market under the trading symbol "CARG."

Class A and Class B Common Stock

Voting Rights

Holders of our Class A common stock and Class B common stock have identical rights, provided that, except as otherwise expressly provided in our Certificate of Incorporation or required by applicable law, on any matter that is submitted to a vote of our stockholders, holders of our Class A common stock are entitled to one vote per share of Class A common stock and holders of our Class B common stock are entitled to 10 votes per share of Class B common stock. Holders of shares of 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 law. Delaware law could require either our Class A common stock or Class B common stock to vote separately as a single class in the following circumstances:

- if we propose to amend our certificate of incorporation to increase or decrease the par value of the shares of a class of our stock; or
- if we propose to amend our certificate of incorporation in a manner that alters or changes the powers, preferences, or special rights of a class of stock in a manner that affected its holders adversely.

We have not provided for cumulative voting for the election of directors in our Certificate of Incorporation.

Economic Rights

Except as otherwise expressly provided in our Certificate of Incorporation or required by applicable law, shares of Class A common stock and Class B common stock have the same rights and privileges and rank equally, share ratably and are identical in all respects as to all matters, including, without limitation, those described below.

Dividends and Distributions. Subject to preferences that may apply to any shares of preferred stock outstanding at the time, the holders of Class A common stock and Class B common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds. We have never declared or paid cash dividends on any of our capital stock and currently do not anticipate paying any cash dividends in the foreseeable future.

Right to Receive Liquidation Distributions. Upon our dissolution, liquidation or winding-up, the assets legally available for distribution to our stockholders are distributable ratably among the holders of our common stock, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights and payment of liquidation preferences, if any, on any outstanding shares of preferred stock.

No Preemptive or Similar Rights. Holders of our Class A common stock and Class B common stock are not entitled to preemptive rights and are not subject to redemption or sinking fund provisions.

Conversion

Each 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 of such share, which is defined to include entering into a voting agreement, whether or not for value, except for certain transfers described in our Certificate of Incorporation, including, without limitation, transfers to certain family members of the transferor stockholder. Finally, all shares of Class B common stock automatically convert into shares of Class A common stock, on a share for share basis, upon the date falling after the first to occur of (1) the death of Langley Steinert, our founder, Chief Executive Officer and Chairman, (2) Mr. Steinert's voluntary termination of all employment with us and service on our board of directors, or (3) the sum of the number of shares of our capital stock held by Mr. Steinert, by any Family Member of Mr. Steinert, and by any Permitted Entity of Mr. Steinert (as such terms are defined in our Certificate of Incorporation), assuming the exercise and settlement in full of all outstanding options and convertible securities and calculated on an asconverted to Class A common stock upon the termination of Mr. Steinert's status as an officer and director, unless such termination is either made voluntarily by Mr. Steinert or due to Mr. Steinert's death. Once converted into Class A common stock, the any outstanding options or converted shares of Class B common stock will not be reissued. In addition, if all shares of Class B common stock are converted into Class A common stock, then any outstanding options or convertible securities with the right to purchase or acquire shares of Class B common stock shall become a right to purchase or acquire shares of Class A common stock shall become a right to purchase or acquire shares of Class A common stock shall become a right to purchase or acquire shares of Class A common stock

Fully Paid and Non-Assessable

All of the outstanding shares of our Class A common stock and Class B common stock are fully paid and non-assessable.

Preferred Stock

Our board of directors has the authority to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges, and restrictions thereof, provided that, prior to the Threshold Date (as such term is defined in our Certificate of Incorporation and described below), such designation is subject to the approval of holders of at least a majority of the combined voting power of our outstanding capital stock. These rights, preferences, and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms, and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. The issuance of preferred stock by us could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change of control of our company or other corporate action. We have no present plan to issue any shares of preferred stock.

Certain Anti-Takeover Provisions of Delaware Law and Our Certificate of Incorporation and Bylaws

The provisions of Delaware law and of our Certificate of Incorporation and Bylaws may have the effect of delaying, deferring or discouraging another person from acquiring control of our company. These provisions, which are summarized below, may have the effect of discouraging takeover bids, coercive of otherwise. They are also designed, in part, to encourage persons seeking to acquire control of us to negotiate first 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.

Delaware Law

We are governed by the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes mergers, asset sales or other transactions resulting in a financial benefit to the stockholder. An "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years of the date on which it is sought to be determined whether such person is an interested stockholder, did own, 15% or more of the corporation's outstanding voting stock. These provisions may have the effect of delaying, deferring, or preventing a change in our control.

Certificate of Incorporation and Bylaws

Our Certificate of Incorporation and Bylaws include a number of provisions, some of which will become effective only from and after the date, which we refer to as the "Threshold Date", on which the votes applicable to the Class A common stock and Class B common stock controlled by Mr. Steinert represent less than a majority of the aggregate votes applicable to all shares of the outstanding Class A common stock and Class B common stock, which could deter hostile takeovers or delay or prevent changes in control of our management team, including the following:

Board Vacancies. Our Certificate of Incorporation and Bylaws provide that, from and after the Threshold Date only our board of directors will be authorized to fill vacant directorships, including newly created seats, and that the number of directors constituting our board of directors will be permitted to be set only by a resolution adopted by our board of directors. These provisions would prevent a stockholder from increasing the size of our board of directors and then gaining control of our board of directors by filling the resulting vacancies with its own nominees. These provisions make it more difficult to change the composition of our board of directors but promote continuity of management.

