2021
Annual Report

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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2021

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)

Delaware **(State or other jurisdiction of incorporation or organization)**	**04-3843478** **(I.R.S. Employer Identification No.)**
2 Canal Park, 4th Floor **Cambridge, Massachusetts** **(Address of principal executive offices)**	**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

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.

Large accelerated filer	☒	Accelerated filer	☐
Non-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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

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, 2021 was $2,546,447,011. Shares of voting and non-voting stock held by executive officers, directors and holders of more than 10% of the outstanding stock as of such date 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 18, 2022, the registrant had 102,066,025 shares of Class A common stock, and 15,999,173 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 2022 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 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;
- our growth strategies and our ability to effectively manage any growth;
- the value proposition of our product offerings for dealers and consumers;
- our belief that we are building the world's most trusted and transparent automotive marketplace and creating a differentiated automotive search experience for consumers;
- the ability of our combined suite of offerings to increase a dealer's return on investment, add scale to our marketplace network, drive powerful network effects, create powerful synergies for dealers, transform the end-to-end car shopping journey for both consumers and dealers and become the marketplace for all steps of the vehicle acquisition and purchase process;
- our evolution to becoming a transaction-enabled marketplace where consumers can shop, buy, seek financing, and sell their cars and dealers can source, market, and sell their vehicles;
- our belief that certain of our strengths, including our trusted marketplace for consumers, our strong value proposition for dealers and our data-driven approach, among other things, will lead to an advantage over our competitors;
- our ability to deliver quality leads at a high volume for our dealer customers and to provide the highest return on a dealer's investment;
- our ability to maintain and acquire new customers;
- our ability to maintain and build our brand;
- our efforts to continue to enhance our diversity, equity, inclusion and belonging initiatives;
- our ability to realize benefits from our acquisitions and successfully implement the integration strategies in connection therewith;
- our expectations regarding future share issuances and the exercise of put and call rights in connection with potentially acquiring additional equity interests in CarOffer, LLC, or CarOffer, as well as the associated valuation of redeemable noncontrolling interests;
- the value proposition of the CarOffer online wholesale platform, including our belief that as dealer enrollments increase, dealers will see a corresponding increase in inventory on the platform, further enabling liquidity, selection, choice and business efficiencies;
- our expectations for CarGurus Instant Max Cash Offer, as well as our digital retail offerings and continued investments;
- our belief that our partnerships with automotive lending companies provides more transparency to car shoppers and delivers highly qualified car shopper leads to participating dealers;
- our belief that our Area Boost offering promotes participating dealers' delivery capabilities and increases non-local VDP views;
- 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 and our beliefs regarding our compliance therewith;
- our ability to overcome challenges facing the automotive industry ecosystem, including inventory supply problems, global supply chain challenges, the global semiconductor chip shortage, 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 regarding cash generation and the sufficiency of our cash to fund our operations;
- the future trading prices of our Class A common stock;
- our expectation that we will realize the benefits of deferred tax assets;
- our expected returns on investments;
- the impact of our expense reduction efforts during the second quarter of 2020;
- our outlook for our Restricted Listings product;
- our expectations regarding future fee reductions for customers; and
- the impacts of the COVID-19 pandemic.

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 or joint ventures in which we may be involved, 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 statement 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.

PART I

Item 1. Business.

Overview

CarGurus, Inc. is a multinational, online automotive platform for buying and selling vehicles that is building upon its industry-leading listings marketplace with both digital retail solutions and the CarOffer online wholesale platform. The CarGurus marketplace gives consumers the confidence to purchase or sell a vehicle either online or in-person, and it gives dealerships the power to accurately price, effectively market, instantly acquire and quickly sell vehicles, all with a nationwide reach. CarGurus uses proprietary technology, search algorithms and data analytics to bring trust, transparency and competitive pricing to the automotive shopping experience. In addition to the United States, we operate online marketplaces under the CarGurus brand in Canada and the United Kingdom. In the United States and United Kingdom, we also operate the Autolist and PistonHeads online marketplaces, respectively, as independent brands.

CarGurus was founded upon the premise of bringing trust and transparency to the car shopping experience. Our online marketplace platform provides ease of access to prices of vehicles and dealer ratings imperative to a consumer's vehicle purchase. Providing car-shoppers with the tools and knowledge for their experience has enabled us to garner a large, engaged user base with whom our dealers can transact. Our ready-to-shop audience of 31.6 million average monthly visitors in the U.S. has attracted 23,860 paying dealers to list inventory on our U.S. online marketplace. Over time we identified that we could continue to be a valued partner to consumers in their car-shopping journey while at the same time innovating to further our partnership with our dealer community. We have since introduced products that expand a dealer's geographic footprint, enable digital retail capabilities that provide consumers with a self-selected journey, and offer new sources of acquiring inventory from our expanded network. This expanded suite of offerings can help increase our dealers' return on investment, or ROI, adding even more scale to our marketplace network. While we maintain our founding principles of trust and transparency, we are evolving to be a transaction-enabled marketplace where consumers can shop, buy, seek financing, and sell their cars and dealers can source, market, and sell their vehicles. We believe this combination of differentiated offerings will transform the end-to-end car shopping journey for both consumers and dealers.

Consumers' CarGurus Journey

Shop: A car purchase is a milestone in a consumer's life – whether it is the first set of keys or parting from a memory-filled vehicle. However, shopping for a car can be frustrating instead of empowering. Enter CarGurus, where we provide trust and transparency to the process for consumers. As the consumer moves to purchase a vehicle, 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.

Buy/Finance: Once a consumer has found a listing they intend to pursue, we provide an omni-channel approach to the purchase of a vehicle partially or completely online. Our digital retail products such as Area Boost and Finance in Advance provide the consumer a self-selected car-buying journey to tailor their experience to their specific needs. We believe this approach throughout the end-to-end consumer experience brings greater trust, transparency, and efficiency to a consumer's entire car shopping experience, leading to highly-engaged, more confident and satisfied shoppers.

Sell: According to recent consumer research, almost 60% of car-buying shoppers will trade in or sell a vehicle during their car-shopping journey. Our acquisition of 51% interest in CarOffer, LLC, or CarOffer, in January 2021, with the ability to buy the remaining equity interest in the company over the next three years, enabled the launch of CarGurus Instant Max Cash Offer, or IMCO. IMCO provides the consumer with the ability to complete this part of the process entirely online through a trusted and transparent experience. Consumers who are trading-in or selling vehicles receive the most competitive offer sourced from in-network dealers. Consumers benefit from the volume of participating dealerships in the CarGurus/CarOffer network, as well as the CarOffer Buying Matrix's 24-7 automated matching, which enables a hands-off approach to find the consumer the best deal at any time. Once the customer has accepted their offer, they can further customize their experience by arranging a location of their choice within participating states to have the vehicle picked-up and transported. With expansive dealer networks, consumers can have the confidence that they are truly finding the best deal for their vehicle instantly.

Dealers' CarGurus Journey

Source: As macroeconomic issues, including the global semiconductor chip shortage, impacted the automotive industry over the past year, obtaining vehicle inventory through in-person, time-consuming methods highlighted inefficiencies; as a result of which, inventory across dealer lots fell to historical lows during 2021. Made possible by the acquisition of CarOffer in 2021, we entered the digital wholesale space enabling dealers to acquire inventory in a convenient and efficient manner. CarOffer is an automated instant vehicle trade platform that is disrupting the traditional wholesale auction model with technology that enables dealers to bid, transact, inspect and transport vehicles seamlessly and efficiently. Any dealer, including those who are customers of the CarGurus site, can enroll on the CarOffer platform at no additional cost. CarOffer's proprietary Buying Matrix technology allows dealers on the platform to buy and sell to other dealers using limit orders, saving dealers the time and expense of going to an auction to acquire vehicles via the traditional in-person physical auction model. Through inspections on every sale, dealers can be confident their purchase meets their expectations while they reap the benefits of focusing their resources and attention on other elements of their businesses. As CarOffer dealer enrollments continue to increase, we expect dealers will see a corresponding increase of inventory on the platform, further enabling liquidity, selection, and business efficiencies. Additionally, the CarOffer platform enabled us to launch IMCO across approximately 70% of the U.S., providing dealers access to a fresh source of trade-in inventory and ensuring liquidity amongst CarOffer's platform. Similar to a dealer-to-dealer purchase, CarOffer handles inspections, transportation, titles, and payments in one bill of sale from the consumer. CarOffer's platform provides a solution for a dealer looking to minimize reliance on in-person or online auctions to source their vehicle inventory while assuring they are paying a fair price, which has led to rapid growth and adoption within the dealer community.

Market: Dealers can list their inventory on CarGurus' marketplace for free or with a subscription to one of our paid Listings packages. Non-paying dealers receive a limited number of anonymized email connections and access to a subset of tools on our Dealer Dashboard at no cost. A dealer with a paid subscription receives connections with consumers that are not anonymous and are made through a wider variety of methods, including phone calls, email, managed text and chat, links to the dealer's website, and map directions to its dealerships. The primary objective of our traffic acquisition and site improvement efforts is to generate quality 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. We define 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. 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 dealership. Paying dealers also have access to tools on the Dealer Dashboard as well as other product offerings such as Area Boost, which enables dealers to expand their geographic footprint to reach an increased consumer audience. Through our large ready-to-purchase consumer audience, our paying dealers ultimately have a consistent and compelling ROI through our variety of product offerings.

Sell: 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 such consumers, we believe we provide dealers with an efficient customer acquisition channel with the highest-intent shoppers providing the highest ROI. Further, as consumer needs evolve to customizing aspects of their vehicle purchase, we provide dealers, through a variety of digital offerings, the means to cater to consumers on a personalized level. Consumers can choose to complete their self-selected car-shopping journey with as little or as many of the digital offerings that we provide through our partnership with dealers, enabling a personalized experience that allows consumers to reach their personalized destination. 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. With the acquisition of CarOffer, we have also integrated insights regarding wholesale pricing among the dealer community. The ability to compare wholesale pricing with retail pricing ultimately allows dealers to price a car with more accuracy, winning loyal consumers with trust and transparency. These combined offerings allow dealers to efficiently drive their business to success from all aspects of sourcing and selling. Our success in our partnership with dealers is evidenced by the number of paying dealers – 23,860 paying dealers as of December 31, 2021 – in our U.S. marketplace.

CarGurus Value Proposition

Our scaled online transaction-enabled marketplace model drives powerful network effects. The combination of digital retail, digital wholesale and listings creates powerful synergies for dealers. Dealers can acquire inventory through consumers and other dealers on both the CarOffer and CarGurus platforms. The industry-leading inventory selection offered on the CarGurus website from our U.S. dealers attracts a large and engaged consumer audience – 31.6 million average monthly U.S. unique users in 2021 – and connections – 60.0 million in the U.S. in 2021. The value of robust connections to this audience incentivizes dealers to purchase our paid Listings packages. Expanded vehicle listings from paying dealers and an increasing number of offers by dealers to purchase vehicles from consumers provides consumers with diverse dealer information and choice. Our industry-leading consumer audience drives value to consumers looking to trade-in or sell their vehicle as well as paying dealers on our platform looking to acquire and sell inventory. As we continue to innovate and progress our offerings to both consumers and dealers, we strive to uphold and improve the quality of the connections between consumers and dealers and become the marketplace for all steps of the vehicle acquisition and purchase process, ultimately giving dealers and consumers the power to reach their destination.

Consumers' Challenges

As consumers complete the end-to-end car shopping journey, the key questions they ask are:

- Am I getting a fair price for my trade-in?
- Should I purchase a vehicle with my trade-in?
- What type of vehicle should I buy?
- Where can I buy a car like this?
- What is a fair price for this particular type of vehicle?
- Have others had a good experience buying from this dealer?
- How much of the purchase process can I transact online?
- Can I obtain financing for this car, and at what cost?
- What if this dealer is not local to my area?

In answering these questions, consumers historically had limited access to transparent information on specific vehicles, car pricing, and dealer reputation. Further, consumers who wanted to trade-in their vehicle or wanted to complete select elements of their car shopping journey online typically had very limited options. Every car-shopping journey is a unique experience, and so for consumers embarking on this journey, there is a difficulty in the absence of consistent information on pricing for both selling and purchasing vehicles. Selling a vehicle was time-consuming and exhausting for consumers as they travelled dealer to dealer to ensure they were receiving a fair and accurate price for their vehicle. Selecting the right dealer was also challenging for consumers as dealer reputations were historically based primarily on word-of-mouth. The lack of clear, 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. In addition, especially as a consequence of the COVID-19 pandemic, consumers are also increasingly interested in understanding which aspects of their buying journey they can complete online and are looking for ways to customize their journey to incorporate both online and in-person components.

Dealers' Challenges

Dealers have had to face a new set of challenges in the past year as a result of the worldwide semiconductor chip shortage impacting auto manufacturers' production levels. The shortage of both used and new car inventory over the past year has caused dealers to invest in additional methods to fill their lots as many physical wholesale auctions were impacted by the continued COVID-19 pandemic. Additionally, dealers have needed to remain competitive in their offers for consumer trade-ins, as consumers have increasing means to source multiple offers in this highly competitive market. The economics of dealerships depend largely on vehicle acquisition costs, sales volume, and customer acquisition efficiency. To achieve a high return on their marketing investments, dealers must find in-market consumers; yet because consumers may not frequently purchase a vehicle, only a small percentage of consumers are actively shopping for a car at any specific point in time. Dealers additionally need to be strategic about selling vehicles before they are “aged inventory.” Traditional marketing channels that dealers utilize, including television, radio, and newspaper, can effectively target locally but are inefficient in targeting the narrow 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 and purchasing strategies to adapt to frequently changing market conditions as evidenced by the previous year.

Our Strengths

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

Trusted Marketplace for Consumers. We provide consumers with transparent information, intuitive search results, and other tools that aid them in their car-shopping journey. Furthermore, consumers can have confidence in the quality of the vehicles they search for in our marketplaces since less than one-third of eligible vehicle listings on CarGurus.com earn a Great Deal or Good Deal rating. We also enable bids on vehicle trade-ins and sales from the thousands of dealers in the CarGurus/CarOffer network, assuring consumers that they are receiving the best offer on their vehicle. 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 to bring them “Great Deals from Top-Rated Dealers.” In 2021, we experienced over 79.3 million average monthly sessions in the United States. 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, on-site 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.

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. 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. With our acquisition of CarOffer in 2021, we have extended our proprietary search algorithms and data analytics to CarOffer’s Buying Matrix providing unique insights to dealers regarding their purchases in the wholesale space as well as up-to-date pricing information for the consumers they are servicing. We apply the knowledge gained from analyzing the substantial volume of connections between consumers and dealers on our platform to build new features for our consumers, IMV technology features on the Dealer Dashboard and new products for our dealers. These enhancements enable more informed consumers and dealers from the start of their car journey to the end.

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. With the acquisition of CarOffer, we have only increased efficiencies for dealers to source vehicles from both consumers and other dealers with the 24/7 online buy matrix. We provide our dealer base with connections to prospective car buyers; most of these connections have historically been for used cars, and to prospective car sellers. 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 for dealers, which we believe yield the highest value engagement for dealers. Dealers are able to leverage our large consumer audience, our digital retail offerings and consumer trade-in service to provide more quality leads to their dealership, providing the highest return on their investment. We provide all dealers with tools that are informed by real-time market conditions that help them acquire inventory, merchandise and sell their cars, and our paying dealers get access to additional valuable information from our Pricing Tool and Market Analysis tool. Additionally, with digital retail offerings we help level the online offering playing field for our dealer partners who are unable to provide these solutions to consumers on their own and/or wish to utilize our largest consumer audience to sell additional inventory with CarGurus' digital retail offerings. Our strong value proposition to the dealer community is evidenced by our 6% growth in quarterly average revenue per subscribing dealer, or QARSD, in the United States in the fourth quarter of 2021 compared to the fourth quarter of 2020.

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, we believe that our scale creates powerful network effects that reinforce the competitive strength of our business model. This powerful network has only strengthened with our acquisition of CarOffer, as we are now able to provide dealers with opportunities to sell their inventory to other dealers. The launch of new digital offerings and IMCO has only increased our network as more consumers are attracted to our site to trade-in their vehicle or complete a portion of their car-shopping journey online, perpetuating even more leads to dealers increasing our appeal and incentivizing more dealers to subscribe to our paid Listings packages to access the numerous benefits unavailable to nonpaying 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 quality of our partnership with dealers to provide digital offerings, the value of connections between consumers and dealers as well as between dealers themselves, 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 $951.4 million in 2021 compared to $551.5 million in 2020, representing a year-over-year increase of 73%. A significant portion of our revenue is recurring due to the subscription nature of our products, including from our Listings packages, our Real-time Performance Marketing, or RPM, digital advertising suite, and our CarOffer online wholesale platform. 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. Our consolidated net income grew 42% in 2021 and 84% in 2020. As a percentage of revenue, our consolidated net income margin was 12% in 2021, compared with 14% in 2020. On a consolidated basis, our Adjusted EBITDA grew 55% in 2021 and 109% in 2020. As a percentage of revenue, our Adjusted EBITDA margin was 26% in 2021, compared with 29% in 2020. In the United States, which is our most developed market, we increased our income from operations to $158.5 million in 2021 from $120.8 million in 2020. See the "Management's Discussion and Analysis of Financial Condition and Results of Operations–Key Business Metrics–Adjusted EBITDA and Adjusted EBITDA Margin" section of this Annual Report on Form 10-K for more information about Adjusted EBITDA and Adjusted EBITDA margin.

Experienced Management Team with Culture of Innovation. Our founder, Executive Chairman and Chairman of our Board of Directors, 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 – including Jason Trevisan, our Chief Executive Officer and Sam Zales, our President and Chief Operating Officer – we bring the same commitment to fostering a culture of innovation and delivering data-driven transparency to the automotive market.

Impacts of the COVID-19 Pandemic on our Business

The outbreak in 2020 of the novel strain of coronavirus that surfaced in Wuhan, China in December 2019 and was subsequently declared a pandemic by the World Health Organization, or COVID-19, resulted in a global slowdown of economic activity including worldwide travel restrictions, prohibitions of non-essential work activities, disruption and shutdown of businesses and uncertainty in global financial markets. Recently identified variants of COVID-19, Delta and Omicron, which appear to be more transmissible and contagious than previous COVID-19 variants, have caused an increase in the number of COVID-19 cases globally. As the COVID-19 pandemic continues to have an impact on global economic activity, the extent to which the COVID-19 pandemic will adversely impact our future business operations, financial performance and results of operations is uncertain and will depend on many factors outside of our control. For a further discussion of the risks, uncertainties and actions taken in response to the COVID-19 pandemic, refer to Item 1A "Risk Factors".

Our Products

Transaction-Enabled Marketplace

<u>Consumer Experience</u>

We provide consumers an online automotive marketplace where they can search for new and used car listings from our dealers and sell their cars to dealers and other consumers. A user accesses our marketplace through our websites or 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 for the U.S. CarGurus marketplace; their availability on our other marketplaces varies. We also offer paid listings subscriptions for dealers and dealer advertising products for the PistonHeads website, as well as paid listings subscriptions for dealers for the Autolist 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. A 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 assesses 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 tens of 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. The IMV 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 vehicle.

- *Vehicle History.* Title check, accident check, number of owners, and fleet status of the vehicle, giving consumers data that helps them better understand the vehicle's condition.

New Cars

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 consumers to list their cars in both our peer-to-peer and consumer-to-dealer marketplaces in the United States. Our peer-to-peer offering, Sell My Car, 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 collect a fee when a consumer lists a vehicle on the peer-to-peer marketplace. See "— Wholesale and Consumer-to-Dealer" below for a description of our consumer-to-dealer offering, IMCO.

Autolist

Autolist provides consumers an online automotive marketplace through mobile applications on iOS and Android phones, as well as a website. The platform includes inventory from top automotive dealers across the U.S. and gives consumers quick access to manage their search on the go with real-time alerts of newly available inventory and changes that occur on cars and saved searches they have configured. An independent editorial staff produces content to keep consumers informed on the latest vehicles and trends in the automotive market.

PistonHeads

PistonHeads is a U.K. automotive marketplace, forum, and editorial site geared towards automotive enthusiasts. The platform allows consumers to search across a broad range of dealer and private seller listings, engage with other automotive enthusiasts through forums, and stay informed about automotive news through editorial articles and expert reviews. Paying U.K. dealers who list on the CarGurus platform automatically have their inventory added to the PistonHeads site for greater consumer reach.

<u>Dealer Offerings</u>

Listings

Our marketplace connects dealers to a large audience of informed and engaged consumers. We offer multiple types of marketplace Listings subscriptions to dealers for the CarGurus U.S. platform (availability varies on our other marketplaces): 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 ROI our solution will provide them.

- *Restricted Listings.* We allow non-paying dealers to list their inventory in our marketplace as Restricted 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. Dealers in our Restricted Listings tier are limited in the number of consumer connections they can receive in a month, with caps on lead volume based on the dealers' inventory size.

- *Paid Listings 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, an offering by which consumers communicate via real-time chat or text message with our agents who act on behalf of dealers. 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 or 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 used inventory as well as their new inventory in a clearly labeled section at the top of the SRP as well as on the VDP of dealers in the Restricted Listings package. 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 packages. In addition, a dealer that pays for our Enhanced, Featured or Featured Priority Listings package may subscribe to our Area Boost offering, 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 – but not edit or manipulate – their dealer 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.

- *IMV Scan*. Allows dealers to scan a vehicle identification number, or VIN, using their smartphone, and receive information on the IMV of the vehicle in order to support dealers in deciding what to pay for a vehicle at a wholesale auto auction. IMV Scan is built into the CarGurus mobile app and is currently available to U.S. dealers that pay for our Enhanced, Featured or Featured Priority Listings packages.

Digital Marketing Products

We offer dealers subscribing to one of our Enhanced, Featured or Featured Priority Listings packages access to additional advertising products marketed primarily under our RPM digital advertising suite. With RPM, dealers can reach our large and engaged automotive shopping audience through on-site advertising that appears in our CarGurus marketplace, on other sites on the internet and/or on high-converting social media platforms. RPM helps dealers build brand awareness and acquire customers to their website and dealership. Advertisements can be targeted by the user's geography, search history, CarGurus website activity and a number of other targeting factors. This product suite allows dealers to increase their visibility with in-market consumers and drive qualified traffic to their websites.

Pricing and Packaging

We offer our Listings product suite through a tiered set of packages. Listings are priced on a monthly, quarterly, semiannual, or annual subscription basis based on the dealer's inventory size, region, and our assessment of the ROI we expect to deliver. For improved performance, dealers can purchase higher Listings suite levels and add-ons available at an existing Listings suite level. Dealers may be renewed at higher rates commensurate with growth and updated performance expectations. RPM is also packaged in a tiered solution, and priced as a percentage of Listings while accounting for factors such as dealership characteristics and performance expectations.

Wholesale and Consumer-to-Dealer

Digital Wholesale

As the automotive industry continues to move further online, it has become even more important for dealers not only to sell their vehicles effectively at retail, but also to acquire the right inventory in the first place via wholesale transactions. In recent years, wholesale vehicle sales have begun shifting online and those trends have accelerated as a result of the COVID-19 pandemic. The industry is moving away from traditional in-person physical auction models and towards online transactions that are easier, faster, and reduce the effect of geographic constraints.

In January 2021, we completed our acquisition of a 51% ownership interest in CarOffer, a modern-day automotive inventory transaction platform that allows dealers and dealer groups to buy, sell, and trade online with automation and ease. The acquisition added wholesale vehicle acquisition and selling capabilities to our portfolio of dealer offerings, creating a powerful new digital solution for dealers to sell and acquire vehicles at both retail and wholesale. Unlike traditional vehicle auctions which require manual bidding and vehicle evaluation, CarOffer's proprietary Buying Matrix technology enables buying dealers to create standing buy orders and provides instant offers to selling dealers.

Consumer-to-Dealer Offering

During 2020, we conducted a pilot that enabled dealers to purchase inventory directly from consumers who visited our site. The consumer entered their vehicle information on the Sell My Car page, and we helped facilitate the transaction with the buying dealer. We collected a transaction fee from the dealer for this service.

In 2021, our CarOffer acquisition also helped facilitate our launch of an updated consumer offering, IMCO, which allows consumers in certain states to sell their vehicles to dealers entirely online. This offering provides dealers access to a fresh source of trade-in inventory and helps ensure liquidity amongst CarOffer's platform. Through IMCO, consumers who are trading-in or selling vehicles enter easy-to-answer questions regarding their vehicle and are instantly presented with the most competitive offer sourced from in-network dealers. Once the customer has saved their offer, they can further customize their experience by arranging a location of their choice to have the vehicle picked-up and transported. In this model, CarOffer processes the transaction directly and collects transaction and other fees from the dealer.

Digital Retail

In recent years, both consumer demand and dealer receptiveness to digital retail has increased, as consumers have become more comfortable transacting some or all of their car buying processes online. We are focused on addressing the needs of both consumers and dealers in this growing segment of automotive digital retail.

Consumer Finance

Through our partnerships with automotive lending companies, we allow eligible consumers on our U.S. marketplace 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. We believe this program both provides more transparency to car shoppers about actual payments to be offered at the dealership specific to participating lenders, as well as delivers highly qualified car shopper leads to participating dealers.

Area Boost

We offer the ability for dealerships to expand their VDP geographic footprint to non-local customers via dealer home delivery services. Revenue is generated through fees charged to the dealership to enable listings beyond the default geographical radius. We believe this program provides additional vehicle options to car shoppers open to home delivery services while promoting participating dealers' delivery capabilities and increasing non-local VDP views.

Buy Online

We continue to offer consumers the ability to transact additional elements of their car buying experience through our websites as they seek to complete more of this process online. For example, our shoppers can 'start purchase' or 'buy now' from a VDP on eligible listings and utilize purchase options, including but not limited to estimating a car's trade-in value, deciding payment options, selecting finance and insurance products, and placing a reservation deposit.

Auto Manufacturer and Other Advertiser Products

Our platform offers auto manufacturers and others the ability to purchase advertising on both our sites and third-party websites, including social media platforms, to execute targeted marketing strategies:

- *Brand Reinforcement.* We allow auto manufacturers to buy advertising on both our sites and third-party websites, including social media platforms, to 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, including social media platforms, based on various parameters, including estimated household income and vehicle specifications, such as make or model, and postal codes.

International

We also facilitate high-intent consumers to engage with automotive dealers in both Canada and the U.K. Like our U.S. offerings, CarGurus provides consumers in Canada and the U.K. with a transparent shopping experience, using our proprietary algorithms to determine market specific valuations for vehicles, and ordinating our organic search results based on Deal Ratings.

In Canada, CarGurus is a leading automotive marketplace that provides consumers a transparent shopping experience whether they are looking for a new or used car. In the U.K., CarGurus is a leading marketplace for dealers' listings of used vehicles, providing consumers with one of the broadest selections of inventory in the U.K. We also provide automotive shoppers rich expert review content, an active forum for automotive discussion, and offer privately owned inventory through the PistonHeads website.

Marketing and Brand

Consumer Marketing

CarGurus is the most visited online automotive marketplace in the United States, with more than 79.3 million and 31.6 million average monthly sessions and unique users, respectively in 2021. We have built our audience on the strength of our user experience, and remain focused on delivering an industry-leading consumer marketplace. Our intuitive search experience, combined with the largest inventory of any major U.S. online automotive marketplace and relevant content, updates, and tools provide unparalleled transparency and decision-support to consumers during their car search to help them buy with confidence. The strength of our consumer experience is one of our most powerful marketing tools, with "word of mouth" representing the second-most cited influence on consumers decision to visit CarGurus despite our substantial investments in paid marketing. This leading consumer experience also enables CarGurus to perform very well with search engines, generating a significant volume of free traffic from high-intent car shoppers.

A key pillar of our consumer marketing efforts is what we call 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 one billion keywords on various search engines as well as sophisticated, personalized re-marketing, to nurture consumers toward finding their right car. The sophistication of our data-driven algorithmic traffic acquisition continues to advance, with an ongoing focus on increasingly data-driven campaigns that drive high return on advertising spend. We believe our expertise in this area constitutes a competitive advantage over less sophisticated competitors and those who outsource these capabilities.

In parallel with our sophisticated paid and organic traffic acquisition efforts, we invest significant resources in optimizing our site experience and retention marketing efforts, including through email and app notifications, to help consumers find the right car for them and connect with a dealer to make a purchase. Rigorous conversion rate optimization efforts help increase the ROI on our advertising spend. Our increasing focus on merchandising that drives more shoppers to connect with dealers with high subscription expansion opportunity is intended to create a virtuous cycle of improved monetization that allows for reinvestment in further improvements to our consumer experience.

We augment our performance marketing, conversion rate optimization and retention marketing efforts with brand-building efforts. Our brand marketing efforts are primarily comprised of (i) investments in media, including television and online video, (ii) expressing our unique brand value proposition throughout our core site experience and organic social channels, and (iii) an active public relations program that allows us to gain significant, high-credibility earned media coverage. Despite a shorter tenure and lower investment in brand marketing than our primary competitors, we have made significant progress toward 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 and refining the articulation of our unique value proposition. As we close the awareness gap compared to our primary competitors, we see significant opportunity to shift our brand focus from reach to driving greater understanding of and preference for our brand, further accelerating the strong consumer engagement and word of mouth benefits we already enjoy.

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 product adoption and usage from our paying dealers. Our dealer marketing efforts aim to:

- *Educate Dealers on the End-to-End Inventory Solutions We Offer, the Quality of Our Audience and Products, and Attractive ROI.* We educate dealers on the increased breadth of solutions we offer, including wholesale buying and selling of inventory, marketing via our core Listings products and other tools, and our growing suite of retailing solutions. We promote the quality of our audience by touting our industry-leading audience, 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 consumer financing features and proprietary IMV 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 Thought Leadership that Educates Dealers on Industry Trends.* We generate insightful content on market trends and best practices in digital advertising that are shared through webinars, dealer forums, dealer advisory councils, our websites, and our participation in industry conferences and events. From time to time, we also 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. In light of the COVID-19 pandemic, we shifted almost all of our in-person events, including Navigate, to fully virtual events to continue to provide thought leadership to dealers during these challenging times. In particular, we helped address their challenges by sharing the latest research and data-driven insights on how shopper behavior has evolved and continues to evolve during this global pandemic.

- *Provide Best Practices to Assist Dealers in Becoming More Successful.* 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 , as well as broader guidance on marketing, sales, operations, and other aspects of running a more profitable dealership. We maintain consistent communication with dealers via email, events and our Dealer Dashboard to ensure awareness of account performance and recent product updates, and we empower our sales and account management teams with resources to directly provide education and assistance to our dealer partners.

- *Drive Product Engagement.* We use our email marketing capabilities and other marketing channels to drive dealer engagement with our products and platforms. This can include automated, personalized marketing about how dealers can improve vehicle pricing and merchandising by using the tools in our dashboard, performance insights around the leads and connections they are receiving, and prompts to respond to reviews and manage their reputation. We also monitor dealer feedback on our products through surveys and product engagement to assess areas for further development or dealer education.

Competition

We face competition to attract consumers and paying dealers to our marketplaces and services 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 our international markets;
- online dealerships, such as Carvana and Vroom;
- sites operated by individual automobile dealers;
- internet search engines;
- social media marketplaces;
- peer-to-peer marketplaces, such as Craigslist; and
- vehicle auction companies, including digital wholesale platforms.

Competition for Consumers and Dealers

We compete for consumer visits with other online automotive marketplaces, free listing services, general search engines, online dealerships and dealers' websites. We compete for consumers primarily on the basis of the quality of the consumer experience and the breadth of offerings that we are able to provide. We believe we compete favorably on user experience due to the number of our vehicle listings, the 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 social media marketplaces, and other internet sites, online dealerships and vehicle auction companies that attract consumers and dealers searching for vehicles, as applicable. We compete primarily on the basis of the ROI that our marketplace offers and the synergies provided by the combination of our foundational listings business with digital wholesale and digital retail offerings. 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 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.

Seasonality

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 the seasonal nature of consumer spending. Additionally, the volume of wholesale vehicle sales can fluctuate from quarter to quarter caused by several factors, including the timing of used vehicles available for sale from selling customers, the seasonality of the retail market for used vehicles and/or inventory challenges in the automotive industry, which affect the demand side of the wholesale industry. Macroeconomic conditions, such as the global semiconductor chip shortage, can also effect the volume of wholesale vehicle sales. To date, our overall operating results have not reflected the general seasonality of the automotive industry or wholesale vehicle sales market, but this could possibly change once our business and markets mature.

Sales

Our sales team is responsible for bringing dealers onto our marketplace, converting non-paying dealers to paid subscriptions and increasing dealer participation in new products that CarGurus is bringing to market. We have built an efficient sales and service team of approximately 300 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 the U.S. and Canada.

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 Listings dealer to assist with on-boarding 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 on-boarding period, a Dealer Relations Account Manager is designated to assist the dealer in utilizing our tools and maximizing ROI from our offerings, including effectively pricing vehicles, vehicle merchandising, and keeping inventory up to date with complete vehicle information. We believe our active communication with our dealers fosters customer satisfaction and increases customer retention.

People and Talent

Our investment in our greatest asset – our people – is integral to our core values, evidenced by our inclusion of employee engagement, retention targets and cultural efforts as components of our 2021 strategic and organizational initiatives. Our Board of Directors oversees our people and talent efforts and views building our culture – from employee development and retention to diversity, equity, inclusion and belonging initiatives – as key to driving long-term value for our business and helping to mitigate risks.

As of December 31, 2021, we had 1,203 full-time employees, 75 of whom were based outside the United States and 288 of whom were employed through CarOffer. None of our employees is represented by a labor union or covered by a collective bargaining agreement.

Culture, Values and Standards

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 results across these constituencies. We invest in creating a work environment that facilitates partnership among our employees and promotes diversity, equity, inclusion and belonging. 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.

Diversity, Inclusion and Belonging and Equal Employment Policy

We are an equal opportunity employer and strive to build and nurture a culture where inclusiveness is a reflex, not an initiative. With support from our Diversity, Inclusion and Belonging Advisory Team, we seek to foster diversity, equity, inclusion and belonging, and to build a workplace where everyone can thrive. Our commitment to these efforts helps us attract and retain the best talent, enables employees to realize their full potential and drives high performance through innovation and collaboration. In 2021, based on data from employees who chose to self-identify, we increased representation among women and non-binary employees (32.8% to 35.1%) and underrepresented racial minorities (30.0% to 30.1%) within our U.S. workforce. We also saw year-over-year increases in the U.S. among women and non-binary employees in technical (23.3% to 25.9%) and management-level roles (34.2% to 38.6%), as well as among underrepresented racial minorities in technical roles (43.6% to 45.7%).

Compensation and Benefits

The success of our business is fundamentally connected to the well-being of our people. Accordingly, we provide our eligible employees with competitive wages and access to flexible and convenient medical programs intended to meet their needs and the needs of their families. In addition to standard medical coverage, we offer the following benefits to our U.S. employees (availability internationally varies): dental and vision coverage, health savings and flexible spending accounts, paid time off, flexible work schedules on a case-by-case basis, employee assistance programs, short term and long term disability insurance and term life insurance, as well as paid access to certain wellness and family care resources. In response to the COVID-19 pandemic, we implemented changes that we determined were in the best interest of our employees, as well as the communities in which we operate, and which comply with government regulations. These changes included requiring our employees to work from home.

Employee Engagement

Each year, we conduct an employee engagement survey to help our management team gain insight into and gauge employees' feelings, attitudes, and behaviors around working at CarGurus. Our latest survey, completed in September 2021, had a participation rate of approximately 85% of our eligible employees worldwide. The survey results indicated that we excelled in areas including manager empathy, career development, belonging, as well as overall excitement about CarGurus' future. Based on employee feedback, we also identified certain company-wide opportunity areas to improve engagement and drive long-term success. Our culture and commitment to building a workplace where we can all thrive has been recognized externally with the following awards: *Built In Boston's* "Best Places to Work" in 2019, 2020, 2021 and 2022; the Mass TLC "Tech Top 50" Company Culture in 2020; *Fortune*'s "Best Places to Work" in 2019; *Computerworld*'s "Best Places to Work in IT" in 2019 and 2020; *Boston Business Journal*'s "Best Places to Work" in 2015, 2016, 2017, 2018, 2019 and 2021; *Boston Globe*'s "Top Place to Work" in 2014, 2015, 2016 and 2018; and *Comparably's 2021* "Best Perks & Benefits", "Best Work-Life Balance", and "Best CEO".

Training and Development

Our people and talent strategy is essential for our ability to continue to develop and market innovative products and customer solutions. We continually invest in our employees' career growth and provide employees with a wide range of development opportunities, including mandatory quarterly compliance training courses as well as one-on-one, virtual, social and self-directed learning, mentoring, coaching, and external development. In 2021, nearly 100% of our employees participated in learning and development activities worldwide.

Technology and Product Development

We are a technology company focused on innovative, actionable data analysis. We design our mobile and web products to create a 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. 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 in the U.S. near each of Boston, Massachusetts and Dallas, Texas, as well as through third-party cloud services in the U.S. Our European websites are hosted on third-party cloud computing services near each of London, England and Dublin, Ireland. 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.

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 one issued U.S. patent with an expiration date of May 2034, two pending U.S. patent applications, and two pending international patent applications. 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 U.S. and certain other jurisdictions. We pursue additional trademark registrations to the extent we believe doing so would be beneficial to our competitive position. Additionally, CarOffer has a number of registered and unregistered trademarks, including "CarOffer" and the CarOffer logo, and related marks, which CarOffer has registered as trademarks in the U.S. CarOffer pursues additional trademark registrations to the extent it believes doing so would be beneficial to its competitive position. Our and CarOffer's registered trademarks remain enforceable in the countries in which they are registered for as long as we and CarOffer, as applicable, continue to use the marks, and pay the fees to maintain the registrations, in those countries.

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, birddog, consumer protection, or advertising laws or regulations.

Our wholesale operations through CarOffer are regulated by the states in which we operate and by the U.S. federal government. These activities may also be subject to state and local licensing requirements. Additionally, we may be subject to regulation by individual state dealer licensing authorities and state consumer protection agencies.

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 products marketed under our RPM digital advertising 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 our website 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, 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 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 from a Delaware limited liability company 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.

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 ™ 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.

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 carefully consider the risks and uncertainties described below, together with all of the other information contained in this Annual Report on Form 10-K, including "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our audited 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 has been, and we expect it to continue to be, adversely affected by the COVID-19 pandemic.

The COVID-19 pandemic has caused an international health crisis and resulted, and may continue to result, in significant disruptions to the global economy as well as businesses and capital markets around the world. Recently identified variants of COVID-19, Delta and Omicron, which appear to be more transmissible and contagious than previous COVID-19 variants, have caused an increase in the number of COVID-19 cases globally. The impact of COVID-19 and, in particular, the Delta and Omicron variants or other variants that may emerge, cannot be predicted at this time, and could depend on a number of factors, including the availability of vaccines in different parts of the world, vaccination rates among the population, and the effectiveness of COVID-19 vaccines against the Delta and Omicron variants and any other variants that may emerge.

Our operations have been and may continue to be materially adversely affected by a range of factors related to the COVID-19 pandemic. In March 2020, we temporarily closed all of our offices and began requiring, subject to limited exceptions, all of our employees to work remotely until further notice, which has disrupted and may continue to disrupt how we operate our business. In addition, in an effort to limit the spread of COVID-19, Canada and the United Kingdom, as well as states and localities in the United States, implemented or mandated, and some continue to, or may in the future, implement or mandate, significant restrictions on travel and commerce, shelter-in-place or stay-at-home orders, and business closures, and these government responses may increase in light of the increase in the number of COVID-19 cases as a result of the Delta and Omicron variants. Fluctuation in infection rates in the regions in which we operate has resulted in periodic changes in restrictions that vary from region to region and may require rapid response to new or reinstated orders. Many of these orders resulted in, and may continue to result in, restrictions on the ability of consumers to buy and sell automobiles by restricting operations at dealerships and/or by closing or reducing the services provided by certain service providers upon which dealerships rely. In addition, these restrictions and continued concern about the spread of the disease have impacted car shopping by consumers and disrupted the operations of car dealerships, which has adversely affected and may continue to adversely affect the market for automobile purchases.

The automotive industry is also facing, and may continue to face, inventory supply problems, including for reasons attributable to the COVID-19 pandemic and other macroeconomic issues, such as the global semiconductor chip shortage. This decline in vehicle inventory has led to an increase in bids per vehicle at auction and corresponding increases to wholesale auction prices. As the price of replenishing inventory through wholesale auctions has increased, dealers have increased, and may continue to increase, the prices they charge consumers. A high volume of price increases on vehicle sales at a rapid rate could impact our proprietary IMV and distribution of Deal Ratings. In addition, if our paying dealers continue to operate at reduced inventory levels or with increased costs, they may reduce or be unwilling to increase their advertising spend with us and/or may terminate their subscriptions prior to the commencement of the applicable renewal term. Our ability to add new paying dealers or increase our fees with dealers may be impeded if dealers perceive they have less of a need for our products and services because of their limited inventory. Inventory challenges in the automotive industry have adversely impacted, and could continue to adversely impact, the amount of inventory on our websites and have contributed to higher prices and reduced lease options for new vehicles, which in turn has reduced, and may continue to reduce, consumer demand, which could contribute to a decline in the number of consumer visits to our websites and/or the number of connections between consumers and dealers through our marketplaces. These inventory-related issues resulting from the COVID-19 pandemic and other macroeconomic issues may materially and adversely impact our business, financial condition and results of operations.

As a result of the travel and commerce restrictions that have been implement or that may be implement as a result of the Delta and Omicron variants and any future variants that may emerge, and the corresponding impact on their businesses, a number of our dealer customers have, or are temporarily closed or are operating on a reduced capacity, and many dealerships are facing significant financial challenges. Such closures and circumstances led, and may in the future lead, some paying dealers to cancel their subscriptions and/or reduce their spending with us, which has had and may continue to have a material adverse effect on our revenues and on our business. Additionally, we reduced our spending on brand advertising and traffic acquisition at the beginning of the COVID-19 pandemic in response to increasing cancelations and reduced consumer demand, which has contributed to a year-over-year decline in the number of consumers using our platform for each of the years ended December 31, 2021 and 2020, which in turn has, and may continue to, materially and adversely affect our business. While we have since restored a portion of that historical consumer spend, we may not in the future fully restore prior spending levels if we elect to redirect our investments elsewhere, including in favor of new product development. If such a strategy were not to result in the benefits that we expect, our business could be harmed. Our business relies on the ability of consumers to borrow funds to acquire automobiles and banks and other financing companies may limit or restrict lending to consumers as a result of the economic impacts of the COVID-19 pandemic, which may also materially and adversely affect our business.

Further, in the past, we have taken measures to help our paying dealers maintain their business health during the COVID-19 pandemic, including by proactively reducing the subscription fees for paying dealers for certain service periods, and we may decide to re-institute further billing relief as we continue to assess the effects of the COVID-19 pandemic on our paying dealers and business operations. Any further billing relief could result in a decline in our revenue and have a material adverse effect to our business. During the COVID-19 pandemic, we have also experienced, and may continue to experience, increased account delinquencies from dealer customers challenged by the COVID-19 pandemic that failed to pay us on time or at all.

These effects from the COVID-19 pandemic on our revenue caused us to implement certain cost-savings measures across our business, which previously disrupted our business and operations and, if we implement future similar cost saving measures, may affect our future business and operations and may yield unintended consequences, such as loss of key employees, increased costs in hiring new employees, undesired attrition, and the risk that we may not achieve the anticipated cost savings at the levels we expect, any of which may have a material adverse effect on our results of operations and/or financial condition.

We continue to monitor and assess the effects of the COVID-19 pandemic, including the effects of the Delta variant, the Omicron variant, and other variants that may emerge, on our commercial operations, including the impact on our revenue. However, we cannot at this time accurately predict what effects these conditions will ultimately have on our operations due to uncertainties relating to the duration of the pandemic, the extent and effectiveness of governmental responses and other preventative, treatment and containment actions or developments, including the distribution and acceptance of vaccines, shifts in behavior going forward, and the length or severity of the travel and commerce restrictions that are currently in effect and may be imposed in the future by relevant governmental authorities. Nor can we predict the adverse impact on the global economies and financial markets in which we operate, which may have a significant negative impact on our business, financial condition and results of operations.

Our business is substantially dependent on our relationships with dealers. 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 marketplaces. Our subscription agreements with dealers generally may be terminated by us with 30 days' notice and by dealers with 30 days' notice prior to the commencement of the applicable renewal term. The majority of our contracts with dealers currently provide for one-month committed terms and 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. A dealer's decision to cancel its subscription with us may be influenced by several factors, including national and regional dealership associations, national and local regulators, automotive manufacturers, consumer groups, and consolidated dealer groups. If any of these influential groups indicate that dealers should not enter into or maintain subscription agreements with us, this belief could become shared by dealers and we may lose a number of our paying dealers. 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.

As a result of the effects of the COVID-19 pandemic, many paying dealers cancelled their subscriptions with us (including, in some cases, with our permission prior to the end of the applicable contract term and notice period), and it is possible that additional dealers will cancel their subscriptions in the future for a variety of reasons, including as a result of the continuing effects of the COVID-19 pandemic. If paying dealers do not receive the volume of consumer connections that they expect during their subscription period, do not experience the level of car sales they expect from those connections, or fail to attribute consumer connections or sales to our platform, they may terminate their subscriptions prior to the commencement of the applicable renewal term. 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 CarGurus marketplaces for free; however, we impose certain limitations on such free listings, such as capping the number of leads that non-paying dealers in the U.S. may receive, not displaying non-paying dealer identity and contact information, and prohibiting access to the paid features of our marketplaces. We continue to adapt our free listings product, Restricted Listings, in our CarGurus marketplaces and in the future, we may decide to impose additional restrictions on Restricted Listings or modify the services available to non-paying dealers. These changes to our Restricted Listings product may result in less inventory being displayed to consumers, which may impair our efforts to attract consumers, and cause paying and non-paying dealers to receive fewer leads and connections, which may make it more difficult for us to convert non-paying dealers to paying dealers or maintain or expand our base of paying dealers. If dealers do not subscribe to our paid offerings at the rates we expect, our business and financial results would be materially and adversely affected.

If we fail to continue to realize transaction synergies from our acquisition of a 51% interest in CarOffer, or if the CarOffer business fails to continue to grow at the rate we expect, our revenue and business would be harmed.

In January 2021 we completed our acquisition of a 51% interest in CarOffer, which added wholesale vehicle acquisition and selling capabilities to our portfolio of dealer offerings. A significant amount of our revenue for the year ended December 31, 2021 was derived from the wholesale sale of automobiles. Continued achievement of our transaction synergies and our ability to continue to grow the CarOffer business and the revenue associated with it depend on a number of factors, including, but not limited to, our ability to continue to: expand the number of dealers engaging on the CarOffer platform; retain existing customers and increase the share of wholesale transactions which they complete on the CarOffer platform; attract prospective customers who have historically purchased or sold vehicles through physical auctions and may choose not to transact online; and successfully compete with competitors, including other online vehicle auction companies and large, national offline vehicle auction companies that are expanding into the online channel and have launched online auctions in connection with their physical auctions. If our anticipated transaction synergies do not fully materialize and/or the CarOffer business fails to continue to grow at the rate we expect, our revenue and business would be harmed.

Industry conditions such as a significant change in vehicle retail prices or a decline in the used vehicle inventory supply coming to the wholesale market could also adversely impact CarOffer's business and growth. For example, if retail prices for used vehicles rise relative to retail prices for new vehicles, it could make buying a new vehicle more attractive to consumers than buying a used vehicle, which could result in reduced used vehicle wholesale sales on the CarOffer platform. Used vehicle dealers may also decide to retail more of their vehicles on their own rather than selling them on the CarOffer platform, which could adversely impact the volume of vehicles offered for sale on the CarOffer platform and the demand for those used vehicles. Inventory challenges in the automotive industry, including for reasons attributable to the COVID-19 pandemic, has contributed and could continue to contribute to a decrease in the supply of vehicles coming to the wholesale market and reduce the number of vehicles sold on the CarOffer platform. An inability by CarOffer to retain customers and/or increase or find alternative sources of vehicle supply would adversely impact our revenue and business.

If dealers or other advertisers reduce their advertising spending with us and we are unable to replace the reduced advertising spending, our advertising revenue and business would be harmed.

A portion of our revenue is derived from advertising revenues generated primarily through advertising sales, including on-site 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 marketplaces; compete effectively for advertising spending with other online automotive marketplaces; continue to develop our advertising products; keep pace with changes in technology and the practices and offerings of our competitors; and offer an attractive ROI to our advertisers for their advertising spend with us.

Our agreements with dealers for 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 prior to the commencement of the applicable renewal term. The contracts do not contain contractual obligations requiring an advertiser to maintain its relationship with us beyond the committed term. Certain of our other advertising contracts, including those with auto manufacturers, typically do not have ongoing commitments to advertise in our marketplaces beyond a committed term. As a result of the effects of the COVID-19 pandemic, some advertisers cancelled or reduced their advertising with us and it is possible that advertising customers will cancel or reduce their advertising with us in the future for a variety of reasons, including as a result of the continuing effects of the COVID-19 pandemic. In addition, the year-over-year decline in the number of consumer visits to our sites as a result of the COVID-19 pandemic resulted in the delivery of fewer impressions for our advertising customers than anticipated year-over-year for the years ended December 31, 2021 and 2020, which has caused, and may continue to cause, an adverse impact on our advertising revenues. 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 offerings as compared to alternative channels. If current advertisers reduce their advertising spending with us and we are unable to replace such reduced advertising spending, 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 marketplaces 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 marketplaces could decline, which in turn could lead dealers to suspend listing their inventory in our marketplaces, cancel their subscriptions, or reduce their spending with us. If dealers pause or cancel listing their inventory in our marketplaces, we may not be able to attract a large consumer audience, which may cause other dealers to pause or cancel their use of our marketplaces. This reduction in the number of dealers using our marketplaces would likely materially and adversely affect our marketplaces and our business and financial results. As consumers increasingly use their mobile devices to access the internet and our marketplaces, our success depends, in part, on our ability to provide 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 desktop computers and through mobile devices, is subject to a number of factors, including our ability to: maintain attractive marketplaces for consumers and dealers; continue to innovate and introduce products for our marketplaces; launch new products that are effective and have a high degree of consumer engagement; display a wide variety of automobile inventory to attract more consumers to our websites; provide mobile applications that engage consumers; 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 access and analyze a sufficient amount of data to enable us to provide relevant information to consumers, including pricing information and accurate vehicle details.

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 that make our marketplaces, websites, and mobile applications useful for consumers and dealers or that otherwise provide value to consumers and dealers. For example, as we transition to a more digitally-initiated environment, during 2021 we launched IMCO, a newer offering that allows consumers in certain states to sell their vehicles to dealers entirely online. We also continue to develop digital retail offerings, including those that expand a dealer's geographic footprint and others that bring additional elements of the car buying experience online through our websites. A failure by us to capture the benefits that we expect from our rollout of IMCO and these digital retail investments could have an adverse effect on our business and financial results.

In addition to introducing new offerings within our existing products, we anticipate that over time we may reach a point when investments in our current products are less productive and the growth of our revenue will require more focus on developing new products for consumers and dealers. These new products, in the aggregate, must be widely adopted by consumers and dealers in order for us to continue to attract consumers to our marketplaces 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 marketplaces and their related products and effectively incorporate new internet and mobile technologies into them. Our ability to engage in these activities may decline as a result of the continued impact of the COVID-19 pandemic and any cost-savings initiatives on our business. These product, technology, and development expenses may include costs of hiring additional personnel, engaging third-party service providers and conducting other research and development activities. There can be no assurance that innovations to our products like IMCO, or the development of future products, will increase consumer or dealer engagement, achieve market acceptance, create additional revenue or become profitable. 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 dealers, and, if we are unable to provide marketplaces and products that consumers and dealers want to use, they may reduce or cease the use of our marketplaces and products. Without innovative marketplaces 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 marketplaces, as well as the amounts that they are willing to pay for our products, which could, in turn, negatively impact our business and financial results.

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 rely, 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 marketplaces 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, if our efforts to improve our search engine optimization are unsuccessful or less successful than our competitors' internet search engine optimization efforts, our ability to attract a large consumer audience could diminish and traffic to our marketplaces 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. Reductions in our own search advertising spend or more aggressive spending by our competitors could also cause us to incur higher advertising costs and/or reduce our market visibility to prospective users. Our websites have experienced fluctuations in organic and paid 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.

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 marketplaces. For example, our success in each market 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 marketplaces 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 marketplaces. 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, increased fees we may be charged by data providers and the continuing effects of the COVID-19 pandemic. Our marketplaces 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 marketplaces 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 marketplaces and could negatively affect our business and operating results.

The failure to build, maintain and protect our brands would harm our ability to attract a large consumer audience and to expand the use of our marketplaces by consumers and dealers.

While we are focused on building our brand recognition, maintaining and enhancing our brands 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 marketplaces. Our ability to protect our brands 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 addition, we have reduced our brand spend in comparison to our pre-COVID-19 pandemic levels, and it is possible that we may in the future decide to further suppress such spend depending on the continued impact of the COVID-19 pandemic or other macro-economic effects. If consumers 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 brands may be adversely affected.

Complaints or negative publicity about our business practices and culture, 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 marketplaces and could adversely affect our brands. There can be no assurance that we will be able to maintain or enhance our brands, and failure to do so would harm our business growth prospects and operating results.

Portions of our platform enable consumers and dealers using our marketplaces 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 marketplaces could damage our reputation, reduce our ability to attract new users or retain our current users, and diminish the value of our brands.

Our recent, rapid growth is not indicative of our future growth, and our revenue growth rate in the future is uncertain, including due to the potential impact of the COVID-19 pandemic.

Our revenue increased to $951.4 million for the year ended December 31, 2021 from $551.5 million for the year ended December 31, 2020, representing a 73% increase between such periods. Our revenue for 2022 and beyond may not grow at such a rate and could potentially be impacted by the COVID-19 pandemic, as it was for the year ended December 31, 2020. In addition, we will not be able to grow as expected, or at all, if we fail to: increase the number of consumers using our marketplaces; maintain and expand the number of dealers that subscribe to our marketplaces and maintain and increase the fees that they are paying; attract and retain advertisers placing advertisements in our marketplaces; further improve the quality of our marketplaces and introduce high quality new products; and increase the number of connections between consumers and dealers using our marketplaces and connections to paying dealers, in particular. If our revenue declines or fails to grow, investors' perceptions of our business may be adversely affected, and the market price of our Class A common stock could decline.

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

If we are unable to generate sufficient cash flows, we would require additional capital to pursue our business objectives and respond to business opportunities, challenges, or unforeseen circumstances, including the effects of the COVID-19 pandemic, as well as to make marketing expenditures to improve our brand awareness, develop new products, further improve our platform and existing products, enhance our operating infrastructure, 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 equity and credit markets, including due to the COVID-19 pandemic, may also have an adverse effect on our ability to obtain equity or debt financing. 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.

Our international operations involve risks that may differ from, or are in addition to, our domestic operational risks.

In addition to the United States, we operate marketplaces in the United Kingdom and Canada, which are less familiar competitive environments and involve 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. We have incurred losses in prior periods in the United Kingdom and Canada and may incur losses there again in the future. We also face various other challenges in those jurisdictions. For example, our competitors may be more established or otherwise better positioned than we are to succeed in the United Kingdom and Canada. 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 marketplaces. Dealers may also be parties to agreements with other dealers and syndicates that prevent them from being able to access our marketplaces. Any of these barriers could impede our operations in our international markets, which could affect our business and potential growth.

In addition to English, we have made portions of our marketplaces available in French and Spanish. We may have difficulty in modifying our technology and content for use in non-English-speaking market segments or gaining acceptance by users in non-English-speaking market segments. 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 business in an environment of multiple languages, cultures, customs, legal and regulatory systems, alternative dispute resolution systems, and commercial infrastructures. Operating internationally may subject us to different 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 and mobile applications 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; adverse changes in trade relationships among foreign countries and/or between the United States and such countries, including as related to the United Kingdom's exit from the European Union, or the EU, commonly referred to as "Brexit"; 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.

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 or other macroeconomic issues. 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 depend on key personnel to operate our business, and if we are unable to retain, attract and integrate qualified personnel, or if we experience turnover of our key 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. Since the onset of the COVID-19 pandemic, we have encountered increased rates of turnover of our employee base and encountered intense competition for retaining and attracting qualified and skilled employees. Additionally, on September 9, 2021, President Biden announced a proposed new rule requiring all employers with at least 100 employees to ensure that their employees are fully vaccinated or require unvaccinated workers to get a negative test at least once a week. The Department of Labor's Occupational Safety and Health Administration, or OSHA, issued an Emergency Temporary Standard, or ETS, on November 5, 2021. The Supreme Court issued a stay of the ETS on January 13, 2022. OSHA subsequently announced that it was withdrawing the ETS effective January 26, 2022 and instead would focus on finalizing a permanent COVID-19 Healthcare Standard, which it has not yet issued. Accordingly, we have incurred, and we may continue to incur, significant costs to attract new employees and retain existing ones, and we may in the future become less competitive in attracting and retaining employees as a result of any expense reduction efforts that we may initiate or our compliance with any COVID-19 healthcare standards to which we may become subject.

In addition, any unplanned turnover or our failure to develop an adequate succession plan for 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 and adversely affected. Additionally, we may face risks related to the transitions that occurred in our senior management team during 2021 and other future transitions in our leadership team, including the disruption of our operations and the depletion of our institutional knowledge base.

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 marketplaces.

We provide consumers using our CarGurus marketplaces with our proprietary 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. Our valuation models depend on the inventory listed on our sites as well as public information regarding automotive sales. If the inventory on our site declines significantly, or if the number of automotive sales declines significantly or used car sales prices become volatile, whether as a result of the COVID-19 pandemic or otherwise, our valuation models may not perform as expected. 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' confidence in, or use of, our marketplaces and could result in legal disputes.

We are subject to a complex framework of 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.

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 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 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 marketplaces and related products are determined to not comply with relevant regulatory requirements, we or dealers could be subject to 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 marketplaces and related products and services in certain jurisdictions. 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 that our marketplaces 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 marketplaces and related products in certain jurisdictions, or could require us to make adjustments to our marketplaces 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 marketplaces 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 platforms enable 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 United States Federal Communications Commission, or the FCC, and federal and state courts, impose 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. 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 applicable laws or their interpretations that further restricts the way consumers and dealers interact through our platforms, 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 and Other Laws

Antitrust and competition laws prohibit, among other things, any joint conduct among competitors that would lessen competition in the marketplace. 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.

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 our marketplaces and on portions of our websites. 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 transmitted in our marketplaces, 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. 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, 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 subscribing 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 marketplaces, 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 marketplaces and related products and services.

Our business is subject to risks related to the larger automotive industry ecosystem, 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 effects of the COVID-19 pandemic, the cost of energy and gasoline; the availability and cost of credit; rising interest rates; reductions in business and consumer confidence; stock market volatility; and increased unemployment.

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 has been and may continue to be negatively affected by challenges to the larger automotive industry ecosystem, including global supply chain challenges, the global semiconductor chip shortage, changes to trade policies, including tariff rates and customs duties, trade relations between the United States and China and other macroeconomic issues, including the ongoing effects of the COVID-19 pandemic. These factors could have a material adverse effect on our business, revenue, results of operations, and financial condition.

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, brands, operating results, and financial condition.