Classified Board. Our Certificate of Incorporation and Bylaws provide that our board of directors is classified into three classes of directors. A third party may be discouraged from making a tender offer or otherwise attempting to obtain control of us as it is more difficult and time consuming for stockholders to replace a majority of the directors on a classified board of directors.

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- Stockholder Action; Special Meeting of Stockholders. Our Certificate of Incorporation and Bylaws provide that from and after the
 Threshold Date our stockholders may not take action by written consent, but may only take action at an annual or special meetings
 of our stockholders. As a result, from and after the Threshold Date a holder controlling a majority of our capital stock would not be
 able to amend our Bylaws or remove directors without holding a meeting of our stockholders called in accordance with our Bylaws.
 Our Certificate of Incorporation further provides that special meetings of our stockholders may be called only by a majority of our
 board of directors, the chairman of our board of directors (if one has been appointed) or, prior to the Threshold Date, by the holders
 of a majority of the combined voting power of our outstanding capital stock, thus prohibiting from and after the Threshold Date a
 stockholder from calling a special meeting. These provisions might, from and after the Threshold Date, delay the ability of our
 stockholders to force consideration of a proposal or for stockholders controlling a majority of our capital stock to take any action,
 including the removal of directors.
- Advance Notice Requirements for Stockholder Proposals and Director Nominations. Our Bylaws 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 Bylaws also specify certain requirements regarding the form and content of a
 stockholder's notice. These provisions might preclude our stockholders from bringing matters before our annual meeting of
 stockholders or from making nominations for directors at our annual meeting of stockholders if the proper procedures are not
 followed. These provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the
 acquirer's own slate of directors or otherwise attempting to obtain control of our company.
- *No Cumulative Voting.* The Delaware General Corporation Law provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless a corporation's certificate of incorporation provides otherwise. Our Certificate of Incorporation does not provide for cumulative voting.
- *Directors Removed Only for Cause.* Our Certificate of Incorporation provides that from and after the Threshold Date stockholders may remove directors only for cause.
- *Amendment of Certificate of Incorporation Provisions*. Any amendment of the above provisions in our Certificate of Incorporation from and after the Threshold Date will require approval by holders of at least 66^{2/3}% of the combined voting power of our then outstanding capital stock.
- *Issuance of Undesignated Preferred Stock.* Our board of directors has the authority to issue up to 10,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by our board of directors, provided that prior to the Threshold Date such designation is subject to the approval of holders of a majority of the combined voting power of our outstanding common stock. The existence of authorized but unissued shares of preferred stock would enable 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 other means.

Exclusive Jurisdiction

Our Certificate of Incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will, to the fullest extent permitted by law, be the sole and exclusive forum for: (i) any derivative action or proceeding brought on behalf of us; (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees or agents to us or to our stockholders; (iii) any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law or our Certificate of Incorporation and Bylaws; (iv) any action to interpret, apply, enforce or determine the validity of our Certificate of Incorporation and Bylaws; or (v) any action asserting a claim against us or any of our directors, officers, or other employees or agents governed by the internal affairs doctrine. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with any action, a court could find the choice of forum provisions contained in our Certificate of Incorporation to be inapplicable or unenforceable in such action.

Transfer Agent and Registrar

The transfer agent and registrar for our Class A common stock is Broadridge Corporate Issuer Solutions. The transfer agent and registrar's address is 1717 Arch Street, Suite 1300, Philadelphia, Pennsylvania 19103.

Subsidiaries of CarGurus, Inc.

Auto List, Inc., a Delaware corporation

CarGurus Canada, Inc., a company incorporated under the laws of the Province of British Columbia

CarGurus Ireland Limited, an Irish Private Company Limited by Shares

CarGurus Securities Corp., a Massachusetts corporation

CarGurus UK Limited, a U.K. Private Limited Company

CGSC, Inc., a Massachusetts corporation

Pistonheads Holdco Limited, a U.K. Private Limited Company

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-221090) pertaining to the Omnibus Incentive Compensation Plan and the Amended and Restated 2015 Equity Incentive Plan of CarGurus, Inc. of our reports dated February 14, 2020, with respect to the consolidated financial statements of CarGurus, Inc. and the effectiveness of internal control over financial reporting of CarGurus, Inc., included in this Annual Report (Form 10-K) for the year ended December 31, 2019.

/s/ Ernst & Young LLP

Boston, Massachusetts February 14, 2020

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

I, Langley Steinert, certify that:

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

Date: February 14, 2020

By: /s/ Langley Steinert

Langley Steinert Chief Executive Officer and Chairman (Principal Executive Officer)

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

I, Jason Trevisan, certify that:

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

Date: February 14, 2020

By: /s/ Jason Trevisan

Jason Trevisan Chief Financial Officer and President, International (Principal Financial Officer and Principal Accounting Officer)

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of CarGurus, Inc. (the "Company") for the period ending December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Langley Steinert, Chief Executive Officer and Chairman of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, based on my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 14, 2020

By: /s/ Langley Steinert

Langley Steinert Chief Executive Officer and Chairman (Principal Executive Officer)

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of CarGurus, Inc. (the "Company") for the period ending December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jason Trevisan, Chief Financial Officer and President, International of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, based on my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 14, 2020

By: /s/ Jason Trevisan

Jason Trevisan Chief Financial Officer and President, International (Principal Financial Officer and Principal Accounting Officer)