Our brands, 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, physical break-ins, electronic breaches, or otherwise, could affect the security or availability of our marketplaces on our websites and mobile applications, and prevent or inhibit the ability of dealers and consumers to access our marketplaces. For example, past disruptions have impacted our ability to activate customer accounts and manage our billing activities in a timely manner. Such interruptions have resulted, and may in the future 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 platforms is located in the United States near each of Boston, Massachusetts and Dallas, Texas, and internationally near each of London, England and Dublin, Ireland. Although we can host our U.S. CarGurus' marketplace from two alternative 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 has caused, and may in the future 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 breaches, 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 marketplaces. 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, which may be exacerbated as a result of the COVID-19 pandemic, 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 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 marketplaces 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 brands and harm our business and operating results.

Some functions of our marketplaces 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 marketplaces, 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 other personal information. 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, and use of personal or other confidential information. If we experience compromises to our security that result in website or mobile application performance or availability problems, the complete shutdown of our websites or mobile applications, or the loss or 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 likely 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 having been 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 reduce or stop the use of our marketplaces 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 and regulations 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, the California Consumer Privacy Act, or the CCPA, which went into effect on January 1, 2020, and the California Privacy Rights Act, or the CPRA, the Virginia Consumer Data Protection Act, or the VCDPA, each of which goes into effect on January 1, 2023, and the Colorado Privacy Act, or the CPA, which goes into effect on July 1, 2023. The GDPR and CCPA in particular have already required, and along with the CPRA, VCDPA, and CPA, may further require, us to change our policies and procedures and may in the future require us to make changes to our marketplaces and other products. These and other requirements could reduce demand for our marketplaces and other offerings, 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 and the Schrems II decision of the Court of Justice of the EU, which effectively invalided the EU-U.S. Privacy Shield Framework, 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, CCPA, CPA, CPRA, or VCDPA 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 to provide certain services to our customers depends on the collection of consumer data from various sources, which may be restricted by consumer choice, privacy restrictions, and developments in laws, regulations and industry standards.

The success of our consumer marketing and the delivery of internet advertisements for our customers depends on our ability to leverage data, including data that we collect from our customers, 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 customers' and publishers' digital properties (including, for example, information about the placement of advertisements and users' shopping or other interactions with our customers' 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, CCPA, CPA, CPRA, and VCDPA; 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 customers. 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 have been, and expect in the future to be, subject to claims and litigation alleging that we infringe others' intellectual property rights, including 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.

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 marketplaces 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 platforms 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 trademarks or trade 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 asserted against us by owners of other registered or unregistered trademarks logos or slogans, for our use of registered or unregistered trademarks, logos or slogans, or third party trademarks that incorporate variations of our trademarks. We have registered the CARGURUS and CG logos, as well as the word-mark CARGURUS, in the U.S., Canada, and the United Kingdom. Additionally, CarOffer has a number of registered and unregistered trademarks, including "CarOffer" and the CarOffer logo, and related marks, which CarOffer has registered as trademarks in the U.S.

We currently hold the "CarGurus.com" internet domain name and various other related domain names relating to our brands. 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 names of our brands. In addition, third parties have created and may in the future create copycat or squatter domains to deceive consumers, which could harm our brands, interfere with our ability to register domain names, and result in additional costs.

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 with data from other sources. In addition, copycat websites may misappropriate data in our marketplaces and attempt to imitate our brands 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 and remedy all such activities in a timely manner. In some cases, our available remedies may not be adequate to protect us against the impact of such operations. Regardless of whether we can successfully enforce our rights against these third parties, 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 brands and business could be harmed.

Seasonality and other factors may cause fluctuations in our operating results and our marketing spend.

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 the seasonal nature of consumer spending, and our consumer-marketing spend generally fluctuates accordingly. This seasonality has not been immediately apparent historically due to the overall growth of other operating expenses. In addition, any reduction of our marketing spend in response to COVID-19-related expense management or otherwise, and shifts in demand from dealers and consumers could impact the efficiency of our marketing spend. As our growth rates moderate or cease, the impact of these seasonality trends and other influences on our results of operations could become more pronounced. In addition, the volume of wholesale vehicle sales fluctuates from quarter to quarter as a result of macroeconomic issues, such as the global semiconductor chip shortage, which may have a corresponding impact on our results of operations. This variability is caused by several factors including the timing of used vehicles available for sale from selling customers, the seasonality of the retail market for used vehicles and/or inventory challenges in the automotive industry, which affect the demand side of the wholesale industry.

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 prospects for growth.

Based on the nature of our business, we are exposed to potential fraudulent and illegal activity in our marketplaces, 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. The measures we have in place to detect and limit the occurrence of such fraudulent and illegal activity in our marketplaces 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 prospects for 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, Chairman of the Board and Executive 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 might harm the trading price of our Class A common stock. In addition, Mr. Steinert has significant influence in the management and major strategic investments of our company as a result of his position as Executive Chairman, and his ability to control the election or replacement of our directors. As Chairman of the Board and our Executive Chairman, 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 a 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 or 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 capitalized terms are defined in our amended and restated certificate of incorporation attached to this Annual Report on Form 10-K as Exhibit 3.1), 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 A and Class B common stock. This concentrated control will limit or preclude the ability of our other stockholders to influence corporate matters for the foreseeable future.

Transfers by holders of Class B common stock will generally result in those transferred 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 has had and will continue to have the effect, over time, of increasing the relative voting power of those holders of Class B common stock who retain such shares. If, for example, Mr. Steinert retains a significant portion of his holdings of Class B common stock, he could continue to control a majority of the combined voting power of our outstanding capital stock.

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 and may elect not to comply with certain Nasdaq corporate governance requirements. 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.

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: changes in the 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; adverse changes to recommendations regarding our stock by securities analysts that cover us; 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 or other public announcements and filing; real or perceived inaccuracies in our key metrics; actions of an activist stockholder; actual or anticipated changes in our operating results or fluctuations in our operating results or developments in our business, our competitors' businesses, or the competitive landscape generally; litigation involving us or investigations by regulators into our operations or those of our competitors; developments or disputes concerning our 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, or guidelines; any significant change in our management; changes in the automobile industry; and general economic conditions, including as related to the continuing effects of the COVID-19 pandemic.

General Risk Factors

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, car-shopping information, lead generation, marketing, wholesale, and digital car-buying and -selling services designed to help consumers and dealers shop for cars and to enable dealers to reach these consumers. Our competitors include: online automotive marketplaces and websites; internet search engines; peer-to-peer marketplaces; social media marketplaces; sites operated by automobile dealers; online dealerships; and vehicle auction companies. We compete with these and other companies for a share of dealers' overall marketing budget for online and offline media marketing spend and we compete with these and other companies in attracting consumers to our websites. To the extent that dealers view alternative marketing and media strategies to be superior to our marketplaces, we may not be able to maintain or grow the number of dealers subscribing to, and advertising on, our marketplaces, and our business and financial results may be adversely affected. We also expect that new competitors will continue to enter the online automotive retail and wholesale industries with competing marketplaces, products, and services, and 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 marketplaces or could offer discounts that could significantly impede our ability to maintain our pricing structure. Our competitors may also develop and market new technologies that render our existing or future platforms and associated products less competitive, unmarketable, or obsolete. In addition, if our competitors develop platforms with similar or superior functionality to ours, or if 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, which may allow them to offer more competitive pricing 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. In addition, these competitors may be able to respond more quickly with technological advances and to undertake more extensive marketing or promotional campaigns than we can. 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 marketplaces and related products and services could substantially decline.

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 depends upon our relationships with third parties, including, among others: our payment processor; our data center hosts; our information technology providers; our data providers for inventory and vehicle information; and our partners for vehicle transportation, inspection and other logistics associated with our CarOffer business and IMCO. If these third parties experience difficulty meeting our requirements or standards, have adverse audit results, violate the terms of our agreements 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, whether as a result of the COVID-19 pandemic or otherwise, we could suffer increased costs and we may be unable to 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.

We must maintain proper and effective internal control 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.

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 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.

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, including the continued effects of the COVID-19 pandemic and other macroeconomic issues, such as the global semiconductor chip shortage. Our results may vary as a result of fluctuations in the number of dealers subscribing to our marketplaces 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 could be subject to adverse changes in tax laws, regulations and interpretations, plus 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. There is also uncertainty over sales tax liability as a result of the U.S. Supreme Court's decision in South Dakota v. Wayfair, Inc., which 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. Any adverse development or outcome in connection with any such 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.

Confidentiality agreements may not adequately prevent disclosure of our 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. 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. 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.

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 185,064 square feet of space in various parcels in three buildings with lease terms that expire in November 2023, August 2023, January 2025, and December 2033, as applicable. We also lease office space in Addison, Texas, Dublin, Ireland, and San Francisco, California for our CarOffer, European and Autolist operations, respectively. We believe that our current facilities are suitable and adequate to meet our current needs. We believe that suitable additional space or substitute space will be available in the future to accommodate our operations as needed. In 2019, we entered into 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 23, 2022, the last reported sale price of our Class A common stock on the Nasdaq Global Select Market was $31.01 per share.

Holders

As of February 18, 2022, we had seven 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.

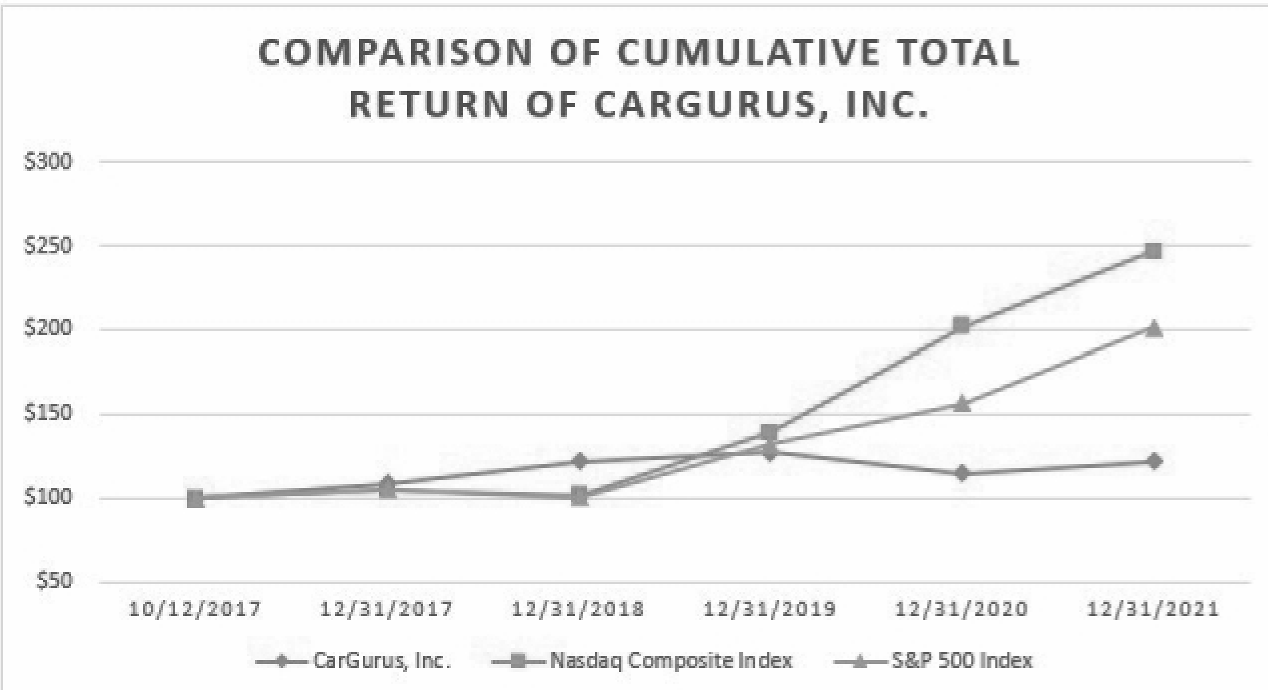
Dividends

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, 2021 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	12/31/2018	12/31/2019	12/31/2020	12/31/2021
CARG	100	109	122	128	115	122
S&P 500 Index	100	105	101	132	157	202
Nasdaq Computer Index	100	105	102	139	202	247

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities

None.

Item 6. Selected Consolidated Financial Data.

Not applicable.

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 Annual Report on Form 10-K, 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 and analysis.

In this discussion, we use financial measures that are considered non-GAAP financial measures under Securities and Exchange Commission rules. These rules regarding non-GAAP financial measures require supplemental explanation and reconciliation, which are 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 United States generally accepted accounting principles, or GAAP.

This section of this Annual Report on Form 10-K discusses 2021 and 2020 items and year-to-year comparisons between 2021 and 2020. Discussions of 2019 items and year-to-year comparisons between 2020 and 2019 can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2020. The period-to-period comparison of financial results is not necessarily indicative of future results.

Company Overview

CarGurus is a multinational, online automotive platform for buying and selling vehicles that is building upon its industry-leading listings marketplace with both digital retail solutions and the CarOffer online wholesale platform. The CarGurus marketplace gives consumers the confidence to purchase or sell a vehicle either online or in-person, and it gives dealerships the power to accurately price, effectively market, instantly acquire and quickly sell vehicles, all with a nationwide reach. We use our proprietary technology, search algorithms and data analytics to bring trust, transparency and competitive pricing to the automotive shopping experience.

We are headquartered in Cambridge, Massachusetts and were incorporated in the State of Delaware on June 26, 2015.

We operate principally in the United States. In the United States, we also operate as independent brands the Autolist online marketplace, which we wholly own, and CarOffer digital wholesale marketplace, in which we own a 51% equity interest. In addition to the United States, we operate online marketplaces under the CarGurus brand in Canada and the United Kingdom. In the United Kingdom, we also operate as an independent brand the PistonHeads online marketplace, which we wholly own. We also operated online marketplaces in Germany, Italy, and Spain until we ceased the operations of each of these marketplaces in the second quarter of 2020.

We have subsidiaries in the United States, Canada, Ireland, and the United Kingdom. Additionally, we have two reportable segments, United States and International. See Note 13 and Note 15 of our consolidated financial statements included elsewhere in this Annual Report on Form 10-K for further segment reporting and geographical information.

We generate marketplace revenue primarily from (i) dealer subscriptions to our Listings packages and Real-time Performance Marketing, or RPM, digital advertising suite, (ii) advertising revenue from auto manufacturers and other auto-related brand advertisers and (iii) revenue from partnerships with financing services companies. We generate wholesale revenue primarily from transaction fees earned by CarOffer from facilitating the purchase and sale of vehicles between dealers. We generate product revenue primarily from aggregate proceeds received on the sale of vehicles.

For the year ended December 31, 2021, we generated revenue of $951.4 million, a 73% increase from $551.5 million of revenue in the year ended December 31, 2020.

For the year ended December 31, 2021, we generated consolidated net income of $110.4 million and Adjusted EBITDA of $249.5 million, compared to consolidated net income of $77.6 million and Adjusted EBITDA of $160.8 million for the year ended December 31, 2020.

See "Adjusted EBITDA and Adjusted EBITDA Margin" below for more information regarding our use of Adjusted EBITDA, a non-GAAP financial measure, and a reconciliation of Adjusted EBITDA to our consolidated net income.

COVID-19 Update

The COVID-19 pandemic has caused an international health crisis and resulted in significant disruptions to the global economy as well as businesses and capital markets around the world.

Our operations have been materially adversely affected by a range of factors related to the COVID-19 pandemic. Since March 2020, all of our offices have been temporarily closed and, subject to limited exceptions, all of our employees have worked remotely, which has disrupted how we operate our business. In addition, in an effort to limit the spread of COVID-19, Canada and the United Kingdom, as well as states and localities in the United States, implemented or mandated significant restrictions on travel and commerce, shelter-in-place or stay-at-home orders, and business closures. Fluctuation in infection rates in the regions in which we operate has resulted in periodic changes in restrictions that vary from region to region and may require rapid response to new or reinstated orders. Many of these orders resulted in restrictions on the ability of consumers to buy and sell automobiles by restricting operations at dealerships and/or by closing or reducing the services provided by certain service providers upon which dealerships rely. In addition, these restrictions and continued concern about the spread of the disease have impacted car shopping by consumers and disrupted the operations of car dealerships, which has adversely affected the market for automobile purchases.

The automotive industry is also facing inventory supply problems, including for reasons attributable to the COVID-19 pandemic and other macroeconomic issues, such as the global semiconductor chip shortage, which have adversely affected the amount of inventory on our websites.

As a result of the travel and commerce restrictions and the impact on their businesses, a number of our dealer customers have, or are temporarily closed or are operating on a reduced capacity, and many dealerships have faced significant financial challenges, which caused us to experience increased customer cancellation rates and slowed paying dealer additions during the year ended December 31, 2020. However, since the second quarter of 2020, cancellations by paying dealers have begun to stabilize, which we believe resulted primarily from the resumption of consumer activity.

Further, in the past, we have taken measures to help our paying dealers maintain their business health during the COVID-19 pandemic, including by proactively reducing the subscription fees for paying dealers for certain service periods. As a result, the level of fees we received from paying dealers materially decreased during the year ended December 31, 2020 as compared to the prior year, resulting in a material decline in our revenue on a year-over-year basis and a material adverse effect to our business. These effects on our revenue caused us to implement a cost-savings initiative during the second quarter of 2020, or the Expense Reduction Plan, that included a reduction in our workforce, a limitation in discretionary spend across our business, reduced consumer marketing across both algorithmic traffic acquisition and brand spend, and ceasing certain international operations and expansion efforts. We have since increased our consumer marketing and other expenses, though remaining short of pre-pandemic levels, as consumer activity increased, and governments implemented re-opening policies. For the year ended December 31, 2021, we also returned to normal contractual billings in all markets except for our suspension of charging subscription fees to paying dealers in the United Kingdom during the February 2021 service period. Although the fee reductions had a material adverse effect on our revenue for the year ended December 31, 2020, they did not have a material adverse impact for the year ended December 31, 2021.

We continue to monitor and assess the effects of the COVID-19 pandemic on our commercial operations, including the impact on our revenue. Recently identified variants of COVID-19, Delta and Omicron, which appear to be more transmissible and contagious than previous COVID-19 variants, have caused an increase in the number of COVID-19 cases globally. The impact of COVID-19 and, in particular, the Delta and Omicron variants or other variants that may emerge, cannot be predicted at this time, and could depend on a number of factors, including the availability of vaccines in different parts of the world, vaccination rates among the population, and the effectiveness of COVID-19 vaccines against the Delta and Omicron variants and any other variants that may emerge. Accordingly, we cannot at this time accurately predict what effects these conditions will ultimately have on our future revenue and operations. See the "Risk Factors" section of this Annual Report on Form 10-K for further discussion of the impacts of the COVID-19 pandemic on our business.

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 revenue 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 each market, our rate of investment, market size, market maturity, competition and other dynamics unique to each country. The metrics presented below exclude CarOffer as we believe such metrics are either not applicable for the CarOffer business or do not provide a meaningful way to evaluate the CarOffer business.

Monthly Unique Users

For each of our websites, we define a monthly unique user as an individual who has visited any 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 of each of our websites 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 any 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. If an individual uses multiple browsers on a single device and/or clears their cookies and returns to our site within a calendar month, each such visit 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 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 Ended December 31,	
Average Monthly Unique Users	**2021**	**2020**
	(in thousands)	
United States	31,646	36,228
International	7,495	8,335
Total	39,141	44,563

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, other than the Autolist website, (ii) Pacific Time for the Autolist website, (iii) Greenwich Mean Time for our U.K. websites, and (iv) Central European Time (or Central European Summer Time when daylight savings is observed) for our Germany, Italy, and Spain websites, which ceased operations in the second quarter of 2020. 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.

	Year Ended December 31,	
Average Monthly Sessions	**2021**	**2020**
	(in thousands)	
United States	79,316	90,909
International	17,309	19,326
Total	96,625	110,235

Number of Paying Dealers

We define a paying dealer as a dealer account with an active, paid marketplace subscription 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 and opportunity, including our ability to retain paying dealers and develop new dealer relationships.

	As of December 31,	
Number of Paying Dealers	**2021**	**2020**
United States	23,860	23,934
International	6,770	6,697
Total	30,630	30,631

Quarterly Average Revenue per Subscribing Dealer (QARSD)

We define QARSD, which is measured at the end of a fiscal quarter, as the marketplace revenue primarily from subscriptions to our Listings packages and RPM digital advertising suite during that trailing quarter divided by the average number of paying dealers in that marketplace during the quarter. We calculate the average number of paying dealers for a period by adding the number of paying dealers at the end of such period and the end of the prior period and dividing by two. This information is important to us, and we believe it provides useful information to investors, because we believe that our ability to grow QARSD is an indicator of the value proposition of our products and the return on investment, or ROI, that our paying dealers realize from our products. In addition, increases in QARSD, which we believe reflect the value of exposure to our engaged audience in relation to subscription cost, are driven in part 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,	
Quarterly Average Revenue per Subscribing Dealer (QARSD)	**2021**	**2020**
United States	$ 5,633	$ 5,304
International	$ 1,546	$ 1,060
Consolidated	$ 4,731	$ 4,382

Adjusted EBITDA and Adjusted EBITDA Margin

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 and Adjusted EBITDA margin, each of which are non-GAAP financial measures. These non-GAAP financial measures are not based on any standardized methodology prescribed by United States generally accepted accounting principles, or GAAP, and are not necessarily comparable to similarly titled measures presented by other companies.

We define Adjusted EBITDA as consolidated net income, adjusted to exclude: depreciation and amortization, impairment of long-lived assets, stock-based compensation expense, acquisition-related expenses, restructuring expenses, other income, net, provision for income taxes, and net income attributable to redeemable noncontrolling interest. 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.

We have presented Adjusted EBITDA and Adjusted EBITDA margin within this Annual Report on Form 10-K because they are key measures 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 and Adjusted EBITDA margin can produce useful measures for period-to-period comparisons of our business.

We use Adjusted EBITDA and Adjusted EBITDA margin to evaluate our operating performance and trends and make planning decisions. We believe Adjusted EBITDA and Adjusted EBITDA margin help 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 and Adjusted EBITDA margin provide 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.

Our Adjusted EBITDA and Adjusted EBITDA margin are 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 and Adjusted EBITDA margin rather than consolidated net income and consolidated net income margin, respectively, which are the most directly comparable GAAP equivalents. Some of these limitations are:

- Adjusted EBITDA and Adjusted EBITDA margin exclude 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 and Adjusted EBITDA margin exclude impairment of long-lived assets and, although these are non-cash adjustments, the assets being impaired may have to be replaced in the future;
- Adjusted EBITDA and Adjusted EBITDA margin exclude 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 and Adjusted EBITDA margin exclude transaction and one-time 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 and Adjusted EBITDA margin exclude restructuring expenses incurred by us during a reporting period, which may not be reflective of our operational performance during such period;
- Adjusted EBITDA and Adjusted EBITDA margin exclude other income, net which primarily includes interest income earned on our cash, cash equivalents, and investments, and net foreign exchange gains and losses;
- Adjusted EBITDA and Adjusted EBITDA margin exclude the provision for income taxes;
- Adjusted EBITDA and Adjusted EBITDA margin exclude the income attributable to redeemable noncontrolling interest, adjusted for all prior limitations to Adjusted EBITDA and Adjusted EBITDA margin as described above; and
- other companies, including companies in our industry, may calculate Adjusted EBITDA and Adjusted EBITDA margin differently, which reduce their usefulness as comparative measures.

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

For the years ended December 31, 2021 and 2020, the following table presents a reconciliation of Adjusted EBITDA and Adjusted EBITDA margin to consolidated net income and consolidated net income margin, respectively, the most directly comparable measures calculated in accordance with GAAP, for each of the periods presented.

	Year Ended December 31,	
	2021	2020
	(in thousands)	
Reconciliation of Adjusted EBITDA and Adjusted EBITDA Margin:		
Consolidated net income	$ 110,373	$ 77,553
Depreciation and amortization	40,476	10,191
Impairment of long-lived assets	3,128	1,151
Stock-based compensation expense	77,710	45,321
Acquisition-related expenses	709	2,906
Restructuring expenses [1]	—	3,514
Other income, net	(1,092)	(1,354)
Provision for income taxes	38,987	21,557
Consolidated Adjusted EBITDA	270,291	160,839
Net income attributable to redeemable noncontrolling interest	(20,784)	—
Adjusted EBITDA	$ 249,507	$ 160,839
Consolidated net income margin	12%	14%
Adjusted EBITDA margin	26%	29%

(1) Excludes stock-based compensation expense of $753 for the year ended December 31, 2020 related to the Expense Reduction Plan, as the amount is already included within the stock-based compensation line item in the Reconciliation of Adjusted EBITDA and Adjusted EBITDA margin.

Components of Consolidated Income Statements

Revenue

We derive revenue from three sources: (i) marketplace revenue, which consists primarily of dealer subscriptions to our Listings packages and RPM digital advertising suite, advertising revenue from auto manufacturers and other auto-related brand advertisers, and revenue from partnerships with financing services companies; (ii) wholesale revenue, which consists primarily of transaction fees earned by CarOffer from facilitating the purchase and sale of vehicles between dealers; and (iii) product revenue, which consists primarily of aggregate proceeds received on the sale of vehicles.

Marketplace Revenue

We offer multiple types of marketplace Listings packages to our dealers for our CarGurus U.S. platform (availability varies on our other marketplaces): Restricted 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.

Our subscriptions for customers generally auto-renew on a monthly basis and are cancellable by dealers with 30 days' advance notice prior to the commencement of the applicable renewal term, although during the second quarter of 2020 we did not require 30 days' advance notice of termination from dealers who cancelled as a result of the COVID-19 pandemic. 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 and is subject to discounts and/or fee reductions that we may offer from time to time. 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. Only dealers subscribing to a paid Listings package have access to the Pricing Tool, Market Analysis tool and our IMV Scan tool.

In addition to displaying inventory in our marketplace and providing access to the Dealer Dashboard, we offer dealers subscribing to certain of our Listings packages other subscription advertising and customer acquisition products and enhancements marketed under our RPM digital advertising suite. Through RPM, dealers can buy advertising that appears in our marketplace, on other sites on the internet and/or on high-converting social media platforms. Such advertisements can be targeted by the user's geography, search history, CarGurus website activity 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 packages for the Autolist website and paid Listings and advertising products for the PistonHeads website.

Marketplace revenue also consists of non-dealer 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.

Marketplace revenue also includes revenue from partnerships with certain financing services companies pursuant to which we enable eligible consumers on our CarGurus U.S. website to pre-qualify for financing on cars from dealerships that offer financing through such companies. 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.

We also offer non-dealer advertising products for the Autolist and PistonHeads websites.

Wholesale Revenue

Wholesale revenue includes transaction fees earned by CarOffer from facilitating the purchase and sale of vehicles between dealers, where CarOffer collects fees from both the buyer and seller. CarOffer also sells vehicles to dealers that CarOffer acquires at other marketplaces – in these instances, CarOffer collects a transaction fee from the buyer.

Wholesale revenue also includes fees earned by CarOffer from performing inspection and transportation services, where CarOffer collects fees from the buyer. Inspection and transportation service revenue is inclusive of dealer to dealer transactions, other marketplace to dealer transactions, and customer to dealer transactions.

Wholesale revenue also includes fees earned by CarOffer from certain guarantees offered to dealers, where CarOffer collects fees from the buying dealer or selling dealer, as applicable.

Product Revenue

Product revenue includes the aggregate proceeds received on the sale of vehicles. This revenue relates to vehicles sold to dealers that CarOffer acquires directly from customers, inclusive of transaction fees collected from the buyer, and in limited situations across all CarOffer transactions, vehicles CarOffer resells after acquiring a vehicle via arbitration. Arbitration is the process by which CarOffer investigates and resolves claims from buying dealers.

Cost of Revenue

Marketplace Cost of Revenue

Marketplace cost of revenue includes expenses related to supporting and hosting digital product offerings. These expenses include personnel and related expenses for our customer support team, including salaries, benefits, incentive compensation, and stock-based compensation, third-party service provider expenses such as advertising, data center and networking expenses, depreciation expense associated with our property and equipment, amortization of developed technology, amortization of capitalized website development and allocated overhead expenses. The Company allocates overhead expenses, such as rent and facility expenses, information technology expense, and employee benefit expense, to all departments based on headcount. As such, general overhead expenses are reflected in cost of revenue and each operating expense category.

Wholesale Cost of Revenue

Wholesale cost of revenue includes expenses related to supporting the facilitation of the purchase and sale of vehicles between dealers, the sale by CarOffer to dealers of vehicles that it acquires at other marketplaces, and net losses on vehicles related to guarantees offered to dealers. These expenses include vehicle transportation and inspection expenses, personnel and related expenses for employees directly involved in the fulfillment and support of transactions, including salaries, benefits, incentive compensation and stock-based compensation, third-party service provider expenses, amortization of developed technology, amortization of capitalized website development and allocated overhead expenses.

Product Cost of Revenue

Product cost of revenue includes expenses related to vehicles sold to dealers that CarOffer acquires directly from consumers and in limited situations across all CarOffer transactions, in which CarOffer acquires the vehicle via arbitration. These expenses include expenses for vehicles in which CarOffer controls the vehicle and therefore acts as a principal in the transaction.

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, and stock-based compensation; expenses associated with consumer marketing, such as traffic acquisition, brand building, and public relations activities; expenses associated with dealer marketing, such as content marketing, customer and promotional events, and industry events; amortization of hosting arrangements; and allocated overhead expenses. A portion of our commissions that are related to obtaining a new contract are capitalized and amortized over the estimated benefit period of customer relationships. All other sales and marketing expenses are expensed as incurred. We expect sales and marketing expenses to fluctuate from quarter to quarter as we respond to the COVID-19 pandemic and changes in the macroeconomic and competitive landscapes affecting our existing dealers, consumer audience and brand awareness, which will impact our annual results of operations.

Product, Technology, and Development

Product, technology, and development expenses, consist primarily of personnel and related expenses for our research and development team, including salaries, benefits, incentive compensation, stock-based compensation and allocated overhead expense. Other than website development and internal-use software expenses, research and development expenses are expensed as incurred. We expect product, technology, and development expenses to increase as we invest in additional engineering resourcing to 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, people & talent, and administrative teams, including salaries, benefits, incentive compensation, and stock-based compensation, in addition to the expenses associated with professional fees for external legal, accounting and other consulting services, insurance premiums, payment processing and billing expenses, and allocated overhead expenses. General and administrative expenses are expensed as incurred. We expect general and administrative expenses to increase as we continue to scale our business.

Depreciation and Amortization

Depreciation and amortization expenses consist of depreciation on property and equipment and amortization of intangible assets and internal-use software.

Other Income, Net

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

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. For the years ended December 31, 2021 and 2020, we have recognized a provision for income taxes 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. As of December 31, 2021 and 2020, our valuation allowances against our net deferred tax assets were both immaterial.

Results of Operations

For the years ended December 31, 2021 and 2020, our consolidated income statements are as follows:

	Year Ended December 31, 2021	Year Ended December 31, 2020
	(dollars in thousands)	
Revenue:		
Marketplace	$ 636,942	$ 551,451
Wholesale	195,127	—
Product	119,304	—
Total revenue	951,373	551,451
Cost of revenue:		
Marketplace	47,689	42,706
Wholesale	127,679	—
Product	118,647	—
Total cost of revenue	294,015	42,706
Gross profit	657,358	508,745
Operating expenses:		
Sales and marketing	290,574	256,979
Product, technology, and development	106,423	85,726
General and administrative	97,678	62,166
Depreciation and amortization	14,415	6,118
Total operating expenses	509,090	410,989
Income from operations	148,268	97,756
Other income, net:		
Interest income	120	1,075
Other income, net	972	279
Total other income, net	1,092	1,354
Income before income taxes	149,360	99,110
Provision for income taxes	38,987	21,557
Consolidated net income	110,373	77,553
Net income attributable to redeemable noncontrolling interest	1,129	—
Net income attributable to CarGurus, Inc.	$ 109,244	$ 77,553

	Year Ended December 31, 2021	Year Ended December 31, 2020
	(dollars in thousands)	
Additional Financial Data		
Revenue		
United States	$ 909,033	$ 519,835
International	42,340	31,616
Total	$ 951,373	$ 551,451
Income (Loss) from Operations		
United States	$ 158,532	$ 120,836
International	(10,264)	(23,080)
Total	$ 148,268	$ 97,756

For the years ended December 31, 2021 and 2020, our consolidated income statements as a percentage of revenue are as follows (amounts may not sum due to rounding):

	Year Ended December 31,	
	2021	2020
Revenue:		
Marketplace	67%	100%
Wholesale	21	—
Product	13	—
Total revenue	100	100
Cost of revenue:		
Marketplace	5	8
Wholesale	13	—
Product	12	—
Total cost of revenue	31	8
Gross profit	69	92
Operating expenses:		
Sales and marketing	31	47
Product, technology, and development	11	16
General and administrative	10	11
Depreciation and amortization	2	1
Total operating expenses	54	75
Income from operations	16	18
Other income, net:		
Interest income	0	0
Other income, net	0	0
Total other income, net	0	0
Income before income taxes	16	18
Provision for income taxes	4	4
Consolidated net income	12	14
Net income attributable to redeemable noncontrolling interest	0	0
Net income attributable to CarGurus, Inc.	11	14

	Year Ended December 31,	
	2021	2020
Additional Financial Data		
Revenue		
United States	96%	94%
International	4	6
Total	100%	100%
Income (Loss) from Operations		
United States	17%	22%
International	(1)	(4)
Total	16%	18%

Year Ended December 31, 2021 Compared to Year Ended December 31, 2020

Revenue

Revenue by Source

	Year Ended December 31, 2021	Year Ended December 31, 2020	Change Amount	Change %
	(dollars in thousands)			
Revenue				
Marketplace	$ 636,942	$ 551,451	$ 85,491	16%
Wholesale	195,127	—	195,127	NM
Product	119,304	—	119,304	NM
Total	$ 951,373	$ 551,451	$ 399,922	73%
Percentage of total revenue:				
Marketplace	67%	100%		
Wholesale	21	—		
Product	13	—		
Total	100%	100%		

NM - Not Meaningful

Overall revenue increased $399.9 million, or 73%, in the year ended December 31, 2021 compared to the year ended December 31, 2020.

Marketplace revenue increased $85.5 million, or 16%, in the year ended December 31, 2021 compared to the year ended December 31, 2020 and represented 67% of total revenue for the year ended December 31, 2021 and 100% of total revenue for the year ended December 31, 2020. This increase was due primarily to the approximately $50 million impact of fee reductions that we provided to our paying dealers during the second quarter of 2020 in response to the COVID-19 pandemic, of which approximately $47 million resulted in revenue reductions during such quarter, with the remaining impact spread over the life of the contract term. The increase was also due in part to product upgrades for existing dealers and signing on new dealers with higher average monthly recurring revenue.

Wholesale revenue increased $195.1 million in the year ended December 31, 2021 compared to the year ended December 31, 2020 and represented 21% of total revenue for the year ended December 31, 2021 and 0% of total revenue for the year ended December 31, 2020. The increase was due to our acquisition of a 51% interest in CarOffer. The increase was primarily due to dealer to dealer transactions, inclusive of transaction, transportation and inspection fees.

Product revenue increased $119.3 million in the year ended December 31, 2021 compared to the year ended December 31, 2020 and represented 13% of the total revenue for the year ended December 31, 2021 and 0% of total revenue for the year ended December 31, 2020. The increase was due to our acquisition of a 51% interest in CarOffer and launch of our consumer-to-dealer offering. The increase was primarily due to a $84.2 million increase in proceeds received on the sale of vehicles acquired by CarOffer directly from customers and a $35.1 million increase in proceeds received from the sale of vehicles acquired via arbitration.

Revenue by Segment

	Year Ended December 31, 2021	Year Ended December 31, 2020	Change Amount	Change %
	(dollars in thousands)			
Revenue				
United States	$ 909,033	$ 519,835	$ 389,198	75%
International	42,340	31,616	10,724	34
Total	$ 951,373	$ 551,451	$ 399,922	73%
Percentage of total revenue:				
United States	96%	94%		
International	4	6		
Total	100%	100%		

United States revenue increased $389.2 million, or 75%, in the year ended December 31, 2021 compared to the year ended December 31, 2020. The increase was primarily due to a $314.4 million increase in wholesale and product revenue due to our acquisition of a 51% interest in CarOffer and launch of our consumer-to-dealer offering. Additionally, the increase was due to approximately $44 million in revenue reductions during the second quarter of 2020 as a result of the impact of fee reductions that we provided to our United States paying dealers during such quarter in response to the COVID-19 pandemic. The increase was also due in part to product upgrades for existing dealers and signing on new dealers with higher average monthly recurring revenue.

International revenue increased $10.7 million, or 34%, in the year ended December 31, 2021 compared to the year ended December 31, 2020. The increase was due primarily to approximately $3 million in revenue reductions during the second quarter of 2020 as a result of the impact of fee reductions that we provided to our international paying dealers during such quarter in response to the COVID-19 pandemic. The increase was also due in part to product upgrades for existing dealers and signing on new dealers with higher average monthly recurring revenue. The increase in international revenue was also attributable to a 1% increase in the number of international paying dealers.

Cost of Revenue

	Year Ended December 31,		Change	
	2021	2020	Amount	%
	(dollars in thousands)			
Cost of revenue				
Marketplace	$ 47,689	$ 42,706	$ 4,983	12%
Wholesale	127,679	—	127,679	NM
Product	118,647	—	118,647	NM
Total	$ 294,015	$ 42,706	$ 251,309	588%
Percentage of total revenue:				
Marketplace	5%	8%		
Wholesale	13	—		
Product	12	—		
Total	31%	8%		

NM - Not Meaningful

Overall cost of revenue increased $251.3 million, or 588%, in the year ended December 31, 2021 compared to the year ended December 31, 2020.

Marketplace cost of revenue increased $5.0 million, or 12%, in the year ended December 31, 2021 compared to the year ended December 31, 2020 and represented 5% of total revenue for the year ended December 31, 2021 and 8% of total revenue for the year ended December 31, 2020. The increase was due primarily to a $5.3 million increase in fees related to provisioning advertising campaigns on our websites and a $0.9 million increase in data center and hosting costs, offset in part by a $1.2 million decrease in salaries and employee-related expense due primarily to a 29% decrease in average CarGurus customer support team headcount primarily in connection with the Expense Reduction Plan.

Wholesale cost of revenue increased $127.7 million, in the year ended December 31, 2021 compared to the year ended December 31, 2020 and represented 13% of total revenue for the year ended December 31, 2021 and 0% of total revenue for the year ended December 31, 2020. The increase was due to our acquisition of a 51% interest in CarOffer. The increase was primarily due to expenses for dealer to dealer transactions, inclusive of transportation expenses, amortization of developed technology, salaries and employee-related expenses, and inspection expenses.

Product cost of revenue increased $118.6 million, in the year ended December 31, 2021 compared to the year ended December 31, 2020 and represented 12% of the total revenue for the year ended December 31, 2021 and 0% of total revenue for the year ended December 31, 2020. The increase was due to our acquisition of a 51% interest in CarOffer and launch of our consumer-to-dealer offering. The increase was primarily due to a $78.4 million increase in expenses related to vehicles acquired by CarOffer directly from customers and a $40.2 million increase in expenses related to vehicles acquired via arbitration.

Operating Expenses

Sales and Marketing Expenses

	Year Ended December 31,		Change	
	2021	2020	Amount	%
	(dollars in thousands)			
Sales and marketing	$ 290,574	$ 256,979	$ 33,595	13%
Percentage of total revenue	31%	47%		

Sales and marketing expenses increased $33.6 million, or 13%, in the year ended December 31, 2021 compared to the year ended December 31, 2020. The increase was due primarily to a $6.9 million increase in salaries and employee-related expense, exclusive of commissions expense, which increased $22.5 million. The increase in salaries and employee-related expense was due primarily to a 33% increase in headcount due primarily to our acquisition of a 51% interest in CarOffer and an increase in expected bonus attainment in comparison to the year ended December 31, 2020 due to improved performance since the outset of the COVID-19 pandemic. The increase in commissions expense was due to the increase in headcount, marketplace sales growth and a decrease in capitalizable costs to obtain contracts. The increase in sales and marketing expenses was also due in part to a $2.3 million increase in consulting expense and a $2.1 million increase in software subscription expense.

Product, Technology, and Development Expenses

	Year Ended December 31,		Change	
	2021	2020	Amount	%
	(dollars in thousands)			
Product, technology, and development	$ 106,423	$ 85,726	$ 20,697	24%
Percentage of total revenue	11%	16%		

Product, technology, and development expenses increased $20.7 million, or 24%, in the year ended December 31, 2021 compared to the year ended December 31, 2020. The increase was due primarily to a $15.7 million increase in salaries and employee-related expense, exclusive of stock-based compensation expense, which increased $1.5 million. The increase in salaries and employee-related expense was due primarily to a 37% increase in headcount and an increase in expected bonus attainment in comparison to the year ended December 31, 2020 due to improved performance since the outset of the COVID-19 pandemic. The increase in stock-based compensation expense was due to the revaluation of certain liability-based stock awards and the increase in headcount. The increase in product, technology, and development expenses was also due in part to a $1.9 million increase in consulting expenses and a $1.0 million increase in rent expense.

General and Administrative Expenses

	Year Ended December 31,		Change	
	2021	2020	Amount	%
	(dollars in thousands)			
General and administrative	$ 97,678	$ 62,166	$ 35,512	57%
Percentage of total revenue	10%	11%		

General and administrative expenses increased $35.5 million, or 57%, in the year ended December 31, 2021 compared to the year ended December 31, 2020. The increase was due primarily to a $5.2 million increase in salaries and employee-related expense, exclusive of stock-based compensation expense, which increased $28.5 million. The increase in salaries and employee-related expense was due primarily to a 33% increase in headcount due primarily to our acquisition of a 51% interest in CarOffer and an increase in expected bonus attainment in comparison to the year ended December 31, 2020 due to improved performance since the outset of the COVID-19 pandemic. The increase in stock-based compensation expense was due primarily to the revaluation of certain liability-based stock awards and annual retention grant. The increase in general and administrative expenses was also due in part to a $1.3 million increase in insurance expenses.

Depreciation and Amortization Expenses

	Year Ended December 31,		Change	
	2021	2020	Amount	%
	(dollars in thousands)			
Depreciation and amortization	$ 14,415	$ 6,118	$ 8,297	136%
Percentage of total revenue	2%	1%		

Depreciation and amortization expenses increased $8.3 million, or 136%, in the year ended December 31, 2021 compared to the year ended December 31, 2020, due primarily to an increase in amortization of intangible assets related to the acquired intangible assets from CarOffer.

Other Income, net

	Year Ended December 31,		Change	
	2021	2020	Amount	%
	(dollars in thousands)			
Other income, net				
Interest income	$ 120	$ 1,075	$ (955)	(89)%
Other income	972	279	693	248
Total other income, net	$ 1,092	$ 1,354	$ (262)	(19)%
Percentage of total revenue:				
Interest income	0%	0%		
Other income	0	0		
Total other income, net	0%	0%		

Other income, net decreased $0.3 million, or 19%, in the year ended December 31, 2021 compared to the year ended December 31, 2020. The $1.0 million decrease in interest income was due primarily to decreases in investments in certificates of deposit as well as a decline in interest rates associated with our certificates of deposit investments during the year ended December 31, 2021. The $0.7 million increase in other income, net was primarily due to a $0.5 million increase in other income related to CarOffer during the year ended December 31, 2021.

Provision for Income Taxes

	Year Ended December 31,		Change	
	2021	2020	Amount	%
	(dollars in thousands)			
Provision for income taxes	$ 38,987	$ 21,557	$ 17,430	81%
Percentage of total revenue	4%	4%		

Provision for income taxes increased $17.4 million, or 81% in year ended December 31, 2021 compared to the year ended December 31, 2020. The increase in provision for income taxes recognized during the year ended December 31, 2021 was principally due to increased profitability in excess of tax attributes available to offset. Additionally, there was $0.4 million tax expense related to excess stock-based compensation deductions recognized during 2021, compared to the insignificant amount of tax benefit recognized during 2020. Furthermore, a $2.0 million tax expense was recognized during 2021 in connection with the Section 162(m) excess officer compensation limitation, which became applicable in May 2021 upon the expiration of the transition period permitted following our IPO.

Income (Loss) from Operations by Segment

	Year Ended December 31,		Change	
	2021	2020	Amount	%
	(dollars in thousands)			
United States	$ 158,532	$ 120,836	$ 37,696	31%
International	(10,264)	(23,080)	12,816	56
Total	$ 148,268	$ 97,756	$ 50,512	52%
Percentage of segment revenue:				
United States	17%	23%		
International	(24)%	(73)%		

United States income from operations increased $37.7 million, or 31%, in the year ended December 31, 2021 compared to the year ended December 31, 2020. This increase was due to increases in revenue of $389.2 million, offset by increases in cost of revenue of $253.7 million and increases in operating expenses of $97.8 million.

International loss from operations decreased $12.8 million, or 56% in the year ended December 31, 2021 compared to the year ended December 31, 2020. The decrease was due to increases in revenue of $10.7 million and decreases in cost of revenue of $2.4 million, offset by increases in operating expenses of $0.3 million.

Liquidity and Capital Resources

Cash, Cash Equivalents and Investments

As of December 31, 2021 and 2020, our principal sources of liquidity were cash and cash equivalents of $231.9 million and $190.3 million, respectively, and investments in certificates of deposit with terms of greater than 90 days but less than one year of $90.0 million and $100.0 million, respectively.

Sources and Uses of Cash

During the years ended December 31, 2021 and 2020, our cash flows from operating, investing, and financing activities, as reflected in the consolidated statements of cash flows, are as follows:

	Year Ended December 31,	
	2021	2020
	(in thousands)	
Net cash provided by operating activities	$ 98,292	$ 156,743
Net cash used in investing activities	(68,149)	(16,895)
Net cash provided by (used in) financing activities	17,808	(10,085)
Impact of foreign currency on cash	(597)	440
Net increase in cash, cash equivalents, and restricted cash	$ 47,354	$ 130,203

Our operations have been financed primarily from operating activities. During the years ended December 31, 2021 and 2020, we generated cash from operating activities of $98.3 million and $156.7 million, respectively.

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. Our future capital requirements will depend on many factors, including: the further impact of the COVID-19 pandemic; our revenue; expenses associated with our sales and marketing activities and the support of our product, technology, and development efforts; expenses associated with our facilities build out under our 1001 Boylston Street lease, other than those which qualify for landlord reimbursement; payments received in advance from a third-party payment processor; our investments in international markets; and the potential exercise of call rights in the second half of 2022, or the 2022 Call Right, exercisable in our sole discretion, to acquire up to twenty-five percent (25%) of the fully diluted outstanding capitalization of CarOffer at an implied value equal to seven (7) times CarOffer's trailing twelve months gross profit as of June 30, 2022 (as calculated in accordance with the defined terms and subject to the adjustments set forth in the CarOffer Operating Agreement (as defined in Note 4 of the consolidated financial statements included elsewhere in this Annual Report on Form 10-K)). If the 2022 Call Right is exercised, the consideration to be paid will be in the form of cash and/or shares of our Class A common stock, as determined in our sole discretion. A cash payment made in connection with the 2022 Call Right is reasonably likely to reduce our net cash in future quarters. Cash from operations could also be affected by various risks and uncertainties, including, but not limited to, the effects of the COVID-19 pandemic and other risks detailed in the "Risk Factors" section of this Annual Report on Form 10-K.

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 $98.3 million during the year ended December 31, 2021 was due primarily to consolidated net income of $110.4 million, adjusted for $53.5 million of stock-based compensation expense, $40.5 million of depreciation and amortization, $12.7 million of amortization of deferred contract costs, $6.2 million of deferred taxes, $3.1 million of impairment of long-lived assets, and $1.0 million of provision for doubtful accounts. Cash provided by operating activities was also attributable to a $35.8 million increase in accrued expenses, accrued income taxes, and other liabilities, a $35.4 million increase in accounts payable, a $3.7 million increase in deferred revenue, and a $1.0 million increase in lease obligations. The increases in cash flow from operations were partially offset by a $174.8 million increase in accounts receivable, net due primarily to the acquisition of a 51% interest in CarOffer, a $17.3 million increase in inventory, a $7.7 million increase in gross deferred contract costs, and a $5.1 million increase in prepaid expenses, prepaid income taxes, and other assets.

Cash provided by operating activities of $156.7 million during the year ended December 31, 2020 was due primarily to consolidated net income of $77.6 million, adjusted for $45.1 million of stock-based compensation expense, $22.2 million of deferred taxes, $11.6 million of amortization of deferred contract costs, $10.2 million of depreciation and amortization, $1.9 million of provision for doubtful accounts, and $1.2 million of impairment of long-lived assets. Cash provided by operating activities was also attributable to a $7.5 million increase in accrued expenses, accrued income taxes, and other liabilities, a $3.9 million decrease in accounts receivable, and a $3.5 million decrease in prepaid expenses, prepaid income taxes, and other assets. The increases in cash flow from operations were partially offset by a $15.1 million decrease in accounts payable, and a $11.4 million increase in gross deferred contract costs.

Investing Activities

Cash used in investing activities of $68.1 million during the year ended December 31, 2021 was due to $64.3 million of acquisition cash payments, net of cash acquired, $7.7 million of purchases of property and equipment, and $6.2 million related to the capitalization of website development costs, offset in part by $130.0 million of maturities in certificates of deposit, net of investments in certificates of deposit of $120.0 million.

Cash used in investing activities of $16.9 million during the year ended December 31, 2020 was due to $21.1 million of acquisition cash payments, net of cash acquired, $4.6 million related to the capitalization of website development costs, and $3.0 million of purchases of property and equipment, offset in part by $111.7 million of maturities in certificates of deposit, net of investments in certificates of deposit of $100.0 million.

Financing Activities

Cash provided by financing activities of $17.8 million during the year ended December 31, 2021 was due primarily to $46.8 million related to payments received in advance from a third-party payment processor and $0.7 million related to the proceeds from the issuance of common stock related to the exercise of vested stock options, partially offset by payment of withholding taxes on net share settlements of restricted stock units, or RSUs, of $15.4 million and CarOffer's repayment of a line of credit of $14.3 million.

Cash used in financing activities of $10.1 million during the year ended December 31, 2020 was due primarily to the payment of withholding taxes on net share settlements of RSUs of $11.2 million, partially offset by $1.1 million related to the proceeds from the issuance of common stock related to the exercise of vested stock options.

Contractual Obligations and Known Future Cash Requirements

Contractual Obligations and Commitments

As of December 31, 2021, all of our property, equipment, and internal-use software have been purchased with cash, with the exception of amounts related to unpaid property and equipment, capitalized website development, capitalized internal-use software and hosting arrangements and amounts related to obligations under finance leases as disclosed in the consolidated statements of cash flows. We have no material long-term purchase obligations outstanding with any vendors or third parties.

Leases

Our primary operating lease obligations consist of various leases for office space in: Boston, Massachusetts; Cambridge, Massachusetts; San Francisco, California; Addison, Texas; and Dublin, Ireland. We also have an operating lease obligation for data center space in Needham, Massachusetts.

Our leases have various lease terms expected to continue through 2038. The terms of our Massachusetts, California, and Texas lease agreements provide for rental payments that increase on an annual basis. The leases in Boston, Massachusetts, Cambridge, Massachusetts and San Francisco, California have associated letters of credit, which are recognized as restricted cash within the consolidated balance sheets. As of December 31, 2021 and 2020, restricted cash was $16.3 million and $10.6 million, 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 our building leases and pass-through payments from customers related to the Company's wholesale business. As of December 31, 2021 and 2020, portions of restricted cash were classified as short-term assets and long-term assets, as disclosed in the consolidated balance sheets.

As of December 31, 2021, known contractual obligations that are fixed and determinable are as follows:

	Total	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years
			(in thousands)		
Operating lease obligations	$ 345,547	$ 16,573	$ 44,770	$ 43,689	$ 240,515
Total contractual obligations	$ 345,547	$ 16,573	$ 44,770	$ 43,689	$ 240,515

The table above includes leases signed but not yet commenced as of December 31, 2021 and is based on expected contractual commencement dates.

Acquisitions

On January 14, 2021 we completed the acquisition of a 51% interest in CarOffer, LLC, an automated instant vehicle trade platform based in Addison, Texas, with the option to acquire portions of the remaining equity in the future. Details of this acquisition are more fully described in Note 4 of our consolidated financial statements included in Item 8 of this Annual Report on Form 10-K.

Guarantees

CarOffer provides certain guarantees to dealers through its 45-Day Guaranteed Bid and OfferGuard product offerings, which are accounted for under Accounting Standards Codifications, or ASC, Topic 460, Guarantees, or ASC 460.

45-Day Guaranteed Bid is an arrangement through which a selling dealer lists a car on the CarOffer platform, and CarOffer provides an offer to purchase the vehicle listed at a specified price at any time over a 45-day period. This provides the seller with a put option, where they have the right, but not the obligation, to require CarOffer to purchase the vehicle during this window. OfferGuard is an arrangement through which a buying dealer purchases a car on the CarOffer platform, and CarOffer provides an offer to purchase the vehicle at a specified price between days 1 and 3, and days 42 and 45 if the dealer is not able to sell the vehicle after 42 days.

As of December 31, 2021, the maximum potential amount of future payments that CarOffer could be required to make under these guarantees was $76.1 million. Of the maximum potential amount of future payments, none are considered probable. The exercise of guarantees has historically been infrequent and even when such exercises did occur the losses were immaterial. As such, as of December 31, 2021, CarOffer had no contingent loss liabilities.

As of December 31, 2020, we did not have any guarantees.

Off-Balance Sheet Arrangements

As of December 31, 2021 and 2020, we did not have any off-balance sheet arrangements or material leases that are less than twelve months in duration, other than leases signed but not commenced, 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 Estimates

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

Although we regularly assess these estimates, actual results could differ materially from these estimates. We base our estimates on historical experience and various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from our 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. Changes in estimates are recognized in the period in which they become known.

Critical estimates relied upon in preparing the consolidated financial statements include the determination of sales allowance and variable consideration in our revenue recognition, allowance for doubtful accounts, the expensing and capitalization of product, technology, and development costs for website development and internal-use software, the valuation and recoverability of goodwill, intangible assets and other long-lived assets, the valuation of redeemable noncontrolling interest, the recoverability of our net deferred tax assets and related valuation allowance and the valuation of equity and liability-classified compensation awards under ASC Topic 718, Stock-based Compensation, or ASC 718. Accordingly, we consider these to be our critical accounting policies and believe that of our significant accounting policies, these policies involve the greatest degree of judgment and complexity.

Revenue Recognition

Sources of Revenue

We derive revenue from three sources: (i) marketplace revenue, which consists primarily of dealer subscriptions to our Listings packages and RPM digital advertising suite, advertising revenue from auto manufacturers and other auto-related brand advertisers, and revenue from partnerships with financing services companies; (ii) wholesale revenue, which consists primarily of transaction fees earned by CarOffer from facilitating the purchase and sale of vehicles between dealers; and (iii) product revenue, which consists primarily of aggregate proceeds received on the sale of vehicles.

Revenue Recognition

ASC Topic 606, Revenue from Contracts with Customers, or 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

Marketplace Revenue - Description

We offer multiple types of marketplace Listings packages to our dealers through our CarGurus U.S. platform (availability varies on our other marketplaces): Restricted 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.

Our subscriptions for customers generally auto-renew on a monthly basis and are cancellable by dealers with 30 days' advance notice prior to the commencement of the applicable renewal term, although during the second quarter of 2020 we did not require 30 days' advance notice of termination from dealers who cancelled as a result of the COVID-19 pandemic. 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 and is subject to discounts and/or fee reductions that we may offer from time to time. 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. Only dealers subscribing to a paid Listings package have access to the Pricing Tool, Market Analysis tool and our IMV Scan tool.

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

In addition to displaying inventory in our marketplace and providing access to the Dealer Dashboard, we offer dealers subscribing to certain of our Listings packages other subscription advertising and customer acquisition products and enhancements marketed under our RPM digital advertising suite. Through RPM, dealers can buy advertising that appears in our marketplace, on other sites on the internet and/or on high- converting social media platforms. Such advertisements can be targeted by the user's geography, search history, CarGurus website activity 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 the first day of each calendar month and is recognized as accounts receivable or short-term deferred revenue when payment is received in advance of services being delivered to the customers.

We also offer paid Listings packages for the Autolist website and paid Listings and advertising products for the PistonHeads website.

Marketplace revenue also consists of non-dealer 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 receivable generally relate to services rendered in the current period, but 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 recognized 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 exchange 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.

Marketplace revenue also includes revenue from partnerships with certain financing services companies pursuant to which we enable eligible consumers on our CarGurus U.S. website to pre-qualify for financing on cars from dealerships that offer financing through such companies. 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.

We also offer non-dealer advertising products for the Autolist and PistonHeads websites.

Marketplace Revenue - Revenue Recognition

For dealer listings, we provide a single similar service each day for a period of time. Each time increment (i.e., one 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 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 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 the portfolio level, there is also variable consideration, that needs to be included in the transaction price. Variable consideration consists of sales allowances, usage fees, and concessions that change the transaction price of the unsatisfied or partially unsatisfied performance obligation. 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. Sales allowances are recognized as a reduction to revenue in the consolidated income statements.

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.

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 generally 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 our 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.

Marketplace 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 allocate 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.

Wholesale Revenue - Description

Wholesale revenue includes transaction fees earned by CarOffer from facilitating the purchase and sale of vehicles between dealers, where CarOffer collects fees from both the buyer and seller. CarOffer also sells vehicles to dealers that CarOffer acquires at other marketplaces – in these instances, CarOffer collects a transaction fee from the buyer.

Wholesale revenue also includes fees earned by CarOffer from performing inspection and transportation services, where CarOffer collects fees from the buyer. Inspection and transportation service revenue is inclusive of dealer to dealer transactions, other marketplace to dealer transactions, and customer to dealer transactions.

Wholesale revenue also includes fees earned by CarOffer from certain guarantees offered to dealers, where CarOffer collects fees from the buying dealer or selling dealer, as applicable. Guarantee revenue is not accounted for under ASC 606 and is accounted for under ASC 460 as discussed further in Note 2 of the consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

Wholesale Revenue - Revenue Recognition

When facilitating the purchase and sale of vehicles between dealers and for vehicles sold to dealers that are acquired at other marketplaces, CarOffer does not control the vehicle and therefore acts as an agent in the transaction. Revenue earned from the fees for facilitating these transactions is recognized at a point in time when the vehicle is sold on a net basis.

For inspection and transportation services, CarOffer leverages a network of third-party inspection service providers and transportation carriers. CarOffer controls both inspection and transportation services as it is primarily responsible for fulfillment and therefore acts as a principal in the transaction. Revenue from fees for inspection services is recognized at the point in time when the inspection is performed and revenue from fees for transportation services is recognized over time as delivery is completed. Revenue from both inspection and transportation services is recognized on a gross basis. Unearned revenue related to unsatisfied performance obligations is recognized as deferred revenue.

Wholesale revenue also includes arbitration in which, in the majority of instances, the vehicle is rematched to a new buyer and not acquired by CarOffer. Arbitration is the process by which CarOffer investigates and resolves claims from buying dealers. In these situations, CarOffer does not control the vehicle and therefore acts as an agent in the transaction.

Within wholesale transactions, there are no contractual cash refund rights, but credits may be issued to a customer at our sole discretion. At the portfolio level, there is also variable consideration, that needs to be included in the transaction price. Variable consideration consists of sales allowances and concessions that change the transaction price of the unsatisfied or partially unsatisfied performance obligation. We recognize that there are times when there is a customer satisfaction issue or other circumstance that will lead to a credit or arbitration. 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. Sales allowances are recognized as a reduction to revenue in the consolidated income statements.

Wholesale revenue is presented net of any taxes collected from customers.

Product Revenue - Description

Product revenue includes the aggregate proceeds received on the sale of vehicles. This revenue relates to vehicles sold to dealers that CarOffer acquires directly from customers, inclusive of transaction fees collected from the buyer, and in limited situations across all CarOffer transactions, vehicles CarOffer resells after acquiring a vehicle via arbitration.

Product - Revenue Recognition

For vehicles sold to dealers that are acquired directly from consumers, CarOffer controls the vehicle and therefore acts as a principal in the transaction. Revenue earned from the fees for facilitating these transactions is recognized at a point in time when the vehicle is sold on a gross basis.

In limited situations across all CarOffer transactions, during an arbitration process, CarOffer acquires vehicles in transactions in which it controls the vehicle and therefore acts as a principal in the transaction. Revenue earned from the sale of the vehicle in these transactions is recognized at a point in time on a gross basis.

Contracts with Multiple Performance Obligations

We periodically enter into arrangements that include Listings and/or dealer advertising product subscriptions within marketplace 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 method as the performance obligation is being satisfied. For our arrangements that include Listings and/or dealer advertising product subscriptions, the performance obligations were satisfied over a consistent period of time and therefore the allocations did not impact the revenue recognized.

For CarOffer's arrangements that include multiple performance obligations, we allocate revenue based on fair value. Vehicle and inspection revenues are recognized at a point in time and transportation revenue is recognized over time.

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. 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.

As of December 31, 2021 and 2020, assets associated with costs to obtain a contract were $14.9 million and $20.0 million, respectively. This decrease in assets recognized for costs to obtain a contract was due to amortization from prior periods' assets being greater than the capitalizable costs to obtain a contract in current period. For the years ended December 31, 2021 and 2020, amortization expense associated with costs to obtain a contract was $12.7 million and $11.6 million, respectively.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded based on the amount due from the customer and a third-party payment processor. Accounts receivable do not bear interest.

We are exposed to credit losses primarily through our trade accounts receivable, which includes receivables in transit from a third-party payment processor. The third-party payment processor collects customer payments on our behalf and remits them to us. Customer payments received, but not remitted as of period end are deemed to be receivables in transit. Additionally, the third-party payment processer provides payments in advance for certain customers to us. If the third-party payment processor does not receive customer payments related to the payments in advance, the balance is deducted from future remittances to us.

We offset gross trade accounts receivable with payments received in advance from a third-party payment processor as we have the right of offset. As of December 31, 2021, gross trade accounts receivable from receivables in transit from the third-party payment processor was $18.7 million, offset by payments received in advance of $46.8 million, which resulted in a net liability of $28.1 million recognized within accrued expenses, accrued income taxes, and other current liabilities in the consolidated balance sheets. Payments received in advance are deductible from future payments from the third-party payment processor if the third-party payment processor does not receive the payment from the customer. Payments received in advance are presented as cash flows from financing activities in the consolidated statements of cash flows. As of December 31, 2020, we did not have any gross trade accounts receivable from receivables in transit from the third-party payment processor.

We also are exposed to credit losses primarily through our trade accounts receivable. We offset gross trade accounts receivable with an allowance for doubtful accounts. The allowance for doubtful accounts is our best estimate of the amount of probable credit losses in our existing accounts receivable and is based upon historical loss trends, the number of days that billings are past due, an evaluation of the potential risk of loss associated with specific accounts, current conditions, and reasonable and supportable forecasts of economic conditions. We also consider 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, our estimates of the recoverability of receivables could be further adjusted.

Provisions for allowances for doubtful accounts are recognized within general and administrative expense in the consolidated income statements. Amounts are charged against the allowance after all means of collection have been exhausted, the potential for recovery is considered remote and when it is determined that expected credit losses may occur. We do not have any off-balance sheet credit exposure related to our customers. Unbilled accounts receivable generally relate to services rendered in the current period, but not invoiced until the subsequent period.

As of December 31, 2021 and 2020, changes in our allowance for doubtful accounts are as follows:

	Balance at Beginning of Period	Provision	Write–offs, net of recoveries	Balance at End of Period
Year ended December 31, 2021	$ 616	$ 999	$ (1,195)	$ 420
Year ended December 31, 2020	240	1,930	(1,554)	616

Impairment of Long-Lived Assets

We evaluate 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, we re-evaluate 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 year ended December 31, 2021, we wrote off $2.5 million of U.S. capitalized website development costs within operating expense in the consolidated income statements and $0.6 million in intangible assets within cost of revenue in the consolidated income statements related to certain developed technology in which we have decided to cease investment. For the year ended December 31, 2020, we wrote off $1.2 million in capitalized website development costs, of which $0.8 million related to the exit of certain international markets in connection with the Expense Reduction Plan.

Capitalized Website Development and Capitalized Internal-Use Software Costs

We capitalize certain costs associated with the development of our websites and internal-use software after the preliminary project stage is complete and until the website development or 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 project with the required authority, it is probable the project will be completed, the website development or 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 website development or software 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, websites and internal-use software are expensed as incurred. Capitalized website development and capitalized internal-use software costs are recognized within property and equipment, net in the consolidated balance sheets.

Capitalized website development and capitalized internal-use software costs are amortized on a straight-line basis over their estimated useful life of three years beginning with the time when the product is ready for intended use. Capitalized website development costs related amortization expenses are recognized within cost of revenue in the consolidated income statements. Capitalized internal-use software costs related amortization expenses are recognized within depreciation and amortization in the consolidated income statements. We evaluate 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 year ended December 31, 2021 and 2020, capitalized website development costs were $8.2 million and $6.4 million, respectively. During the year ended December 31, 2021, capitalized internal-use software costs were $2.9 million. During the year ended December 31, 2020, no capitalized internal-use software costs were recognized.

For the years ended December 31, 2021 and 2020, amortization expense associated with capitalized website development costs was $3.7 million and $3.3 million, respectively. For the year ended December 31, 2021, amortization expense associated with capitalized internal-use software costs was $0.3 million. For the year ended December 31, 2020, no amortization expense associated with capitalized internal-use software costs was recognized.

Capitalized Hosting Arrangements

Hosting arrangement capitalized implementation costs are amortized on a straight-line basis over an 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 the software is ready for intended use.

Hosting arrangements costs are recognized within the same line item in the consolidated income statements as the expense for fees for the associated hosting arrangement. 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, 2021, 2020, and 2019 we launched separate initiatives designed to enhance our hosting arrangements related to our enterprise applications, each of which are ongoing. During the year ended December 31, 2021 and 2020, implementation costs were $3.8 million and $0.3 million, respectively, and recognized within other non-current assets and within prepaid expenses, prepaid income taxes and other current assets, respectively, in the consolidated balance sheets.

For the years ended December 31, 2021 and 2020, amortization expense associated with our hosting arrangements was $1.8 million and $0.7 million, respectively, and recognized within operating expense in the consolidated income statements.

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 recognized within goodwill.

Intangible Assets

Intangible assets are recognized 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 recognized over the relevant estimated useful lives ranging from three to eleven years.

We evaluate the useful lives of these assets on an annual basis. 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. We monitor our long-lived assets for impairment indicators on an ongoing basis in accordance with GAAP, and test for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets. If impairment indicators exist, we perform the required impairment analysis by comparing the undiscounted cash flows expected to be generated from the long-lived assets to the related net book values.

Goodwill

Goodwill is recognized 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.

As of and for the year ended December 31, 2021, we have determined that we have three reporting units, United States, International, and CarOffer. We elected to bypass the optional qualitative test for impairment and proceed to Step 1 which is a quantitative impairment test. 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 market approach, based on market multiples derived from public companies that we identify as peers. In 2021, we calculated the fair value of our reporting units using the market approach, which required us to estimate the forecasted revenue and estimate revenue market multiples using publicly available information for each of our reporting units. Developing these assumptions required the use of significant judgment and estimates. Actual results may differ from these forecasts.

For the years ended December 31, 2021 and 2020, we did not identify any impairment of our goodwill.

Redeemable Noncontrolling Interest

In connection with our acquisition of a 51% interest in CarOffer on January 14, 2021, we became a party with the noncontrolling equity holders of CarOffer to the CarOffer Operating Agreement, which, among other matters, sets forth certain put and call rights described in Note 4 of the consolidated financial statements included elsewhere in this Annual Report on Form 10-K. The CarOffer Operating Agreement provides us with the right to purchase, and the noncontrolling equity holders with the right to sell to us, the noncontrolling CarOffer equity holders' equity interests in CarOffer at a contractually defined formulaic purchase price, which is based on a multiple of earnings. As the purchase is contingently redeemable at the option of the noncontrolling equity holders, we classify the carrying amount of the redeemable noncontrolling interests within the mezzanine section in the consolidated balance sheet, which is presented above the equity section and below the liabilities section. As of the date of Closing (as defined in Note 4 of the consolidated financial statements included elsewhere in this Annual Report on Form 10-K), the noncontrolling interest was recognized at fair value computed using the Least Square Monte Carlo Simulation approach. Significant inputs to the model include market price of risk, volatility, correlation and risk-free rate.

Subsequent to our acquisition of the 51% interest on January 14, 2021, the redeemable noncontrolling interest is measured at the greater of the amount that would be paid if settlement occurred as of the balance sheet date based on the contractually defined redemption value and its carrying amount adjusted for net income (loss) attributable to the noncontrolling interest. Adjustments to the carrying value of the redeemable noncontrolling interest resulting from changes in the redemption value are recognized within retained earnings in the consolidated balance sheets.

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. As of December 31, 2021 and 2020, we have no recognized liabilities for uncertain tax positions.

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 granted under our stock-based compensation plans, the fair value of each award is determined on the date of grant.

For RSUs granted subject to service-based vesting conditions, the fair value is determined on the date of grant using the closing price of our Class A common stock, par value $0.001 per share, as reported on the Nasdaq Global Select Market. RSUs granted subject to service-based vesting conditions generally vest over a four-year requisite service period.

For RSUs granted subject to market-based vesting conditions, the fair value is determined on the date of grant using the Monte Carlo simulation lattice model. The determination of the fair value using this model is affected by our stock price performance relative to the companies listed on the S&P 500 as of December 31, 2021 and 2020 and a number of assumptions including volatility, correlation coefficient, risk-free interest rate and expected dividends. RSUs granted subject to market-based vesting conditions vest upon achievement of specified levels of market conditions.

For stock options granted, the fair value is determined on the date of grant using the Black-Scholes option-pricing model. The determination of the fair value is affected by our stock price and a number of assumptions including volatility, term, risk-free interest rate and dividend yield. Stock options granted generally have a term of ten years from the date of grant and generally vest over a four-year requisite service period.

The weighted average assumptions utilized to determine the fair value of options granted during the year ended December 31, 2021 are as follows:

	Year Ended December 31, 2021
Expected dividend yield	—
Expected volatility	50.95%
Risk–free interest rate	0.69%
Expected term (in years)	6.06

During the years ended December 31, 2020 and 2019, no options were granted.

In connection with our acquisition of a 51% interest in CarOffer, the then-outstanding unvested incentive units, or CO Incentive Units, of CarOffer and unvested Class CO CarOffer units, or the Subject Units, remained outstanding and will vest over the requisite service periods as discussed below.

Grants of the CO Incentive Units are subject to the CarOffer 2020 Equity Incentive Plan, adopted effective November 24, 2020, or the 2020 CO Plan, the applicable award agreement, and the CarOffer Operating Agreement. Following the Company's acquisition of the 51% interest in CarOffer on January 14, 2021, remaining unvested CO Incentive Units will vest over a period of three (3) years, with one third having vested on January 14, 2022 and one third vesting on each of January 14, 2023 and January 14, 2024, provided that a grantee's continuous service to CarOffer has not terminated on the applicable vesting date. Under the terms of the grants, vesting of unvested CO Incentive Units is accelerated in the event of (i) a change of control of CarOffer (which, for the avoidance of doubt, does not include the Company's acquisition of the 51% interest on January 14, 2021), (ii) the death or disability of the grantee, (iii) termination of the grantee's employment with CarOffer without cause, or (iv) termination of grantee's employment by the grantee for good reason. Upon termination of a grantee's continuous service to CarOffer voluntarily by the grantee (other than for good reason) or by CarOffer for cause, all of such grantee's unvested CO Incentive Units are forfeited. In addition, if a grantee's continuous service terminates, then CarOffer has the option to repurchase any outstanding CO Incentive Units from the grantee.

In addition to the 2020 CO Plan, on December 9, 2020 CarOffer entered into a Vesting Agreement, or the Vesting Agreement, regarding the vesting of Subject Units beneficially owned by Bruce Thompson, the founder and CEO of CarOffer, and certain affiliated persons, or, collectively, the T5 Holders, in connection with the our then-anticipated acquisition of a 51% interest in CarOffer. Pursuant to the Vesting Agreement, 432,592 Subject Units beneficially owned by the T5 Holders vest in three (3) approximately equal installments, with one third having vested on January 14, 2022 and one third vesting on each of January 14, 2023 and January 14, 2024, subject to the terms of the Vesting Agreement. As more particularly described in the Vesting Agreement, unvested Subject Units are subject to forfeiture in the event that Mr. Thompson's relationship with CarOffer terminates other than in the event of a termination without cause (as defined in the Vesting Agreement) or due to Mr. Thompson's death or disability. The Vesting Agreement also provides for acceleration of any unvested Subject Units in the event of the termination of Mr. Thompson's employment with CarOffer without cause, Mr. Thompson's death or disability, or the consummation of an eligible liquidity event (as defined in the Vesting Agreement).

In connection with the Closing, CarOffer reserved 228,571 incentive units, or the 2021 Incentive Units, for purposes of establishing an employee incentive equity plan. Thereafter, CarOffer formed CarOffer Incentive Equity, LLC, or CIE, a Delaware manager-managed limited liability company managed by us, and established the CIE 2021 Equity Incentive Plan, or the 2021 CO Plan. The 2021 CO Plan and related documentation, including the applicable award agreement, a vesting agreement between CarOffer and CIE, and the CarOffer Operating Agreement, provide for an incentive equity grant structure whereby 2021 Incentive Units will be granted to CIE and 2021 CO Plan grantees will receive an associated equity interest in CIE, or the CIE Interest, with back-to-back vesting between the 2021 Incentive Units and the associated CIE Interest. Subject to any modifications as may be approved by the CarOffer Board of Managers in its discretion, grants under the 2021 CO Plan will vest over a period of three (3) years from the grant date, one third each on the first, second, and third anniversaries of the applicable grant date, provided that a grantee's continuous service to CarOffer has not terminated on the applicable grant date. Upon termination of a grantee's continuous service to CarOffer, all of such grantee's unvested 2021 Incentive Units are forfeited. As of December 31, 2021, there had not been any grants of 2021 Incentive Units under the 2021 CO Plan.

CO Incentive Units, Subject Units and 2021 Incentive Units are liability-classified awards because the awards can be put to us at a formula price such that the holders do not bear the risks and rewards associated with equity ownership. For liability-classified awards, the fair value is determined on the date of issuance using a Least Square Monte Carlo simulation model. The determination of the fair value is affected by CarOffer's equity value, EBITDA, Excess Parent Capital (as defined in the CarOffer Operating Agreement), and revenue forecasts that drive the exercise price of future call/put rights, as well as a number of assumptions including market price of risk, volatility, correlation, and risk-free interest rate. Liability-classified awards are remeasured to fair value each period until settlement.

We issue shares of Class A common stock upon the vesting of RSUs and the exercise of stock options out of our shares available for issuance. We issue CO Incentive Units and Subject Units out of CarOffer's units available for issuance. We account for forfeitures when they occur.

We recognize compensation expense 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.

The tax effect of differences between tax deductions related to stock compensation and the corresponding financial statement expense compensation are recognized within tax expense. Excess tax benefits recognized on stock-based compensation expense are classified as an operating activity in the consolidated statements of cash flows.

As of December 31, 2021, tax demerits related to stock-based compensation were $1.2 million. As of December 31, 2020, tax demerits related to stock-based compensation were immaterial.

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

As of December 31, 2021 and 2020, we did not have any long-term borrowings.

As of December 31, 2021 and 2020, we had cash, cash equivalents, and investments of $321.9 million and $290.3 million, respectively, which consisted 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. Given recent changes in the interest rate environment and in an effort to ensure liquidity, we expect lower returns from our investments for the foreseeable future. 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, 2021 and 2020, we had foreign currency exposures in the British pound, the Euro and the Canadian dollar, although such exposure is not significant.

Our foreign subsidiaries have intercompany transactions that are eliminated upon consolidation, and these transactions expose us to foreign currency exchange rate fluctuations. Exchange rate fluctuations on short-term intercompany transactions are recognized within other income, net in our consolidated income statements. Exchange rate fluctuations on long-term intercompany transactions are recognized within accumulated other comprehensive (loss) income in our consolidated balance sheets.

As we seek to grow our international operations in Canada and the United Kingdom, our risks associated with fluctuation in currency rates may become greater, and we will continue to reassess our approach to managing these risks.

Item 8. Financial Statements and Supplementary Data.

CarGurus, Inc.

Index to Consolidated Financial Statements

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, 2021 and 2020, the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2021, 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, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, 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, 2021, 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 24, 2022 expressed an unqualified opinion thereon.

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, 2021, the Company recognized revenue of $951.4 million. As explained in Note 2 to the consolidated financial statements, the Company recognizes revenue in accordance with Accounting Standard Codification 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 Audit

We 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, 2021, 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.

Business Combinations – Valuation of Acquired Intangible Assets and Redeemable Noncontrolling Interest

Description of the Matter

As described in Note 4 to the consolidated financial statements, the Company acquired a 51% interest in CarOffer, LLC (CarOffer) on January 14, 2021 for an aggregate consideration of $173.2 million. 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 CarOffer was complex due to the significant estimation uncertainty in the Company's determination of the fair value of identified intangible assets of $104.1 million, which consisted of developed technology, brand, and customer relationships, and the fair value of the redeemable noncontrolling interest of $61.0 million. 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 redeemable noncontrolling interest and the sensitivity of the respective fair values to the significant underlying assumptions. The Company used the income approach, relief from royalty method and with/without approach to value the developed technology, brand and customer relationships intangible assets, respectively. The Company used the Least Square Monte Carlo Simulation approach to value the redeemable noncontrolling interest. The significant assumptions used to estimate the fair value of the intangible assets and redeemable noncontrolling interest included discount rates and certain assumptions that form the basis of the forecasted results (e.g., revenue growth rates, gross profit, and earnings before interest, taxes, depreciation, and amortization (EBITDA) margins). Additional significant assumptions used to estimate the fair value of the redeemable noncontrolling interest included certain calculated market inputs such as market price of risk (MPR), volatility, correlation, and risk-free rate. The 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 Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's valuation of acquired intangible assets and redeemable noncontrolling interest. This included testing controls over the Company's estimation process supporting the recognition and measurement of intangible assets and redeemable noncontrolling interest, as well as controls over management's judgments and evaluation of underlying assumptions regarding the valuations.

Our audit procedures to test the estimated fair value of the acquired intangible assets and redeemable noncontrolling interest included, among others, evaluating the Company's valuation methodology used to estimate the fair value of the developed technology, brand, and customer relationship intangible assets and redeemable noncontrolling interest. 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 for the intangible assets and redeemable noncontrolling interest. Our valuation specialist also evaluated the Company's use of a Least Square Monte Carlo Simulation model and performed independent comparative calculations of the fair value of the noncontrolling interest, the MPR, volatility, correlation and risk-free rate market input assumptions. 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, gross profit, and EBITDA margins), and evaluated the completeness and accuracy of the underlying data supporting the significant assumptions and estimates. Specifically, when evaluating the assumptions related to the forecasted results and changes in the business that would drive these results, we compared the assumptions to historical results of the acquired entity and current industry and economic trends. We also performed a sensitivity analysis of the significant assumptions to evaluate the change in the fair values that would result from changes in the assumptions.

Fair Value Measurement of Liability-Classified Awards

Description of the Matter

As described in Note 2 and Note 4 to the consolidated financial statements CarOffer has issued incentive units that are liability-classified awards because the awards can be put to the Company at a contractually defined formulaic purchase price such that the holders do not bear the risks and rewards associated with equity ownership.

Auditing the Company's accounting for these liability-classified awards was complex due to the significant estimation uncertainty in the Company’s determination of the fair value of the awards of $21.1 million at December 31, 2021. The significant estimation uncertainty was primarily due to the complexity of the valuation models prepared by management to measure the fair value of the awards and the sensitivity of the respective fair values to the significant underlying assumptions. The Company used the Least Square Monte Carlo Simulation approach to value the liability-classified awards. The significant assumptions used to estimate the fair value of the liability classified awards include the discount rates and certain calculated market inputs such as MPR, volatility, correlation, risk-free rate, and certain assumptions that form the basis of the CarOffer equity value (e.g., revenue growth rates, gross profit, EBITDA). 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 Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company’s valuation of these liability-classified awards. This included testing controls over the Company’s estimation process supporting the recognition and measurement of liability-classified awards, 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 included, among others, evaluating the Company’s valuation methodology used to estimate the fair value of the liability-classified awards. 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 evaluated the Company's use of a Least Square Monte Carlo Simulation model, developed an independent Monte Carlo Simulation model, and performed independent comparative calculations to estimate the fair value of the liability classified awards, the discount rates, MPR, volatility, correlation and risk-free rate market input assumptions. 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, gross profit, and EBITDA margins), and evaluated the completeness and accuracy of the underlying data supporting the significant assumptions and estimates. Specifically, when evaluating the assumptions related to the forecasted results and changes in the business that would drive these results, we compared the assumptions to historical results of the acquired entity and current industry and economic trends. We also performed a sensitivity analysis of the significant assumptions to evaluate the change in the fair values that would result from changes in the assumptions.

/s/ Ernst & Young LLP
We have served as the Company’s auditor since 2016.
Boston, Massachusetts
February 24, 2022

CarGurus, Inc.

Consolidated Balance Sheets

(in thousands, except share and per share data)

	As of December 31, 2021	As of December 31, 2020
Assets		
Current assets:		
Cash and cash equivalents	$ 231,944	$ 190,299
Investments	90,000	100,000
Accounts receivable, net of allowance for doubtful accounts of $420 and $616, respectively	189,324	18,235
Inventory	19,656	—
Prepaid expenses, prepaid income taxes and other current assets	16,430	12,385
Deferred contract costs	9,045	10,807
Restricted cash	6,709	250
Total current assets	563,108	331,976
Property and equipment, net	32,210	27,483
Intangible assets, net	83,915	10,862
Goodwill	158,287	29,129
Operating lease right-of-use assets	60,609	60,835
Restricted cash	9,627	10,377
Deferred tax assets	13,378	19,774
Deferred contract costs, net of current portion	5,867	9,189
Other non-current assets	4,573	2,673
Total assets	$ 931,574	$ 502,298
Liabilities, redeemable noncontrolling interest and stockholders' equity		
Current liabilities:		
Accounts payable	$ 66,153	$ 21,563
Accrued expenses, accrued income taxes and other current liabilities	78,586	24,751
Deferred revenue	12,784	9,137
Operating lease liabilities	13,186	11,085
Total current liabilities	170,709	66,536
Operating lease liabilities	57,519	58,810
Deferred tax liabilities	58	291
Other non–current liabilities	23,639	3,075
Total liabilities	251,925	128,712
Commitments and contingencies (Note 9)		
Redeemable noncontrolling interest	162,808	—
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; 101,773,034 and 94,310,309 shares issued and outstanding at December 31, 2021 and 2020, respectively	102	94
Class B common stock, $0.001 par value; 100,000,000 shares authorized; 15,999,173 and 19,076,500 shares issued and outstanding at December 31, 2021 and 2020, respectively	16	19
Additional paid–in capital	387,868	242,181
Retained earnings	129,258	129,412
Accumulated other comprehensive (loss) income	(403)	1,880
Total stockholders' equity	516,841	373,586
Total liabilities and stockholders' equity	$ 931,574	$ 502,298

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

CarGurus, Inc.

Consolidated Income Statements

(in thousands, except share and per share data)

	Year Ended December 31, 2021	Year Ended December 31, 2020	Year Ended December 31, 2019
Revenue			
Marketplace	$ 636,942	$ 551,451	$ 588,916
Wholesale	195,127	—	—
Product	119,304	—	—
Total revenue	951,373	551,451	588,916
Cost of revenue[1]			
Marketplace	47,689	42,706	36,300
Wholesale	127,679	—	—
Product	118,647	—	—
Total cost of revenue	294,015	42,706	36,300
Gross profit	657,358	508,745	552,616
Operating expenses:			
Sales and marketing	290,574	256,979	393,844
Product, technology, and development	106,423	85,726	69,462
General and administrative	97,678	62,166	50,434
Depreciation and amortization	14,415	6,118	4,554
Total operating expenses	509,090	410,989	518,294
Income from operations	148,268	97,756	34,322
Other income, net:			
Interest income	120	1,075	2,984
Other income, net	972	279	1,399
Total other income, net	1,092	1,354	4,383
Income before income taxes	149,360	99,110	38,705
Provision for (benefit from) income taxes	38,987	21,557	(3,441)
Consolidated net income	110,373	77,553	42,146
Net income attributable to redeemable noncontrolling interest	1,129	—	—
Net income attributable to CarGurus, Inc.	$ 109,244	$ 77,553	$ 42,146
Accretion of redeemable noncontrolling interest to redemption value	109,398	—	—
Net (loss) income attributable to common stockholders	$ (154)	$ 77,553	$ 42,146
Net (loss) income per share attributable to common stockholders: (Note 11)			
Basic	$ (0.00)	$ 0.69	$ 0.38
Diluted	$ (0.00)	$ 0.68	$ 0.37
Weighted–average number of shares of common stock used in computing net (loss) income per share attributable to common stockholders:			
Basic	117,142,062	112,854,524	111,450,443
Diluted	117,142,062	113,849,815	113,431,850

(1) Includes depreciation and amortization for the years ended December 31, 2021, 2020, and 2019 of $26,061, $5,224, and $3,263, respectively.

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

CarGurus, Inc.

Consolidated Statements of Comprehensive Income

(in thousands)

	Year Ended December 31,		
	2021	2020	2019
Consolidated net income	$ 110,373	$ 77,553	$ 42,146
Other comprehensive income:			
Foreign currency translation adjustment	(2,283)	2,230	(421)
Consolidated comprehensive income	108,090	79,783	41,725
Comprehensive income attributable to redeemable noncontrolling interests	1,129	—	—
Comprehensive income attributable to CarGurus, Inc.	$ 106,961	$ 79,783	$ 41,725

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

CarGurus, Inc.

Consolidated Statements of Stockholders' Equity

(in thousands, except share data)

	Redeemable Noncontrolling Interest	Class A Common Stock Shares	Class A Common Stock Amount	Class B Common Stock Shares	Class B Common Stock Amount	Additional Paid–in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
Balance as of December 31, 2018	$ —	89,728,223	$ 90	20,702,084	$ 21	$ 184,216	$ 9,713	$ 71	194,111
Net income	—	—	—	—	—	—	42,146	—	42,146
Stock–based compensation expense	—	—	—	—	—	35,682	—	—	35,682
Issuance of common stock upon exercise of stock options	—	838,928	—	—	—	1,807	—	—	1,807
Issuance of common stock upon vesting of restricted stock units	—	1,317,736	1	—	—	(1)	—	—	—
Payment of withholding taxes on net share settlements of equity awards	—	(452,678)	—	—	—	(16,470)	—	—	(16,470)
Conversion of common stock	—	387,440	1	(387,440)	(1)	—	—	—	—
Foreign currency translation adjustment	—	—	—	—	—	—	—	(421)	(421)
Balance as of December 31, 2019	—	91,819,649	92	20,314,644	20	205,234	51,859	(350)	256,855
Net income	—	—	—	—	—	—	77,553	—	77,553
Stock–based compensation expense	—	—	—	—	—	46,996	—	—	46,996
Issuance of common stock upon exercise of stock options	—	352,212	—	—	—	1,136	—	—	1,136
Issuance of common stock upon vesting of restricted stock units	—	1,347,464	1	—	—	(1)	—	—	—
Payment of withholding taxes and option costs on net share settlement of restricted stock units and stock options	—	(447,160)	—	—	—	(11,184)	—	—	(11,184)
Conversion of common stock	—	1,238,144	1	(1,238,144)	(1)	—	—	—	—
Foreign currency translation adjustment	—	—	—	—	—	—	—	2,230	2,230
Balance as of December 31, 2020	—	94,310,309	94	19,076,500	19	242,181	129,412	1,880	373,586
Net income	1,129	—	—	—	—	—	109,244	—	109,244
Stock–based compensation expense	—	—	—	—	—	56,772	—	—	56,772
Issuance of common stock upon exercise of stock options	—	222,147	—	—	—	663	—	—	663
Issuance of common stock upon vesting of restricted stock units	—	1,575,206	2	—	—	(2)	—	—	—
Payment of withholding taxes on net share settlements of equity awards	—	(527,237)	—	—	—	(15,388)	—	—	(15,388)
Conversion of common stock	—	3,077,327	3	(3,077,327)	(3)	—	—	—	—
Issuance of common stock upon for acquisition	—	3,115,282	3	—	—	103,642	—	—	103,645
Acquisition of a 51% interest in CarOffer, LLC	60,982	—	—	—	—	—	—	—	—
Accretion of redeemable noncontrolling interest to redemption value	109,398	—	—	—	—	—	(109,398)	—	(109,398)
Distributions to redeemable noncontrolling interest holders	(8,701)	—	—	—	—	—	—	—	—
Foreign currency translation adjustment	—	—	—	—	—	—	—	(2,283)	(2,283)
Balance as of December 31, 2021	$ 162,808	101,773,034	$ 102	15,999,173	$ 16	$ 387,868	$ 129,258	$ (403)	$ 516,841

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

CarGurus, Inc.

Consolidated Statements of Cash Flows

(in thousands)

	Year Ended December 31, 2021	2020	2019
Operating Activities			
Consolidated net income	$ 110,373	$ 77,553	$ 42,146
Adjustments to reconcile consolidated net income to net cash provided by operating activities:			
Depreciation and amortization	40,476	10,191	7,817
Currency (gain) loss on foreign denominated transactions	(70)	23	(690)
Deferred taxes	6,163	22,235	(3,734)
Provision for doubtful accounts	999	1,930	1,091
Stock-based compensation expense	53,525	45,090	34,301
Amortization of deferred contract costs	12,653	11,605	8,416
Impairment of long-lived assets	3,128	1,151	—
Changes in operating assets and liabilities:			
Accounts receivable, net	(174,771)	3,889	(9,608)
Inventory	(17,318)	—	—
Prepaid expenses, prepaid income taxes, and other assets	(5,068)	3,484	(378)
Deferred contract costs	(7,714)	(11,378)	(15,979)
Accounts payable	35,397	(15,077)	4,268
Accrued expenses, accrued income taxes, and other liabilities	35,817	7,450	2,760
Deferred revenue	3,661	(861)	1,174
Lease obligations	1,041	(542)	(1,468)
Net cash provided by operating activities	98,292	156,743	70,116
Investing Activities			
Purchases of property and equipment	(7,713)	(2,952)	(11,205)
Capitalization of website development costs	(6,163)	(4,579)	(3,021)
Cash paid for acquisitions, net of cash acquired	(64,273)	(21,056)	(19,139)
Investments in certificates of deposit	(120,000)	(100,000)	(177,808)
Maturities of certificates of deposit	130,000	111,692	188,916
Net cash used in investing activities	(68,149)	(16,895)	(22,257)
Financing Activities			
Proceeds from exercise of stock options	663	1,136	1,807
Payment of finance lease obligations	(39)	(37)	(30)
Payment of withholding taxes and option costs on net share settlement of restricted stock units and stock options	(15,388)	(11,184)	(16,470)
Repayment of line of credit	(14,250)	—	—
Payments received in advance from third-party payment processor	46,822	—	—
Net cash provided by (used in) financing activities	17,808	(10,085)	(14,693)
Impact of foreign currency on cash, cash equivalents, and restricted cash	(597)	440	(1)
Net increase in cash, cash equivalents, and restricted cash	47,354	130,203	33,165
Cash, cash equivalents, and restricted cash at beginning of period	200,926	70,723	37,558
Cash, cash equivalents, and restricted cash at end of period	$ 248,280	$ 200,926	$ 70,723
Supplemental cash disclosure of cash flow information:			
Cash paid for income taxes	$ 27,520	$ 2,831	$ 300
Cash paid for operating lease liabilities	$ 16,168	$ 14,941	10,906
Supplemental noncash disclosure of cash flow information:			
Unpaid purchases of property and equipment, capitalized website development, capitalized internal-use software and hosting arrangements	$ 478	$ 136	$ 647
Capitalized stock-based compensation expense in website development and capitalized internal-use software costs	$ 3,247	$ 1,906	$ 1,381
Obtaining a right-of-use asset in exchange for a finance lease liability	$ 664	$ —	$ —
Obtaining a right-of-use asset in exchange for an operating lease liability	$ 12,336	$ —	$ —
Issuance of stock for acquisition	$ 103,645	$ —	$ —
Accretion of redeemable noncontrolling interest to redemption value	$ 109,398	$ —	$ —
Distributions to redeemable noncontrolling interest holders	$ 8,701	$ —	$ —

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

CarGurus, Inc.

Notes to Consolidated Financial Statements

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

1. Organization and Business Description

CarGurus, Inc. (the "Company") is a multinational, online automotive platform for buying and selling vehicles that is building upon its industry-leading listings marketplace with both digital retail solutions and the CarOffer online wholesale platform. The CarGurus marketplace gives consumers the confidence to purchase or sell a vehicle either online or in-person, and it gives dealerships the power to accurately price, effectively market, instantly acquire and quickly sell vehicles, all with a nationwide reach. The Company uses proprietary technology, search algorithms and data analytics to bring trust, transparency and competitive pricing to the automotive shopping experience.

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. In the United States, it also operates as independent brands the Autolist online marketplace, which it wholly owns, and the CarOffer, LLC ("CarOffer") digital wholesale marketplace, in which it has a 51% interest. In addition to the United States, the Company operates online marketplaces under the CarGurus brand in Canada and the United Kingdom. In the United Kingdom, it also operates as an independent brand the PistonHeads online marketplace, which it wholly owns. The Company also operated online marketplaces in Germany, Italy, and Spain until it ceased the operations of each of these marketplaces in the second quarter of 2020.

The Company has subsidiaries in the United States, Canada, Ireland, and the United Kingdom. Additionally, it has two reportable segments, United States and International. See Note 13 and Note 15 of these consolidated financial statements for further segment reporting and geographical information.

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

Basis of Presentation

The 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 GAAP as found in the Accounting Standards Codification ("ASC") and Accounting Standards Update ("ASU") of the Financial Accounting Standards Board ("FASB").

While the Company disclosed total revenue in the consolidated income statements in the Company's Annual Report on Form 10-K for the years ended December 31, 2020 and 2019, filed with the SEC on February 12, 2021 and February 14, 2020, respectively, the accompanying consolidated income statements for the years ended December 2020 and 2019 present revenues disaggregated into marketplace, wholesale, and product revenues to conform to the current year presentation, as a result of the acquisition of a 51% interest in CarOffer.

While the Company disclosed other non-current liabilities separately in the consolidated statements of cash flows in the Company's Annual Report on Form 10-K for the year ended December 31, 2019, filed with the SEC on February 14, 2020, the accompanying consolidated statements of cash flows for the year ended December 31, 2019 present other non-current liabilities with accrued expenses, accrued income taxes and other current liabilities to conform to the current year presentation, as other non-current liabilities did not meet the threshold for separate disclosure.

While the Company disclosed impairment of long-lived assets within depreciation and amortization in the consolidated statements of cash flows in the Company's Annual Report on Form 10-K for the year ended December 31, 2020 filed with the SEC on February 12, 2021, the accompanying consolidated statements of cash flows for the year ended December 31, 2020 present impairment of long-lived assets separately to conform to the current year presentation, as impairments of long-lived assets are material in the current year.

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. 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 15 of these consolidated financial statements.

Use of Estimates

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

Although the Company regularly assesses these estimates, actual results could differ materially from these estimates. 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. Changes in estimates are recognized in the period in which they become known.

Critical estimates relied upon in preparing the consolidated financial statements include the determination of sales allowance and variable consideration in the Company's revenue recognition, allowance for doubtful accounts, the expensing and capitalization of product, technology, and development costs for website development and internal-use software, the valuation and recoverability of goodwill, intangible assets and other long-lived assets, the valuation of redeemable noncontrolling interest, the recoverability of the Company's net deferred tax assets and related valuation allowance and the valuation of equity and liability-classified compensation awards under ASC Topic 718, Stock-based Compensation ("ASC 718"). Accordingly, the Company considers these to be its critical accounting policies, and believes that of the Company's significant accounting policies, these policies involve the greatest degree of judgment and complexity.

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, cash equivalents, and investments with multiple financial institutions, its deposits may often 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.

The majority of the Company's accounts receivable results from the acquisition of a 51% interest in CarOffer, which uses a third-party payment vendor for wholesale revenue transactions. An increase in wholesale revenue transactions as a result of the acquisition resulted in the increase in accounts receivable, net. The Company has had no material losses related to CarOffer receivables, as it does not release the title until successfully collecting funds from the buying dealer.

For the years ended December 31, 2021, 2020, and 2019, no individual customer accounted for more than 10% of total revenue.

As of December 31, 2021, two customers accounted for 47% and 18% of net accounts receivable, respectively. As of December 31, 2020, one customer accounted for approximately 10% of net accounts receivable.

As of December 31, 2021 and 2020, included in net accounts receivable was $7,356 and $7,426, respectively, of unbilled accounts receivable relating primarily to advertising customers invoiced in the subsequent period to services rendered.

Cash, Cash Equivalents, and Investments

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 considers all highly liquid investments with an original maturity of 90 days 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.

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, 2021 and 2020, 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, as of December 31, 2021 and 2020, investments were recognized at amortized cost. 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, 2021, 2020, and 2019, the Company did not have any premiums or discounts. Realized gains and losses from sales of the Company's investments are included within other income, net in the consolidated income statements. For the years ended December 31, 2021, 2020 or 2019, there were no realized gains or losses on investments.

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 income statements if the Company has experienced a credit loss 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, 2021 and 2020, the Company determined that no other-than-temporary impairments were required to be recognized in the consolidated income statements.

Restricted Cash

As of December 31, 2021 and 2020, restricted cash was $16,336 and $10,627, 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 and pass-through payments from customers related to the Company's wholesale business. As of December 31, 2021 and 2020, portions of restricted cash were classified as short-term assets and long-term assets, as disclosed in the consolidated balance sheets.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded based on the amount due from the customer and a third-party payment processor. Accounts receivable do not bear interest.

The Company is exposed to credit losses primarily through its trade accounts receivable, which includes receivables in transit from a third-party payment processor. The third-party payment processor collects customer payments on the Company's behalf and remits them to the Company. Customer payments received, but not remitted as of period end are deemed to be receivables in transit. Additionally, the third-party payment processer provides payments in advance for certain customers to the Company. If the third-party payment processor does not receive customer payments related to the payments in advance, the balance is deducted from future remittances to the Company.

The Company offsets gross trade accounts receivable with payments received in advance from a third-party payment processer as it has the right of offset. As of December 31, 2021, gross trade accounts receivable from receivables in transit from the third-party payment processor was $18,747, offset by payments received in advance of $46,822, which resulted a net liability of $28,075 recognized within accrued expenses, accrued income taxes and other current liabilities in the consolidated balance sheets. Payments received in advance are deductible from future payments from the third-party payment processor if the third-party payment processor does not receive the payment from the customer. Payments received in advance are presented as cash flows from financing activities in the consolidated statements of cash flows. As of December 31, 2020, the Company did not have any gross trade accounts receivable from receivables in transit from the third-party payment processor.

The Company also is exposed to credit losses primarily through its trade accounts receivable. 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 trends, the number of days that billings are past due, an evaluation of the potential risk of loss associated with specific accounts, current conditions, and reasonable and supportable forecasts of economic conditions. The Company also 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.

Provisions for allowances for doubtful accounts are recognized within general and administrative expense in the consolidated income statements. Amounts are charged against the allowance after all means of collection have been exhausted, the potential for recovery is considered remote and when it is determined that expected credit losses may occur. The Company does not have any off-balance sheet credit exposure related to its customers. Unbilled accounts receivable generally relate to services rendered in the current period, but not invoiced until the subsequent period.

As of December 31, 2021 and 2020, changes in the Company's allowance for doubtful accounts are as follows:

	Balance at Beginning of Period	Provision	Write–offs, net of recoveries	Balance at End of Period
Year ended December 31, 2021	$ 616	$ 999	$ (1,195)	$ 420
Year ended December 31, 2020	240	1,930	(1,554)	616

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 and right-of-use assets are amortized over the lease term, or the estimated useful life of the related asset, if shorter. The estimated useful lives of the Company's property and equipment are as follows:

	Estimated Useful Life (In Years)
Server and computer equipment	3
Capitalized internal-use software	3
Capitalized website development	3
Furniture and fixtures	5
Right-of-use assets	Lease term, or asset life if shorter
Leasehold improvements	Lease term, or asset life if shorter

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 year ended December 31, 2021, the Company wrote off $2,481 of U.S. capitalized website development costs within operating expense in the consolidated income statements and $647 of U.S. intangible assets within cost of revenue in the consolidated income statements related to certain developed technology in which the Company has decided to cease investment. For the year ended December 31, 2020, the Company wrote off $1,151 of capitalized website development costs, of which $844 related to the exit of certain international markets in connection with the cost-savings initiative by the Company during the second quarter of 2020 (the "Expense Reduction Plan"). For the year ended December 31, 2019, the Company did not identify any impairment of long-lived assets.

Capitalized Website Development and Capitalized Internal-Use Software Costs

The Company capitalizes certain costs associated with the development of its websites and internal-use software after the preliminary project stage is complete and until the website development or 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 project with the required authority, it is probable the project will be completed, the website development or 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 website development or software 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, websites and internal-use software are expensed as incurred. Capitalized website development and capitalized internal-use software costs are recognized within property and equipment, net in the consolidated balance sheets.

Capitalized website development and capitalized internal-use software costs are amortized on a straight-line basis over their estimated useful life of three years beginning with the time when the product is ready for intended use. Capitalized website development costs related amortization expenses are recognized within cost of revenue in the consolidated income statements. Capitalized internal-use software costs related amortization expenses are recognized within depreciation and amortization in the consolidated income statements. 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.

During the year ended December 31, 2021 and 2020, capitalized website development costs were $8,190 and $6,396, respectively. During the year ended December 31, 2021, capitalized internal-use software costs were $2,892. During the year ended December 31, 2020, no capitalized internal-use software costs were recognized.

For the year ended December 31, 2021, 2020, and 2019, amortization expense associated with its capitalized website development costs were $3,705, $3,324 and $1,643, respectively. For the year ended December 31, 2021, amortization expense associated with capitalized internal-use software costs was $272. For the years ended December 31, 2020 and 2019, no amortization expense associated with its capitalized internal-use software costs was recognized.

Capitalized Hosting Arrangements

Hosting arrangement capitalized implementation costs are amortized on a straight-line basis over an 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 the software is ready for intended use.

Hosting arrangements costs are recognized within the same line item in the consolidated income statements as the expense for fees for the associated hosting arrangement. 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, 2021, 2020, and 2019, the Company launched separate initiatives designed to enhance its hosting arrangements related to its enterprise applications, each of which are ongoing. During the years ended December 31, 2021 and 2020, implementation costs were $3,842 and $332, respectively, and recognized within other non-current assets and within prepaid expenses, prepaid income taxes and other current assets, respectively, in the consolidated balance sheets.

For the years ended December 31, 2021, 2020, and 2019, amortization expense associated with its hosting arrangements was $1,761, $690, and $132, respectively, and recognized within operating expense in the consolidated income statements.

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 recognized within goodwill.

Intangible Assets

Intangible assets are recognized 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 recognized 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. 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. The Company monitors its long-lived assets for impairment indicators on an ongoing basis in accordance with GAAP, and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets. If impairment indicators exist, the Company performs the required impairment analysis by comparing the undiscounted cash flows expected to be generated from the long-lived assets to the related net book values.

Goodwill

Goodwill is recognized 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.

As of and for the year ended December 31, 2021, the Company has determined that it had three reporting units, United States, International, and CarOffer. The Company elected to bypass the optional qualitative test for impairment and proceed to Step 1, which is a quantitative impairment test. 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 market approach, based on market multiples derived from public companies that are identified as peers. In 2021, the Company calculated the fair value of its reporting units using the market approach, which required the Company to estimate the forecasted revenue and estimate revenue market multiples using publicly available information for each of their reporting units. Developing these assumptions required the use of significant judgment and estimates. Actual results may differ from these forecasts.

For the years ended December 31, 2021 and 2020, the Company did not identify any impairment of its goodwill.

Redeemable Noncontrolling Interest

In connection with the Company's acquisition of a 51% interest in CarOffer on January 14, 2021, the Company became a party with the noncontrolling equity holders of CarOffer to the CarOffer Operating Agreement (as defined in Note 4 of these consolidated financial statements), which, among other matters, sets forth certain put and call rights described in Note 4 of these consolidated financial statements. The CarOffer Operating Agreement provides the Company with the right to purchase, and the noncontrolling equity holders with the right to sell to the Company, the noncontrolling CarOffer equity holders' equity interests in CarOffer at a contractually defined formulaic purchase price, which is based on a multiple of earnings. As the purchase is contingently redeemable at the option of the noncontrolling equity holders, the Company classifies the carrying amount of the redeemable noncontrolling interests within the mezzanine section in the consolidated balance sheet, which is presented above the equity section and below the liabilities section. As of the date of Closing (as defined in Note 4 of these consolidated financial statements), the noncontrolling interest was recognized at fair value computed using the Least Square Monte Carlo Simulation approach. Significant inputs to the model include market price of risk, volatility, correlation and risk-free rate.

Subsequent to the Company's acquisition of the 51% interest on January 14, 2021, the redeemable noncontrolling interest is measured at the greater of the amount that would be paid if settlement occurred as of the balance sheet date based on the contractually defined redemption value and its carrying amount adjusted for net income (loss) attributable to the noncontrolling interest. Adjustments to the carrying value of the redeemable noncontrolling interest resulting from changes in the redemption value are recognized within retained earnings in the consolidated balance sheets.

Leases

In February 2016, the FASB issued ASC Topic 842, Leases ("ASC 842"), which requires a lessee to recognize most leases in the consolidated balance sheet but recognize expenses in the consolidated income statement in a manner similar to pre-existing practice, on a straight-line basis. 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.

The Company reviews all material contracts for embedded leases to determine if they have a right-of-use asset. The Company made an accounting policy election to not separate lease components from non-lease components for all leases.

The Company recognizes rent expense on a straight-line basis over the lease period. The depreciable life of assets and leasehold improvements are limited by the expected lease term, unless there is a transfer of title or purchase option reasonably certain of exercise. The Company allocates lease costs across all departments based on headcount in the respective location.

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 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 in 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.

The Company recognizes sublease income on a straight-line basis over the sublease period. The Company recognizes sublease income net as rent expense within operating expenses in the consolidated income statements as subleasing is not a primary business activity of the Company and is meant to offset occupancy costs. For the year ended December 31, 2021, the Company did not recognize any sublease income. For the years ended December 31, 2020 and 2019, the Company recognized sublease income within other income in the consolidated income statements for an immaterial amount.

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 can be reasonably estimated. 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 recognized 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.

Income Taxes

The Company accounts 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.

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. As of December 31, 2021 and 2020, the Company has no recognized liabilities for uncertain tax positions.

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 ("ASC 740"), 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.

Fair Value of Financial Instruments

The Company measures eligible assets and liabilities at fair value with changes in value recognized in earnings. As of December 31, 2021 and 2020, there were no liabilities that were measured at fair value. 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. During the years ended December 31, 2021 and 2020, 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.

ASC Topic 820, Fair Value Measurements and Disclosures ("ASC 820"), 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 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.

As of December 31, 2021 and 2020, 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 due to the short-term nature of these instruments.

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: (i) asset and liability accounts at period-end rates; (ii) income statement accounts at weighted-average exchange rates for the period; and (iii) stockholders' equity accounts at historical exchange rates. The resulting translation adjustments are excluded from consolidated net income and are recognized within accumulated other comprehensive (loss) income in our consolidated balance sheets.

Foreign currency transaction gains and losses are included in consolidated net income for the period. The Company's foreign subsidiaries have intercompany transactions that are eliminated upon consolidation, and these transactions expose the Company to foreign currency exchange rate fluctuations. Exchange rate fluctuations on short-term intercompany transactions are recognized in other income, net in our consolidated income statements. Exchange rate fluctuations on long-term intercompany transactions are recognized within accumulated other comprehensive (loss) income in our consolidated balance sheets.

Revenue Recognition

Sources of Revenue

The Company derives its revenue from three sources: (i) marketplace revenue, which consists primarily of dealer subscriptions to the Company's Listings packages and Real-time Performance Marketing ("RPM") digital advertising suite, advertising revenue from auto manufacturers and other auto-related brand advertisers, and revenue from partnerships with financing services companies; (ii) wholesale revenue, which consists primarily of transaction fees earned by CarOffer from facilitating the purchase and sale of vehicles between dealers; and (iii) product revenue, which consists primarily of aggregate proceeds received on the sale of vehicles.

Revenue Recognition

ASC Topic 606, Revenue from Contracts with Customers ("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

Marketplace Revenue - Description

The Company offers multiple types of marketplace Listings packages to its dealers for its CarGurus U.S. platform (availability varies on the Company's other marketplaces): Restricted 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.

The Company's subscriptions for customers generally auto-renew on a monthly basis and are cancellable by dealers with 30 days' advance notice prior to the commencement of the applicable renewal term, although during the second quarter of 2020 the Company did not require 30 days' advance notice of termination from dealers who cancelled as a result of the COVID-19 pandemic. 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 and is subject to discounts and/or fee reductions that the Company may offer from time to time. The Company also offers all dealers on the platform access to its Dealer Dashboard, which includes a performance summary, Dealer Insights tool, and user review management platform. Only dealers subscribing to a paid Listings package have access to the Pricing Tool, Market Analysis tool and IMV Scan tool.

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

In addition to displaying inventory in the Company's marketplace and providing access to the Dealer Dashboard, the Company offers dealers subscribing to certain of its Listings packages other subscription advertising and customer acquisition products and enhancements marketed under the Company's RPM digital advertising suite. Through RPM, dealers can buy advertising that appears in the Company's marketplace, on other sites on the internet, and/or on high-converting social media platforms. Such advertisements can be targeted by the user's geography, search history, CarGurus website activity 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 the first day of each calendar month and is recognized as accounts receivable or short-term deferred revenue when payment is received in advance of services being delivered to the customers.

The Company also offers paid Listings packages for the Autolist website and paid Listings and advertising products for the PistonHeads website.

Marketplace revenue also consists of non-dealer 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 receivable generally relate to services rendered in the current period, but 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 recognized 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.

Marketplace revenue also includes revenue from partnerships with certain financing services companies pursuant to which the Company enables eligible consumers on the Company's CarGurus U.S. website to pre-qualify for financing on cars from dealerships that offer financing through such companies. The Company primarily generates revenue from these partnerships based on the number of funded loans from consumers who pre-qualify with its lending partners through its site.

The Company also offers non-dealer advertising products for the Autolist and PistonHeads websites.

Marketplace Revenue - Revenue Recognition

For dealer listings, the Company provides a single similar service each day for a period of time. Each time increment (i.e., one 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 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 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 the portfolio level, there is also variable consideration that needs to be included in the transaction price. Variable consideration consists of sales allowances, usage fees, and concessions that change the transaction price of the unsatisfied or partially unsatisfied performance obligation. 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. Sales allowances are recognized as a reduction to revenue in the consolidated income statements.

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.

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 generally 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.

Marketplace 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.

Wholesale Revenue - Description

Wholesale revenue includes transaction fees earned by CarOffer from facilitating the purchase and sale of vehicles between dealers, where CarOffer collects fees from both the buyer and seller. CarOffer also sells vehicles to dealers that CarOffer acquires at other marketplaces – in these instances, CarOffer collects a transaction fee from the buyer.

Wholesale revenue also includes fees earned by CarOffer from performing inspection and transportation services, where CarOffer collects fees from the buyer. Inspection and transportation service revenue is inclusive of dealer to dealer transactions, other marketplace to dealer transactions, and customer to dealer transactions.

Wholesale revenue also includes fees earned by CarOffer from certain guarantees offered to dealers, where CarOffer collects fees from the buying dealer or selling dealer, as applicable. Guarantee revenue is not accounted for under ASC 606 and is accounted for under ASC 460 as discussed further in Note 2 of these consolidated financial statements.

Wholesale Revenue - Revenue Recognition

When facilitating the purchase and sale of vehicles between dealers and for vehicles sold to dealers that are acquired at other marketplaces, CarOffer does not control the vehicle and therefore acts as an agent in the transaction. Revenue earned from the fees for facilitating these transactions is recognized at a point in time when the vehicle is sold on a net basis.

For inspection and transportation services, CarOffer leverages a network of third-party inspection service providers and transportation carriers. CarOffer controls both inspection and transportation services as it is primarily responsible for fulfillment and therefore acts as a principal in the transaction. Revenue from fees for inspection services is recognized at the point in time when the inspection is performed and revenue from fees for transportation services is recognized over time as delivery is completed. Revenue from both inspection and transportation services is recognized on a gross basis. Unearned revenue related to unsatisfied performance obligations is recognized as deferred revenue.

Wholesale revenue also includes arbitration in which, in the majority of instances, the vehicle is rematched to a new buyer and not acquired by CarOffer. Arbitration is the process by which CarOffer investigates and resolves claims from buying dealers. In these situations, CarOffer does not control the vehicle and therefore acts as an agent in the transaction.

Within wholesale transactions, there are no contractual cash refund rights, but credits may be issued to a customer at the sole discretion of the Company. At the portfolio level, there is also variable consideration that needs to be included in the transaction price. Variable consideration consists of sales allowances and concessions that change the transaction price of the unsatisfied or partially unsatisfied performance obligation. The Company recognizes that there are times when there is a customer satisfaction issue or other circumstance that will lead to a credit or arbitration. 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. Sales allowances are recognized as a reduction to revenue in the consolidated income statements.

Wholesale revenue is presented net of any taxes collected from customers.

Product Revenue - Description

Product revenue includes the aggregate proceeds received on the sale of vehicles. This revenue relates to vehicles sold to dealers that CarOffer acquires directly from customers, inclusive of transaction fees collected from the buyer, and in limited situations across all CarOffer transactions, vehicles CarOffer resells after acquiring a vehicle via arbitration.

Product - Revenue Recognition

For vehicles sold to dealers that are acquired directly from consumers, CarOffer controls the vehicle and therefore acts as a principal in the transaction. Revenue earned from the fees for facilitating these transactions is recognized at a point in time when the vehicle is sold on a gross basis.

In limited situations across all CarOffer transactions, during an arbitration process, CarOffer acquires vehicles in transactions in which it controls the vehicle and therefore acts as a principal in the transaction. Revenue earned from the sale of the vehicle in these transactions is recognized at a point in time on a gross basis.

Contracts with Multiple Performance Obligations

The Company periodically enters into arrangements that include Listings and/or dealer advertising product subscriptions within marketplace 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 method as the performance obligation is being satisfied. For the Company’s arrangements that include Listings and/or dealer advertising product subscriptions, the performance obligations were satisfied over a consistent period of time and therefore the allocations did not impact the revenue recognized.

For CarOffer's arrangements that include multiple performance obligations, the Company allocates revenue based on fair value. Vehicle and inspection revenues are recognized at a point in time and transportation revenue is recognized over time.

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. 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.

As of December 31, 2021 and 2020, assets associated with costs to obtain a contract were $14,912 and $19,996, respectively. This decrease in assets recognized for costs to obtain a contract was due to amortization from prior periods' assets being greater than the capitalizable costs to obtain a contract in current period. For the years ended December 31, 2021, 2020, and 2019, amortization expense associated with costs to obtain a contract was $12,653, $11,605, and $8,416, respectively.

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 recognized as current deferred revenue and the remaining portion is recognized as noncurrent in the consolidated balance sheets. All deferred revenue was recognized as current for all periods presented.

Marketplace Cost of Revenue

Marketplace cost of revenue includes expenses related to supporting and hosting digital product offerings. These expenses include personnel and related expenses for our customer support team, including salaries, benefits, incentive compensation, and stock-based compensation, third-party service provider expenses such as advertising, data center and networking expenses, depreciation expense associated with our property and equipment, amortization of developed technology, amortization of capitalized website development and allocated overhead expenses. The Company allocates overhead expenses, such as rent and facility expenses, information technology expense, and employee benefit expense, to all departments based on headcount. As such, general overhead expenses are reflected in cost of revenue and each operating expense category.

Wholesale Cost of Revenue

Wholesale cost of revenue includes expenses related to supporting the facilitation of the purchase and sale of vehicles between dealers, the sale by CarOffer to dealers of vehicles that it acquires at other marketplaces, and net losses on vehicles related to guarantees offered to dealers. These expenses include vehicle transportation and inspection expenses, personnel and related expenses for employees directly involved in the fulfillment and support of transactions, including salaries, benefits, incentive compensation and stock-based compensation, third-party service provider expenses, amortization of developed technology, amortization of capitalized website development and allocated overhead expenses.

Product Cost of Revenue

Product cost of revenue includes expenses related to vehicles sold to dealers that CarOffer acquires directly from consumers and in limited situations across all CarOffer transactions, in which CarOffer acquires the vehicle via arbitration. These expenses include expenses for vehicles in which CarOffer controls the vehicle and therefore acts as a principal in the transaction.

Guarantees

CarOffer provides certain guarantees to dealers through its 45-Day Guaranteed Bid and OfferGuard product offerings, which are accounted for under ASC Topic 460, Guarantees ("ASC 460").

45-Day Guaranteed Bid is an arrangement through which a selling dealer lists a car on the CarOffer platform, and CarOffer provides an offer to purchase the vehicle listed at a specified price at any time over a 45-day period. This provides the seller with a put option, where they have the right, but not the obligation, to require CarOffer to purchase the vehicle during this window. OfferGuard is an arrangement through which a buying dealer purchases a car on the CarOffer platform, and CarOffer provides an offer to purchase the vehicle at a specified price between days 1 and 3, and days 42 and 45 if the dealer is not able to sell the vehicle after 42 days.

A guarantee liability is initially measured using the amount of consideration received from the dealer for the purchase of the guarantee. The initial liability is released, and guarantee income is recognized, upon the earliest of the following: the vehicle sells during the guarantee period, the seller exercises it's put option during the guarantee period, or the option expires unexercised at the end of the guarantee period. Guarantee income is recognized within wholesale revenue in the consolidated income statements. When it is probable and reasonably estimable that CarOffer will incur a loss on a vehicle that it is required to purchase, a liability, and a corresponding charge to cost of sales will be recognized for the amount of the loss in the consolidated balance sheets. Gains and losses resulting from the dealers exercise of guarantees are recognized within cost of sales in the consolidated balance sheets.

For the year ended December 31, 2021, income for guarantees purchased by dealers was $5,537. For the year ended December 31, 2021, the net loss resulting from the dealer's exercise of guarantees was immaterial.

As of December 31, 2021, the maximum potential amount of future payments that CarOffer could be required to make under these guarantees was $76,075. Of the maximum potential amount of future payments, none are considered probable. The exercise of guarantees has historically been infrequent and even when such exercises did occur the losses were immaterial. As such, as of December 31, 2021, CarOffer had no contingent loss liabilities.

As of December 31, 2020, the Company did not have any guarantees.

Inventory

The Company's inventory consists of inventory acquired directly from consumers, at other marketplaces, or in limited situations across all CarOffer transactions, during arbitrations. The inventory is recognized on the balance sheet and is valued at the lower of cost or net realizable value. Cost is determined based on specific identification.

Stock-Based Compensation

For stock-based awards granted under the Company's stock-based compensation plans, the fair value of each award is determined on the date of grant.

For restricted stock units ("RSUs") granted subject to service-based vesting conditions, the fair value is determined on the date of grant using the closing price of the Company's Class A common stock, par value $0.001 per share (the "Class A common stock"), as reported on the Nasdaq Global Select Market. RSUs granted subject to service-based vesting conditions generally vest over a four-year requisite service period.

For RSUs granted subject to market-based vesting conditions, the fair value is determined on the date of grant using the Monte Carlo simulation lattice model. The determination of the fair value using this model is affected by the Company's stock price performance relative to the companies listed on the S&P 500 as of December 31, 2021 and 2020 and a number of assumptions including volatility, correlation coefficient, risk-free interest rate and expected dividends. RSUs granted subject to market-based vesting conditions vest upon achievement of specified levels of market conditions.

For stock options granted, the fair value is determined on the date of grant using the Black-Scholes option-pricing model. The determination of the fair value is affected by the Company's stock price and a number of assumptions including volatility, term, risk-free interest rate and dividend yield. Stock options granted generally have a term of ten years from the date of grant and generally vest over a four-year requisite service period.

The weighted average assumptions utilized to determine the fair value of options granted during the year ended December 31, 2021 are as follows:

	Year Ended December 31, 2021
Expected dividend yield	—
Expected volatility	50.95%
Risk–free interest rate	0.69%
Expected term (in years)	6.06

During the years ended December 31, 2020 and 2019, no options were granted.

In connection with the Company's acquisition of a 51% interest in CarOffer, the then-outstanding unvested incentive units ("CO Incentive Units") of CarOffer and unvested Class CO CarOffer units (the "Subject Units") remained outstanding and will vest over the requisite service periods as discussed below.

Grants of the CO Incentive Units are subject to the CarOffer 2020 Equity Incentive Plan, adopted effective November 24, 2020 (the "2020 CO Plan"), the applicable award agreement, and the CarOffer Operating Agreement. Following the Company's acquisition of the 51% interest in CarOffer on January 14, 2021, remaining unvested CO Incentive Units will vest over a period of three (3) years, with one third having vested on January 14, 2022 and one third vesting on each of January 14, 2023 and January 14, 2024, provided that a grantee's continuous service to CarOffer has not terminated on the applicable vesting date. Under the terms of the grants, vesting of unvested CO Incentive Units is accelerated in the event of (i) a change of control of CarOffer (which, for the avoidance of doubt, does not include the Company's acquisition of the 51% interest on January 14, 2021), (ii) the death or disability of the grantee, (iii) termination of the grantee's employment with CarOffer without cause, or (iv) termination of grantee's employment by the grantee for good reason. Upon termination of a grantee's continuous service to CarOffer voluntarily by the grantee (other than for good reason) or by CarOffer for cause, all of such grantee's unvested CO Incentive Units are forfeited. In addition, if a grantee's continuous service terminates, then CarOffer has the option to repurchase any outstanding CO Incentive Units from the grantee.

In addition to the 2020 CO Plan, on December 9, 2020 CarOffer entered into a Vesting Agreement (the "Vesting Agreement") regarding the vesting of Subject Units beneficially owned by Bruce Thompson, the founder and CEO of CarOffer, and certain affiliated persons (collectively, the "T5 Holders") in connection with the Company's then-anticipated acquisition of a 51% interest in CarOffer. Pursuant to the Vesting Agreement, 432,592 Subject Units beneficially owned by the T5 Holders vest in three (3) approximately equal installments, with one third having vested on January 14, 2022 and one third vesting on each of January 14, 2023 and January 14, 2024, subject to the terms of the Vesting Agreement. As more particularly described in the Vesting Agreement, unvested Subject Units are subject to forfeiture in the event that Mr. Thompson's relationship with CarOffer terminates other than in the event of a termination without cause (as defined in the Vesting Agreement) or due to Mr. Thompson's death or disability. The Vesting Agreement also provides for acceleration of any unvested Subject Units in the event of the termination of Mr. Thompson's employment with CarOffer without cause, Mr. Thompson's death or disability, or the consummation of an eligible liquidity event (as defined in the Vesting Agreement).

In connection with the Closing, CarOffer reserved 228,571 incentive units (the "2021 Incentive Units") for purposes of establishing an employee incentive equity plan. Thereafter, CarOffer formed CarOffer Incentive Equity, LLC ("CIE"), a Delaware manager-managed limited liability company managed by the Company, and established the CIE 2021 Equity Incentive Plan (the "2021 CO Plan). The 2021 CO Plan and related documentation, including the applicable award agreement, a vesting agreement between CarOffer and CIE, and the CarOffer Operating Agreement, provide for an incentive equity grant structure whereby 2021 Incentive Units will be granted to CIE and 2021 CO Plan grantees will receive an associated equity interest in CIE (the "CIE Interest"), with back-to-back vesting between the 2021 Incentive Units and the associated CIE Interest. Subject to any modifications as may be approved by the CarOffer Board of Managers in its discretion, grants under the 2021 CO Plan will vest over a period of three (3) years from the grant date, one third each on the first, second, and third anniversaries of the applicable grant date, provided that a grantee's continuous service to CarOffer has not terminated on the applicable grant date. Upon termination of a grantee's continuous service to CarOffer, all of such grantee's unvested 2021 Incentive Units are forfeited. As of December 31, 2021, there had not been any grants of 2021 Incentive Units under the 2021 CO Plan.

CO Incentive Units, Subject Units and 2021 Incentive Units are liability-classified awards because the awards can be put to the Company at a formula price such that the holders do not bear the risks and rewards associated with equity ownership. For liability-classified awards, the fair value is determined on the date of issuance using a Least Square Monte Carlo simulation model. The determination of the fair value is affected by CarOffer's equity value, EBITDA, Excess Parent Capital (as defined in the CarOffer Operating Agreement), and revenue forecasts that drive the exercise price of future call/put rights, as well as a number of assumptions including market price of risk, volatility, correlation, and risk-free interest rate. Liability-classified awards are remeasured to fair value each period until settlement.

The Company issues shares of Class A common stock upon the vesting of RSUs and the exercise of stock options out of its shares available for issuance. The Company issues CO Incentive Units and Subject Units out of CarOffer's units available for issuance. The Company accounts for forfeitures when they occur.

The Company recognizes compensation expense 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.

The tax effect of differences between tax deductions related to stock compensation and the corresponding financial statement expense compensation are recognized within 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 the year ended December 31, 2021, the Company recognized $1,179 of tax demerits related to stock-based compensation as compared to immaterial tax demerits during the year ended December 31, 2020 and excess tax benefits of $11,115 recognized during the year ended December 31, 2019.

See Note 10 of these consolidated financial statements for a summary of the stock option, RSU and CO Incentive Unit activity for the year ended December 31, 2021.

Advertising Costs

Advertising costs are expensed as incurred and recognized within sales and marketing expense in the consolidated income statements. For the years ended December 31, 2021, 2020, and 2019, advertising expense was $151,457, $155,580, and $287,107, respectively.

Comprehensive Income

Comprehensive income is defined as the change in stockholders' equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. Comprehensive income consists of consolidated net income and other comprehensive income (loss), which includes certain changes in equity that are excluded from consolidated net income. Specifically, cumulative foreign currency translation adjustments are included in accumulated other comprehensive (loss) income. As of December 31, 2021 and 2020, accumulated other comprehensive (loss) income is presented separately in the consolidated balance sheets and consists entirely of cumulative foreign currency translation adjustments.

Recent Accounting Pronouncements Adopted

Income Taxes

In December 2019, the FASB issued ASU 2019-12, Income Taxes – Simplifying the Accounting for Income Taxes ("ASU 2019-12"). ASU 2019-12 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 standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020, with early adoption permitted. The Company adopted the guidance on January 1, 2021. The adoption did not have an impact in the consolidated financial statements.

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. As of December 31, 2021, there are no new accounting pronouncements that the Company is considering adopting.

3. Revenue Recognition

The Company provides disaggregation of revenue based on marketplace, wholesale and product revenue classification on the face of its consolidated income statements and based on geographic region in Note 13 of these consolidated financial statements. The Company believes these categories best depict how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors.

ASC Topic 606, Revenue from Contracts with Customers (“ASC 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 the relevant year end.

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, 2021 was approximately $9.2 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 ASC 606 to not disclose the amount of transaction price allocated to unsatisfied performance obligations as of December 31, 2021. For performance obligations not satisfied as of December 31, 2021, 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, 2021.

For the year ended December 31, 2021 and 2020, revenue recognized from amounts included in deferred revenue at the beginning of the period was $9,137 and $9,984, respectively.

In response to the COVID-19 pandemic, the Company reduced the subscription fees for paying dealers by at least 50% on all marketplace subscriptions for the April and May 2020 service periods, as well as provided a fee reduction on all June 2020 marketplace subscriptions of 20% for paying dealers in the United States and Canada and 50% for paying dealers in the United Kingdom. These fee reductions resulted in a modification to contracts with initial contractual periods greater than one month. For any contract modified, the Company calculated the remaining transaction price and allocated the consideration over the remaining performance obligations. These fee reductions materially and adversely impacted revenue for the year ended December 31, 2020, resulting in an approximately $50 million decrease in marketplace revenue. These fee reductions did not materially impact revenue for the year ended December 31, 2021. During the December 2020 and February 2021 service periods, the Company also suspended charging subscription fees for subscribing dealers in the United Kingdom. These fee reductions are included in the Company’s variable consideration assessment. These fee reductions did not materially impact revenue for the years ended December 31, 2021 and 2020.

4. Acquisitions

On January 14, 2021, the Company acquired a 51% interest in CarOffer, which provides an automated instant vehicle trade platform and is based in Addison, Texas, pursuant to the terms of a Membership Interest Purchase Agreement (the “Purchase Agreement”) dated as of December 9, 2020 (the “Agreement Date”), as amended, by and among the Company, CarOffer, CarOffer Investors Holding, LLC, a Delaware limited liability company (“TopCo”), each of the Members of TopCo (the “Members”), and Bruce T. Thompson, an individual residing in Texas (the “Members’ Representative”). This acquisition (the “CarOffer Acquisition”) is intended to add wholesale vehicle purchasing and selling capabilities to CarGurus’ portfolio of dealer offerings and create a complete and efficient digital solution for dealers to sell and acquire vehicles at both retail and wholesale.

Upon consummation of the transactions contemplated by the Purchase Agreement (the “Closing”), the Company acquired a 51% interest in CarOffer for an aggregate consideration of $173,155 (the “Total Consideration”), such Total Consideration consisting of (a) shares of Class A common stock in the aggregate amount of $103,645 (the “Stock Consideration”) and (b) $69,510 in cash (the “Cash Consideration”). The number of shares of Class A common stock issued following the Closing in connection with the Stock Consideration was 3,115,282, which was calculated by reference to a value of $22.51 per share, which equals the volume-weighted average closing price per share of Class A common stock on the Nasdaq Stock Market for the 28 consecutive trading days ending on the third Business Day (as defined in the Purchase Agreement) preceding the Agreement Date. Pursuant to the Purchase Agreement, the remaining equity in CarOffer (the “Remaining Equity”) is being retained by the then-current equity holders of CarOffer and subject to certain call and put arrangements discussed below.

Pursuant to the Purchase Agreement, the Company established a retention pool in an aggregate amount of $8,000 in the form of RSUs to be issued pursuant to the Company’s standard form of RSU agreement under the 2017 Plan, (i) $6,000 of which was granted to certain CarOffer employees following the Closing in accordance with the terms of the Purchase Agreement and (ii) $2,000 of which is available for issuance to future CarOffer employees in accordance with the terms of the Purchase Agreement. RSUs issued from the retention pool will be subject to vesting based on rendering of future services.

As of December 31, 2021, the Company incurred total acquisition-related costs of $2,647 related to the CarOffer Acquisition, of which $709 was incurred for the year ended December 31, 2021 and recognized within general and administrative operating expenses in the consolidated income statements. Acquisition-related costs were excluded from the purchase price allocation as they were primarily comprised of legal, professional and consulting expenses.

Total consideration transferred consists of the following:

	Consideration Transferred
Cash paid, net of cash acquired	$ 64,273
Cash acquired	5,237
Cash consideration	69,510
Stock consideration	103,645
Total consideration transferred	$ 173,155

The CarOffer Acquisition has been accounted for as a business combination under the acquisition method and, accordingly, the total consideration is allocated to the acquired assets and assumed liabilities. The Company’s 51% interest in CarOffer represents a controlling financial interest in the entity as the minority interest holders only have protective rights such that CarOffer is consolidated as of the date of Closing. The following table presents the purchase price allocation recognized in the Company’s consolidated balance sheet as of the date of Closing:

	Adjusted Fair Value at Date of Acquisition
Cash and cash equivalents	$ 5,237
Accounts receivable	16,119
Inventory	2,338
Prepaid expenses, prepaid income taxes and other current assets	95
Property and equipment, net	198
Intangible assets (1)	104,100
Goodwill (2)(4)	130,451
Operating lease right-of-use assets	709
Accounts payable	(8,888)
Accrued expenses, accrued income taxes, and other current liabilities	(15,513)
Operating lease liabilities - current	(230)
Operating lease liabilities - non-current	(479)
Redeemable noncontrolling interest (3)(4)	(60,982)
Total purchase price	$ 173,155

(1) Identifiable definite-lived intangible assets were comprised of developed technology, brand, and customer relationships of $63,000, $23,100, and $18,000, respectively, with estimated useful lives of 3 years, 11 years, and 3 years, respectively, which will be amortized on a straight-line basis over their estimated useful lives. The fair value of the developed technology has been estimated using the multi-period excess earnings method which is a variation of the income approach. The fair value of the brand and customer relationships has been estimated using the relief from royalty method and the with/without approach, respectively.

(2) Goodwill represents the excess value of the purchase price over net assets acquired, primarily attributable to adding wholesale vehicle acquisition and selling capabilities to CarGurus' portfolio of dealer offerings. All goodwill is assigned to the United States reporting segment. For tax purposes, $28,991 of the goodwill is deductible under IRC Section 197. In connection with the transaction, the Company accelerated certain stock options deemed to be outside of consideration transferred. Therefore, for the year ended December 31, 2021, the Company recognized an additional $1,229 of stock-based compensation expense

(3) The fair value of the redeemable noncontrolling interest has been estimated using the Least Square Monte Carlo Simulation approach. Significant inputs include market price of risk, volatility, correlation and risk-free rate.

(4) The Company finalized its assessment of the significant inputs utilized in the Least Square Monte Carlo Simulation for the fair value of the redeemable noncontrolling interest and recognized an adjustment of $2,951 during the year ended December 31, 2021.

In addition, the Company, TopCo, each Member and CarOffer MidCo, LLC, a Delaware limited liability company, entered into the Second Amended and Restated Limited Liability Company Agreement, dated as of December 9, 2020 (the "CarOffer Operating Agreement"), pursuant to which, among other matters, the Company secured the right to appoint a majority of the members of the Board of Managers of CarOffer, other rights customary for a transaction of this nature and the put and call rights described below. On November 23, 2021, the CarOffer Operating Agreement was amended and restated for administrative purposes, including principally to recapitalize certain of the membership units thereunder without changing overall consideration payable by the Company thereunder.

In the second half of 2022, the Company will have a call right (the "2022 Call Right"), exercisable in its sole discretion, to acquire a portion of the Remaining Equity representing up to twenty-five percent (25%) of the fully diluted capitalization of CarOffer (such acquired Remaining Equity, the "2022 Acquired Remaining Equity") at an implied CarOffer value (the "2022 Call Right Value") of seven (7) times CarOffer's trailing twelve months gross profit as of June 30, 2022 (calculated in accordance with the defined terms and subject to the adjustments set forth in the CarOffer Operating Agreement). If the 2022 Call Right is exercised by the Company, the 2022 Acquired Remaining Equity will be purchased ratably across all of the holders of CarOffer equity securities other than the Company. The consideration to be paid by the Company in connection with the exercise of the 2022 Call Right will be in the form of cash and/or shares of Class A common stock, as determined by the Company in its sole discretion.

In the second half of 2024, (a) the Company will have a call right (the "2024 Call Right"), exercisable in its sole discretion, to acquire all, and not less than all, of the Remaining Equity that it has not acquired pursuant to the 2022 Call Right and the Closing, at the greater of (i) (x) one hundred million dollars ($100,000,000), and (y) the 2022 Call Right Value, whichever is less, and (ii) an implied CarOffer value of twelve (12) times CarOffer's trailing twelve months EBITDA as of June 30, 2024 (in each case calculated in accordance with the defined terms and subject to the adjustments set forth in the CarOffer Operating Agreement), and (b) the representative of the holders of the Remaining Equity will have a put right (the "2024 Put Right"), exercisable in his, her or their sole discretion, to have the holders of the Remaining Equity sell to the Company, all, and not less than all, of the Remaining Equity at an implied CarOffer value of twelve (12) times CarOffer's trailing twelve months EBITDA as of June 30, 2024 (calculated in accordance with the defined terms and subject to the adjustments set forth in the CarOffer Operating Agreement). The determination of whether the 2024 Call Right or the 2024 Put Right is ultimately exercised is as set forth in the CarOffer Operating Agreement. The consideration to be paid by the Company in connection with the exercise of either the 2024 Call Right or the 2024 Put Right, as applicable, will be in the form of cash and/or shares of Class A common stock, as determined by the Company in its sole discretion.

The foregoing summary of the Purchase Agreement, the CarOffer Operating Agreement and the transactions contemplated thereby does not purport to be complete and is subject to, and qualified in their entirety by, the full text of the Purchase Agreement and the CarOffer Operating Agreement, which are filed as exhibits 2.1 and 10.27 to this Annual Report on Form 10-K, respectively.

The following unaudited pro forma consolidated financial information combines the unaudited results of the Company for the years ended December 31, 2021 and 2020 and the unaudited results of CarOffer for the year ended December 31, 2021 and 2020, and assumes that the CarOffer Acquisition, which closed on January 14, 2021, was completed on January 1, 2020 (the first day of fiscal year 2020). The pro forma consolidated financial information has been calculated after applying the Company's accounting policies and includes adjustments for amortization expense of acquired intangible assets, transaction-related costs, and compensation expense for ongoing share-based compensation arrangements replaced, together with the consequential tax effects. These pro forma results have been prepared for comparative purposes only and do not purport to be indicative of the operating results of the Company that would have been achieved had the CarOffer Acquisition actually taken place on January 1, 2020. In addition, these results are not intended to be a projection of future results and do not reflect events that may occur after December 31, 2021, including, but not limited to revenue enhancements, cost savings or operating synergies that the combined Company may achieve as a result of the CarOffer Acquisition.

	Unaudited			
	Three Months Ended December 31		Year Ended December 31	
	2021	2020	2021	2020
Revenue	$ 339,342	$ 161,443	$ 954,312	$ 582,777
Consolidated net income [(1)]	$ 34,158	$ 6,626	$ 110,055	$ 28,415

(1) For the three months ended December 31, 2021 pro forma consolidated net income includes $7,275 and $12,606 related to intangibles amortization and stock-based compensation for CarOffer, respectively. For the three months ended December 31, 2020 pro forma consolidated net income includes $7,275 and $12,606 related to intangibles amortization and stock-based compensation for CarOffer, respectively. For the year ended December 31, 2021, pro forma consolidated net income includes $29,100 and $22,419 related to intangibles amortization and stock-based compensation for CarOffer, respectively. For the year ended December 31, 2020, pro forma consolidated net income includes $29,100 and $22,234 related to intangibles amortization and stock-based compensation for CarOffer, respectively.

$314,430 of revenue and $2,960 of net income attributable to CarOffer is included in our consolidated income statement from the Closing date of January 14, 2021 to December 31, 2021.

5. Fair Value of Financial Instruments Including Cash Equivalents and Investments

As of December 31, 2021 and 2020, assets measured at fair value on a recurring basis consist of the following:

	As of December 31, 2021			
	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	$ 157,525	$ —	$ —	$ 157,525
Investments:				
Certificates of deposit	—	90,000	—	90,000
Total	$ 157,525	$ 90,000	$ —	$ 247,525

	As of December 31, 2020			
	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	$ 112,431	$ —	$ —	$ 112,431
Investments:				
Certificates of deposit	—	100,000	—	100,000
Total	$ 112,431	$ 100,000	$ —	$ 212,431

As of December 31, 2021 and 2020, investments consist of the following:

	As of December 31, 2021			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Investments:				
Certificates of deposit due in one year or less	$ 90,000	$ —	$ —	$ 90,000
Total	$ 90,000	$ —	$ —	$ 90,000

	As of December 31, 2020			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Investments:				
Certificates of deposit due in one year or less	$ 100,000	$ —	$ —	$ 100,000
Total	$ 100,000	$ —	$ —	$ 100,000

6. Property and Equipment, Net

As of December 31, 2021 and 2020, property and equipment, net consist of the following:

	As of December 31,	
	2021	2020
Server and computer equipment	$ 8,349	$ 8,108
Capitalized internal-use software	3,041	149
Capitalized website development	22,037	16,328
Furniture and fixtures	8,615	7,320
Leasehold improvements	24,082	20,507
Construction in progress	854	1,024
Finance lease right-of-use assets	556	41
	67,534	53,477
Less accumulated depreciation and amortization	(35,324)	(25,994)
Property and equipment, net	$ 32,210	$ 27,483

For the year ended December 31, 2021, 2020, and 2019, depreciation and amortization expense, excluding amortization of intangible assets, amortization of capitalized hosting arrangements, and write offs, was $10,324, $8,198 and $7,168, respectively.

For the year ended December 31, 2021, the Company wrote off $2,481 of U.S. capitalized website development costs within operating expense in the consolidated income statements related to certain developed technology in which the Company has decided to cease investment. For the year ended December 31, 2020, the Company wrote off $1,151 of capitalized website development costs, of which $844 related to the exit of certain international markets in connection with the Expense Reduction Plan.

Capitalized website development costs increased $5,709 due to continued investment in our product offerings. Leasehold improvements costs increased $3,575 due to the costs associated with the additional leased space in 55 Cambridge Parkway, as discussed further in Note 9 of these consolidated financial statements. Capitalized internal-use software costs increased $2,892 due to additions related to internal engineering and development tools.

7. Goodwill and Other Intangible Assets

Goodwill

As of December 31, 2021, changes in the carrying value of goodwill are as follows:

	United States		International		Total	
Balance as of December 31, 2020	$	12,477	$	16,652	$	29,129
CarOffer acquisition [1]		130,451		—		130,451
Foreign currency translation adjustment		—		(1,293)		(1,293)
Balance as of December 31, 2021	$	142,928	$	15,359	$	158,287

(1) See Note 4 of these consolidated financial statements.

The Company assessed its goodwill for impairment and did not identify any impairment as of December 31, 2021.

Other Intangible Assets

As of December 31, 2021 and 2020, intangible assets consist of the following:

	As of December 31, 2021								
	Weighted Average Remaining Useful Life (years)		Gross Carrying Amount		Accumulated Amortization		Impairment		Net Carrying Amount
Brand	9.4	$	32,274	$	4,206	$	—	$	28,068
Customer relationships	2.0		19,870		7,314		—		12,556
Developed technology	2.0		65,212		21,274		647		43,291
Total		$	117,356	$	32,794	$	647	$	83,915

	As of December 31, 2020								
	Weighted Average Remaining Useful Life (years)		Gross Carrying Amount		Accumulated Amortization		Impairment		Net Carrying Amount
Brand	8.4	$	9,405	$	1,235	$	—	$	8,170
Customer relationships	1.6		1,886		938		—		948
Developed technology	2.4		2,213		469		—		1,744
Total		$	13,504	$	2,642	$	—	$	10,862

For the year ended December 31, 2021, 2020, and 2019, amortization of intangible assets was $30,152, $1,993, and $649, respectively.

For the year ended December 31, 2021, the Company wrote off $647 of U.S. intangible assets within cost of revenue in the consolidated income statements related to certain developed technology which the Company has decided to cease investment.

As of December 31, 2021, estimated amortization expense of intangible assets for future periods is as follows:

Year Ending December 31,	Amortization Expense
2022	30,782
2023	30,118
2024	4,082
2025	3,045
2026	3,045
Thereafter	12,843
Total	$ 83,915

8. Accrued Expenses, Accrued Income Taxes and Other Current Liabilities and Other Non-Current Liabilities

As of December 31, 2021 and 2020, accrued expenses, accrued income taxes and other current liabilities consist of the following:

	As of December 31, 2021	As of December 31, 2020
Accrued bonus	$ 11,777	$ 10,845
Accrued commissions	2,293	3,941
Accrued income taxes	6,344	233
Accrued advertising costs	5,583	—
Accrued distributions to redeemable noncontrolling interest holders	8,701	—
Payments received in advance from third-party payment processor	28,075	—
Other accrued expenses, accrued income taxes and other current liabilities	15,813	9,732
Total	$ 78,586	$ 24,751

Accrued distributions to redeemable noncontrolling interest holders relate to mandatory tax distributions to non-controlling interest members for the estimated tax liability on their respective taxable income. Payments received in advance from third-party payment processor relate to payments received in advance of $46,822, offset by receivables in transit from the third-party payment processor of $18,747.

As of December 31, 2021 and 2020, other non-current liabilities consist of the following:

	As of December 31, 2021	As of December 31, 2020
CO Incentive Unit and Subject Unit liability-classified awards	$ 21,095	$ —
Other non-current liabilities	2,544	3,075
Total	$ 23,639	$ 3,075

CO Incentive Unit and Subject Unit liability-classified awards related to liability-classified awards that were recognized in connection with the Company's acquisition of a 51% interest in CarOffer, as discussed further in Note 2 and Note 10 of these consolidated financial statements.

9. Commitments and Contingencies

Contractual Obligations and Commitments

As of December 31, 2021, all of the Company's property, equipment, and internal-use software have been purchased with cash with the exception of amounts related to unpaid property and equipment, capitalized website development, capitalized internal-use software and hosting arrangements and amounts related to obligations under finance leases as disclosed in the consolidated statements of cash flows. The Company has no material long-term purchase obligations outstanding with any vendor or third party.

Leases

The Company's primary operating lease obligations consist of various leases for office space in: Boston, Massachusetts; Cambridge, Massachusetts; San Francisco, California; Addison, Texas; and Dublin, Ireland. The Company also has an operating lease obligation for data center space in Needham, Massachusetts.

On January 25, 2021, CarOffer entered into a sublease in Addison, Texas at 15601 Dallas Parkway for the lease of approximately 61,826 square feet of office space with a non-cancellable lease term through 2030. The sublease commenced on March 1, 2021. CarOffer's monthly base rent for the premises is payable from January 1, 2022. The lease provides for annual rent increases through the term of the lease. In connection with the sublease, CarOffer entered into a financing lease arrangement for furniture and fixtures used in connection with its operations. The term of the financing lease is for the entire period of the sublease. The monthly rent for the furniture and fixtures is included in the sublease monthly rent, with ownership of the furniture and fixtures transferring to CarOffer at the expiration of the lease term. Monthly rent payments are allocated based upon the relative fair value of the office space and furniture of 95% and 5%, respectively.

On June 12, 2020, the Company amended its operating lease agreement in Boston, Massachusetts at 1001 Boylston Street, which was originally entered into on December 19, 2019 for the lease of 273,595 square feet of office space (the "Original Boston Lease Agreement"). Pursuant to this amendment, the Company exercised its right to reduce the amount of office space agreed to under the lease to 225,428 square feet, and the parties agreed to certain other changes to the lease as set forth in the amendment. The Company is expecting to move into the office space in 2023. As the lease has been signed but the lease term has not commenced, there is no impact to the consolidated financial statements.

The Original Boston Lease Agreement provides for leasehold improvement incentives and provides for annual rent increases through the term of the lease, and provides for variable payments related to management fees. 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 recognized as a lease modification in 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 January 10, 2019, Auto List, Inc., which the Company acquired on January 16, 2020, entered into an operating lease in San Francisco, California at 332 Pine St. for the lease of 6,345 square feet of office space with a non-cancellable lease term through 2024. 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 provides for leasehold improvement incentives and annual rent increases through the term of the lease. The Company subleased the fifth floor to another party and recognized the sublease income within other income, net in the consolidated income statement. The sublease expired in August 2020. As of December 31, 2020 and 2019, sublease income was immaterial. The Company entered into a noncancelable agreement to sublease the second and third floors and a portion of the first floor to another party on December 23, 2021. The sublease provides for annual rent increases throughout the three-and-a-half-year term of the sublease. The sublease contains a sublessee option to extend the term of the sublease for three additional years, and it includes a sublessee option to expand the sublease to the fourth and fifth floors of the building. The sublease contains both lease and non-lease components in the contract. Non-lease components relate to parking and operating and utilities expenses. As a result of the practical expedient elected under ASC 842, the Company combines the lease and these non-lease components. As the sublease has not yet commenced, there is no impact to the consolidated financial statements. The sublease commenced in January 2022.

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 provides for leasehold improvement incentives and annual rent increases through the term of the lease. On October 6, 2021, the Company entered into a one-year non-cancellable sublease for the same 48,059 square feet of office space that will commence on December 1, 2022, after the expiration of the current lease term from another party, with an option to extend the sublease term for an additional period of five years. The sublease is treated as a separate contract from the current lease as the contract was separately negotiated with a new Landlord. As the lease term is 12 months, no additional right-of-use asset will be recognized in line with the Company’s policy in Note 2 of these consolidated financial statements. As the sublease has not yet commenced, there is no impact to the consolidated financial statements.

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

The leases in Boston, Massachusetts, Cambridge, Massachusetts and San Francisco, California have associated letters of credit, which are recognized within restricted cash in the consolidated balance sheets. As of December 31, 2021 and 2020, restricted cash was $16,336 and $10,627, 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 and pass-through payments from customers related to the Company's wholesale business. As December 31, 2021 and 2020, portions of restricted cash were classified as a short-term asset and long-term asset, as disclosed in the consolidated balance sheets.

For the years ended December 31, 2021, 2020, and 2019, the Company recognized $15,844, $14,157, and $10,260, respectively, of lease costs for leases that have commenced.

As of December 31, 2021 and 2020, for leases that have commenced the weighted average remaining lease term was 7.6 years and 7.7 years, respectively, and the weighted average discount rate was 5.3% and 5.3%, respectively. As 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.

As of December 31, 2021, future minimum lease payments are as follows:

Year Ending December 31,	Operating Lease Commitments
2022	$ 16,573
2023	14,736
2024	13,122
2025	6,091
2026	5,540
Thereafter	32,965
Total lease payments	89,027
Less imputed interest	(18,322)
Total	$ 70,705

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, 2021. As of December 31, 2021, total estimated future minimum lease payments for leases signed but not yet commenced, which consists only of the sublease for 2 Canal Park and the 1001 Boylston Street lease and have expected commencement dates in December 2022 and in 2023, respectively, are estimated to be $256,525.

As of December 31, 2021, future minimum lease income payments are as follows:

Year Ending December 31,	Sublease Income Payments
2022	$ 882
2023	1,876
2024	1,923
2025	1,021
2026	—
Thereafter	—
Total	$ 5,702

Acquisitions

On January 14, 2021 the Company completed the acquisition of a 51% interest in CarOffer, an automated instant vehicle trade platform based in Addison, Texas, with the option to acquire portions of the remaining equity in the future. Details of this acquisition are more fully described in Note 4 of these consolidated financial statements.

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, partners and service providers that include commercial provisions with respect to licensing, infringement, guarantees, indemnification, and other common provisions.

CarOffer provides certain guarantees to dealers through its 45-Day Guaranteed Bid and OfferGuard product offerings, which are accounted for under ASC 460.

45-Day Guaranteed Bid is an arrangement through which a selling dealer lists a car on the CarOffer platform, and CarOffer provides an offer to purchase the vehicle listed at a specified price at any time over a 45-day period. This provides the seller with a put option, where they have the right, but not the obligation, to require CarOffer to purchase the vehicle during this window. OfferGuard is an arrangement through which a buying dealer purchases a car on the CarOffer platform, and CarOffer provides an offer to purchase the vehicle at a specified price between days 1 and 3, and days 42 and 45 if the dealer is not able to sell the vehicle after 42 days.

As of December 31, 2021, the maximum potential amount of future payments that CarOffer could be required to make under these guarantees was $76,075. Of the maximum potential amount of future payments, none are considered probable . The exercise of guarantees has historically been infrequent and even when such exercises did occur the losses were immaterial. As such, as of December 31, 2021, CarOffer had no contingent loss liabilities.

As of December 31, 2020, the Company did not have any guarantees.

10. Stock-based Compensation

CarGurus 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 stock-based incentives 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 restricted stock units ("RSUs") under the 2015 Plan, to remove Class B common stock from the pool of shares available for issuance under the 2015 Plan and to 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 reserved under the amended and restated 2015 Plan was decreased, on a corresponding share for share basis, (2) no new awards of Class B common stock could be granted under the amended 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 Company's initial public offering ("IPO"), in October 2017, the Board adopted, and the Company's stockholders approved, the Omnibus Incentive 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 Board. 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 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 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, January 2, 2020 and January 4, 2021. On January 3, 2022, an additional 4,070,921 shares of the Company's Class A Common Stock was authorized to be issued or transferred under the 2017 Plan pursuant to the Evergreen Increase. 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.

As of December 31, 2021, 2,609,854 shares of Class A common stock were available for issuance under the 2017 Plan.

CarOffer Equity Incentive Plans

The 2020 CO Plan provides for the issuance of CO Incentive Units to CarOffer's employees, officers, managers, and consultants. The 2020 CO Plan authorized up to an aggregate of 485,714 CO Incentive Units for such issuances, all of which were issued prior to the close of the transaction.

At the time of close, 142,857 CO Incentive Units were accelerated and redeemed. The compensation relating to these CO Incentive Units was deemed to be outside of consideration transferred. Therefore, for the year ended December 31, 2021, the Company recognized an additional $1,229 of stock-based compensation expense. As of December 31, 2021, the remaining 342,857 CO Inventive Units were unvested. There was $18,640 of unrecognized stock-based compensation expense related to unvested CO Incentive Units that is expected to be recognized over a weighted-average period of 2.5 years. These CO Incentive Units are accounted for within other non-current liabilities in the consolidated balance sheets.

As of December 31, 2021, there were no CO Incentive Units available for issuance under the 2020 CO Plan.

The Vesting Agreement provides for the vesting of the Subject Units beneficially owned by the T5 Holders, which vest in accordance with the terms described in Note 2 of these consolidated financial statements. As of December 31, 2021, there were 432,592 Subject Units issued and unvested. There was $29,507 of unrecognized stock-based compensation expense related to unvested Subject Units that is expected to be recognized over a weighted-average period of 2.0 years. These Subject Units are accounted for within other non-current liabilities in the consolidated balance sheets.

As of December 31, 2021, there were no Subject Units available for issuance under the Vesting Agreement.

The 2021 CO Plan provides for an incentive equity grant structure whereby 2021 Incentive Units will be granted to CIE and 2021 CO Plan grantees will receive an associated CIE Interest, with back-to-back vesting between the 2021 Incentive Units and the associated CIE Interest. The 2021 CO Plan authorized up to an aggregate of 228,571 2021 Incentive Units for such issuances.

As of December 31, 2021, 228,571 2021 Incentive Units were available for issuance under the 2021 CO Plan.

Stock Options

During the year ended December 31, 2021, stock option activity is as follows:

	Common Stock	Weighted-Average Exercise Price for Equity	Weighted-Average Remaining Contractual Life (In Years)	Aggregate Intrinsic Value[(1)]
Outstanding, December 31, 2020	590,397	$ 1.99	4.0	$ 17,560
Granted	619,618	35.75		
Exercised	(222,147)	2.98		6,027
Forfeited	(38,561)	35.61		
Outstanding, December 31, 2021	949,307	22.42	6.7	$ 11,877
Options exercisable as of December 31, 2021	478,588	9.28	4.3	$ 11,877

(1) As of December 31, 2021 and 2020, the aggregate intrinsic value was calculated based on the positive difference, if any, between the estimated fair value of our common stock on December 31, 2021 and 2020, respectively, or the date of exercise, as appropriate, and the exercise price of the underlying options.

During the years ended December 31, 2020 and 2019, there were no options granted.

During the years ended December 31, 2020 and 2019, the aggregate intrinsic value for options exercised was $8,401 and $28,902, respectively.

As of December 31, 2021, there was $7,507 unrecognized stock-based compensation expense related to unvested stock options that is expected to be recognized over a weighted-average period of 3.2 years.

Restricted Stock Units

During the year ended December 31, 2021, RSU activity is as follows:

	Number of Shares	Weighted-Average Grant Date Fair Value	Aggregate Intrinsic Value
Unvested outstanding, December 31, 2020	3,483,816	$ 32.52	$ 110,538
Granted	2,969,187	33.83	
Vested	(1,575,206)	33.28	
Forfeited	(1,043,475)	33.23	
Unvested outstanding, December 31, 2021	3,834,322	33.02	$ 128,987

During the years ended December 31, 2020 and 2019, the weighted-average grant-date fair value of RSUs granted was $28.47 and $39.07 per share, respectively.

During the years ended December 31, 2020 and 2019, RSUs that vested and settled totaled 1,347,464 and 1,317,736, respectively.

During the years ended December 31, 2020 and 2019, the total fair value of RSUs vested was $40,613 and $31,533 respectively.

As of December 31, 2021, there was $106,888 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 year ended December 31, 2021, 2020, and 2019, stock-based compensation expense by award type and where the stock compensation expense was recognized in the Company's consolidated income statements is as follows:

	Year Ended December 31,		
	2021	2020	2019
Options	$ 2,471	$ 17	$ 155
Restricted Stock Units	52,916	45,304	34,146
CO Incentive Units and Subject Units	22,323	—	—
Total stock-based compensation expense	$ 77,710	$ 45,321	$ 34,301

	Year Ended December 31,		
	2021	2020	2019
Cost of revenue	$ 417	$ 293	$ 354
Sales and marketing expense	12,801	10,564	9,989
Product, technology, and development expense	22,289	20,741	15,159
General and administrative expense	42,203	13,723	8,799
Total stock-based compensation expense	$ 77,710	$ 45,321	$ 34,301

For the years ended December 31, 2021, 2020, and 2019, excluded from stock-based compensation expense is $3,247, $1,906, and $1,381 of capitalized website development costs and capitalized internal-use software costs, respectively.

For the years ended December 31, 2021, 2020, and 2019, the income tax benefit from stock-based compensation expense was $5,301, $4,796, and $2,953, respectively.

During the years ended December 31, 2021, 2020, and 2019, the Company withheld 527,237, 447,160, and 452,678 shares of Class A common stock, respectively, to satisfy employee tax withholding requirements and for option exercise costs due to net share settlements and cashless exercises of options, as applicable. The shares withheld return to the authorized, but unissued, pool under the 2017 Plan and can be reissued by the Company. For the years ended December 31, 2021, 2020, and 2019, total payments to satisfy employee tax withholding requirements and for option exercise costs due to net share settlements and cashless exercises of options, were $15,388, $11,184, and $16,470, respectively, and are reflected as a financing activity in the consolidated statements of cash flows.

Common Stock Reserved for Future Issuance

As of December 31, 2021, the Company had reserved the following shares of Class A common stock for future issuance:

Common stock options outstanding	949,307
Restricted stock units outstanding	3,834,322
Shares available for issuance under the 2017 Plan	2,609,854
Total shares of authorized common stock reserved for future issuance	7,393,483

11. Earnings Per Share

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 upon either the death or voluntary termination of the Company's Executive Chairman. 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, 2021, 2020, and 2019, holders of Class B common stock converted 3,077,327 shares, 1,238,144 shares and 387,440 shares, respectively, of Class B common stock to Class A common stock.

Basic net income per share ("Basic EPS") is computed by dividing net (loss) income attributable to common stockholders and adjusted to reflect changes in the redemption value of the redeemable noncontrolling interest, if applicable, 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 plus the weighted-average of any additional shares issued and outstanding during the reporting period.

Diluted net income per share ("Diluted EPS") gives effect to all potentially dilutive securities. Diluted EPS is computed by dividing net (loss) income attributable to common stockholders and adjusted to reflect adjustments for net income (loss) attributable to the noncontrolling interest and redemption adjustments to redeemable noncontrolling interest, if applicable and dilutive, by the weighted-average number of common shares outstanding during the reporting period using (i) the number of shares of common stock used in the Basic EPS calculation as indicated above, (ii) if dilutive, the incremental weighted-average common stock that the Company would issue upon the exercise of stock options and the vesting of RSUs, (iii) if dilutive, market-based performance awards based on the number of shares that would be issuable as of the end of the reporting period assuming the end of the reporting period was also the end of the contingency period. The dilutive effect of these common stock equivalents is reflected in diluted earnings per share by application of the treasury stock method. The if-converted method is used to calculate the number of shares issuable upon exercise of the 2024 Put Right, inclusive of CarOffer noncontrolling interest and incentive units, that would be issuable as of the end of the reporting period assuming the end of the reporting period was also the end of the contingency period.

For the years ended December 31, 2021, 2020, and 2019, a reconciliation of the numerator and denominator used in the calculation of basic and diluted net income per share is as follows:

	Year Ended December 31,		
	2021	2020	2019
Numerator:			
Consolidated net income	$ 110,373	$ 77,553	$ 42,146
Net income attributable to redeemable noncontrolling interest	1,129	—	—
Accretion of redeemable noncontrolling interest to redemption value	109,398	—	—
Net (loss) income attributable to common stockholders	$ (154)	$ 77,553	$ 42,146
Denominator:			
Weighted-average number of shares of common stock used in computing net income per share attributable to common stockholders — basic	117,142,062	112,854,524	111,450,443
Dilutive effect of share equivalents resulting from stock options	—	674,018	1,155,906
Dilutive effect of share equivalents resulting from unvested restricted stock units (service-based and market-based)	—	321,273	825,501
Weighted-average number of shares of common stock used in computing net income per share attributable to common stockholders — diluted	117,142,062	113,849,815	113,431,850
Net (loss) income per share attributable to common stockholders:			
Basic	$ (0.00)	$ 0.69	$ 0.38
Diluted	$ (0.00)	$ 0.68	$ 0.37

For the years ended December 31, 2021, 2020, and 2019, potentially dilutive common stock equivalents that have been excluded from the calculation of diluted weighted-average shares outstanding as their effect would have been anti-dilutive are as follows:

	Year Ended December 31,		
	2021	2020	2019
Stock options outstanding	617,504	—	—
Restricted stock units outstanding	2,867,330	2,722,226	1,144,287
CO Incentive Units, Subject Units and noncontrolling interest	1,509,750	—	—

In addition, shares of Class A common stock potentially issuable under market-based performance awards of approximately 14,682 RSUs were excluded from the calculation of weighted average shares used to compute Diluted EPS for the year ended December 31, 2021 as the performance period began subsequent to the reporting period end date and as such there were zero contingently issuable shares.

12. Income Taxes

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

	Year Ended December 31,		
	2021	2020	2019
United States	$ 148,037	$ 97,120	$ 37,476
Foreign	1,323	1,990	1,229
Income before income taxes	$ 149,360	$ 99,110	$ 38,705

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

	Year Ended December 31,		
	2021	2020	2019
Current provision (benefit):			
Federal	$ 22,133	$ (3,733)	$ —
State	10,438	2,288	(220)
Foreign	253	767	513
	32,824	(678)	293
Deferred provision (benefit):			
Federal	5,698	19,539	(2,377)
State	669	2,734	(1,306)
Foreign	(204)	(38)	(51)
	6,163	22,235	(3,734)
Income tax provision (benefit)	$ 38,987	$ 21,557	$ (3,441)

The Company's effective tax rate, calculated using income before income taxes adjusted for net income attributable to redeemable noncontrolling interest, is 26.3%, greater than the U.S. federal statutory rate primarily due to state and local income taxes, shortfalls on the taxable compensation of share-based awards and the Section 162(m) excess officer compensation limitation, which became applicable in May 2021 upon the expiration of the transition period permitted following the IPO, partially offset by federal and state research and development tax credits. The Company’s effective tax rates for the year ending December 31, 2020 is greater than the U.S. federal statutory rate primarily due to state and local income taxes with partial offset by the benefits from the U.S. federal and state research and development credits and the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”). The Company’s effective tax rates for the year ending December 31, 2019 is less than the U.S. federal statutory rate primarily due to federal and state research and development credits and excess tax deductions related to stock-based compensation awards.

	Year Ended December 31, 2021	2020	2019
U.S. federal taxes at statutory rate	21.0%	21.0%	21.0%
State taxes, net of federal benefit	7.5	6.2	0.2
Nondeductible expenses	0.3	0.4	2.9
Stock compensation	0.3	0.2	(22.0)
Foreign rate differential	(0.2)	(0.2)	(0.3)
Federal and state credits	(2.6)	(3.2)	(10.3)
CARES Act	—	(2.4)	—
Disallowed officer compensation	1.0	—	—
Investment in partnership	(0.3)	—	—
Federal, state, and foreign provision to return differences	(0.7)	—	—
Other	(0.2)	(0.2)	(0.2)
Consolidated effective tax rate	26.1%	21.8%	(8.7)%
Effective tax rate attributable to redeemable noncontrolling interest	0.2	—	—
Effective tax rate attributable to CarGurus, Inc.	26.3%	21.8%	(8.7)%

As of December 31, 2021 and 2020, the approximate income tax effect of each type of temporary difference and carryforward is as follows:

	As of December 31, 2021	2020
Deferred tax assets:		
Net operating loss carryforwards	$ 1,429	$ 3,735
Credit carryforwards	4,241	17,572
Stock-based compensation	5,301	4,796
Lease liability	15,640	18,671
Investment in partnership	6,709	—
Accruals and reserves	5,942	3,249
	39,262	48,023
Valuation Allowance	(229)	(158)
	39,033	47,865
Deferred tax liabilities:		
Prepaid expenses	(1,850)	(1,482)
Deferred commissions	(3,508)	(5,144)
Right of use assets	(12,955)	(15,920)
Intangible assets	(1,111)	(1,025)
Fixed assets	(6,289)	(4,811)
	(25,713)	(28,382)
Net deferred tax assets	$ 13,320	$ 19,483

The Company accounts for income taxes in accordance with the liability method. 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.

As of December 31, 2021 and 2020, the Company has provided an immaterial valuation allowance against its net deferred tax assets. 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. For the years ended December 31, 2021 and 2020, the change in the valuation allowance was $71 and $96, respectively.

As of December 31, 2021, the Company has federal and state net operating loss ("NOL") carryforwards of $1,160 and $17,105, respectively. Prior to the enactment of the CARES Act on March 27, 2020, federal NOLs would generally carryforward indefinitely, subject to an annual limitation of 80% of taxable income. The CARES Act temporarily removed the 80% limitation on NOLs to offset taxable income for tax years prior to 2021. The 80% annual taxable income limitation will resume for tax years 2021 and on. The federal NOL carryforward does not expire and the state NOL carryforwards, excluding South Carolina which carryforwards indefinitely, expire at various dates through 2040. As of December 31, 2021, the Company has federal and state tax credit carryforwards of $673 and $4,516, respectively, available to reduce future tax liabilities that, excluding California which carryforwards indefinitely, expire at various dates through 2040. Utilization of the NOL 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 Internal Revenue Code ("Section 382"), as well as similar state provisions. Ownership changes may limit the amount of NOL 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 percent in the aggregate over a three-year period.

The Company previously adopted the provision for uncertain tax positions under ASC 740. As of December 31, 2021 and 2020, the Company had no recognized 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 Company. As of December 31, 2021 and December 31, 2020, the amount of unrecognized deferred U.S. taxes on these earnings would be de minimis.

The Company and its subsidiaries are subject to various U.S. federal, state, and foreign income tax examinations. The Company is currently not subject to income tax examination for the tax years of 2017 and prior as a result of applicable statute of limitations of the Internal Revenue Service ("IRS") and state jurisdictions. The Company is currently open to examination in its foreign jurisdictions for tax years 2019 and after.

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, (the "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, wholesale and product revenues from customers within the United States. The International segment derives revenues from marketplace 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. Revenue 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 recognized for statutory reporting purposes. Asset information is assessed and reviewed on a global basis.

For the years ended December 31, 2021, 2020, and 2019, information regarding the Company's operations by segment and geographical area is as follows:

	Year Ended December 31,		
	2021	2020	2019
Segment revenue:			
United States	$ 909,033	$ 519,835	$ 555,007
International	42,340	31,616	33,909
Total revenue	$ 951,373	$ 551,451	$ 588,916

	Year Ended December 31,		
	2021	2020	2019
Segment income (loss) from operations:			
United States	$ 158,532	$ 120,836	$ 73,872
International	(10,264)	(23,080)	(39,550)
Total income from operations	$ 148,268	$ 97,756	$ 34,322

The Company ceased the operations of the International segment online marketplaces in Germany, Italy, and Spain in the second quarter of 2020 in connection with the Expense Reduction Plan.

As of December 31, 2021, total assets held outside of the United States were $35,521, primarily attributable to $15,359 of goodwill. As of December 31, 2020, total assets held outside of the United States were $32,012, primarily attributable to $16,652 of goodwill.

14. Employee Benefit Plans

The Company maintains a defined contribution savings plan for all eligible U.S. employees under Section 401(k) of the Internal Revenue 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.

For the years ended December 31, 2021, 2020, and 2019, total employer contributions to the 401(k) plan were $2,960, $2,675, and $2,708, respectively.

15. Subsequent Events

Effective the first quarter of 2022, the Company revised its segment reporting from two reportable segments, United States and International, to one reportable segment. The change in segment reporting was made to align with changes made in the manner the CODM reviews the Company’s operating results in assessing performance and allocating resources. The CODM now assesses the Company's performance as a whole rather than by geographical location as a result of the international segment becoming less significant relative to the overall business due to growth in wholesale revenue. The change in segment reporting does not impact the Company’s consolidated financial statements.

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, 2021, 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, 2021, using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in its Internal Control-Integrated Framework (2013).

Our assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of CarOffer, LLC, which is included in the consolidated financial statements. As of December 31, 2021, CarOffer, LLC constituted 25% and 20% of total and net assets, respectively. For the year ended December 31, 2021, CarOffer, LLC constituted 33% and 2% of revenues and consolidated net income, respectively.

Based on this assessment and those criteria, management concluded that our internal control over financial reporting was effective as of December 31, 2021.

The effectiveness of our internal control over financial reporting as of December 31, 2021, 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, 2021 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, 2021, 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, 2021, based on the COSO criteria.

As indicated in the accompanying Management's Annual Report on Internal Control Over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of CarOffer, LLC, which is included in the 2021 consolidated financial statements of the Company and constituted 25% and 20% of total and net assets, respectively, as of December 31, 2021 and 33% and 2% of revenues and net income, respectively, for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of CarOffer, LLC.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2021 consolidated financial statements of the Company and our report dated February 24, 2022 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 24, 2022

Item 9B. Other Information.

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions That Prevent Inspections.

Not Applicable.

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 2022 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 2022 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 2022 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 2022 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 2022 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.

PART IV

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

Exhibit Number	Exhibit Description	Incorporated by Reference: Form	File Number	Filing Date	Exhibit Number	Filed Herewith
2.1	Membership Interest Purchase Agreement dated as of December 9, 2020, as amended, by and among the Registrant, CarOffer, LLC, CarOffer Investors Holding, LLC (“TopCo”), the Members of TopCo and Bruce T. Thompson.	10-K	001-38233	February 12, 2021	2.1	
3.1	Amended and Restated Certificate of Incorporation of the Registrant.	8-K	001-38233	October 16, 2017	3.1	
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 Registrant.	S-1/A	333-220495	September 29, 2017	4.1	
4.2	Amended and Restated Investors’ Rights Agreement, dated August 23, 2016, by and among the Registrant and certain of its stockholders.	S-1	333-220495	September 15, 2017	4.2	
4.3	Description of the Registrant’s Securities Registered Under Section 12 of the Securities Exchange Act of 1934.	10-K	001-38233	February 14, 2020	4.3	
10.1	Form of Indemnification Agreement between the Registrant and each of its directors and officers.	S-1	333-220495	September 15, 2017	10.1	
10.2#	Amended and Restated 2006 Equity Incentive Plan.	S-1	333-220495	September 15, 2017	10.2	
10.3#	Amended and Restated 2015 Equity Incentive Plan and forms of agreements thereunder.	S-1/A	333-220495	September 29, 2017	10.3	
10.4#	Omnibus Incentive Compensation Plan and forms of agreements thereunder.	10-K	001-38233	February 12, 2021	10.4	
10.4.1#	Form of Executive Nonqualified Stock Option Grant Agreement.	10-K	001-38233	February 12, 2021	10.4.1	
10.4.2#	Form of Executive Time-Based Restricted Stock Unit Agreement.	10-Q	001-38233	May 3, 2018	10.3	
10.4.3#	Form of Executive Performance-Based Restricted Stock Unit Agreement.	10-K	001-38233	February 12, 2021	10.4.3	
10.4.4#	Form of Non-Employee Director Restricted Stock Unit Agreement.	8-K	001-38233	March 26, 2018	10.1	
10.5#	Offer Letter, dated March 17, 2006, by and between the Registrant and Langley Steinert.	S-1	333-220495	September 15, 2017	10.5	
10.6#	Offer Letter, dated August 10, 2015, by and between the Registrant and Jason Trevisan.	S-1	333-220495	September 15, 2017	10.6	
10.7#	Offer Letter, dated October 24, 2014, by and between the Registrant and Samuel Zales.	S-1	333-220495	September 15, 2017	10.7	
10.8#	Offer Letter, dated November 18, 2016, by and between the Registrant and Thomas Caputo.	10-K	001-38233	February 28, 2019	10.8	
10.9#	Offer Letter, dated August 2, 2017, by and between the Registrant and Kathleen Patton.	10-K	001-38233	February 28, 2019	10.9	
10.10#	Offer Letter, dated December 4, 2015, by and between the Registrant and Scot Fredo.	10-K	001-38233	February 12, 2021	10.10	
10.11#	Offer Letter, dated March 7, 2008, by and between the Registrant and Kyle Lomeli.	10-Q	001-38233	August 6, 2020	10.1	
10.12#	Offer Letter, dated December 29, 2015, by and between the Registrant and Sarah Welch.	10-Q	001-38233	August 6, 2020	10.2	

10.13	Lease, dated as of October 8, 2014, by and between the Registrant and BCSP Cambridge Two Property LLC.	S-1	333-220495	September 15, 2017	10.8	
10.14	Office Lease Agreement, dated as of March 11, 2016, by and between 55 Cambridge Parkway, LLC and the Registrant.	S-1	333-220495	September 15, 2017	10.9	
10.15	First Amendment to Lease, dated as of July 30, 2016 by and between 55 Cambridge Parkway, LLC and the Registrant.	S-1	333-220495	September 15, 2017	10.10	
10.16#	CarGurus, Inc. Annual Incentive Plan.	8-K/A	001-38233	April 6, 2018	10.1	
10.17	Lease Agreement, dated as of June 19, 2018, by and between US Parcel A, LLC and the Registrant.	8-K	001-38233	June 20, 2018	10.1	
10.18	Second Amendment to Lease, dated as of August 30, 2019 by and between 55 Cambridge Parkway, LLC and the Registrant.	10-Q	001-38233	November 5, 2019	10.1	
10.19	Indenture of Lease between S&A P-12 Property LLC and the Registrant, dated as of December 19, 2019.	8-K	001-38233	December 20, 2019	10.1	
10.20	First Amendment to Lease between S&A P-12 Property LLC and the Registrant, dated as of June 12, 2020.	10-Q	001-38233	August 6, 2020	10.3	
10.21	Third Amendment to Lease, dated as of July 1, 2020, between 55 Cambridge Parkway, LLC and the Registrant.	10-Q	001-38233	November 5, 2020	10.1	
10.22	First Amendment to Lease, dated as of October 27, 2015, between BCSP Cambridge Two Property, LLC and the Registrant.	10-Q	001-38233	November 5, 2020	10.2	
10.23	Second Amendment to Lease, dated as of September 28, 2020, between Two Canal Park Massachusetts, LLC, as successor-in-interest to BCSP Cambridge Two Property, LLC, and the Registrant.	10-Q	001-38233	November 5, 2020	10.3	
10.24#	Separation Agreement, dated November 13, 2020, by and between the Registrant and Kyle Lomeli.	8-K	001-38233	November 17, 2020	10.1	
10.25#	Amendment to Separation Agreement, dated May 4, 2021, by and between the Registrant and Kyle Lomeli.	10-Q	001-38233	May 7, 2021	10.4	
10.26#	Consulting Agreement, dated November 13, 2020, by and between the Registrant and Kyle Lomeli.	8-K	001-38233	November 17, 2020	10.2	
10.27	Third Amended and Restated Limited Liability Company Agreement, dated November 23, 2021, by and among the Registrant, TopCo, the Members of TopCo, and CarOffer MidCo, LLC.					X
10.28#	Separation Agreement, dated November 16, 2021, by and between the Registrant and Sarah Welch.					X
10.29	Sublease, dated October 6, 2021, by and between the Registrant and HubSpot, Inc.					X
10.30	Sublease, dated December 23, 2021, by and between the Registrant and Amylyx Pharmaceuticals, Inc.					X
10.31#	Form of Amendment to Performance Restricted Stock Unit Agreement.					X
21.1	List of Subsidiaries of the Registrant.					X

23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.	X
31.1	Certification of Principal Executive Officer 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.	X
31.2	Certification of Principal Financial Officer 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.	X
32.1*	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X
32.2*	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X
101.INS	Inline XBRL Instance Document- the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.	X
101.SCH	Inline XBRL Taxonomy Extension Schema Document.	X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.	X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.	X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.	X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.	X
104	The cover page from the Company’s Annual Report on Form 10-K for the year ended December 31, 2021 has been formatted in Inline XBRL.	X

# 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.

CarGurus, Inc.

Date: February 24, 2022

By: /s/ Jason Trevisan
Jason Trevisan
Chief Executive Officer

POWER OF ATTORNEY

Each person whose individual signature appears below hereby constitutes and appoints Jason Trevisan and Scot Fredo, 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
/s/ Jason Trevisan Jason Trevisan	Chief Executive Officer and Director *(Principal Executive Officer)*	February 24, 2022
/s/ Scot Fredo Scot Fredo	Chief Financial Officer *(Principal Financial Officer)*	February 24, 2022
/s/ Yann Gellot Yann Gellot	Senior Vice President, Finance *(Principal Accounting Officer)*	February 24, 2022
/s/ Langley Steinert Langley Steinert	Executive Chairman and Chairman of the Board of Directors	February 24, 2022
/s/ Steven Conine Steven Conine	Director	February 24, 2022
/s/ Yvonne Hao Yvonne Hao	Director	February 24, 2022
/s/ Lori Hickok Lori Hickok	Director	February 24, 2022
/s/ Stephen Kaufer Stephen Kaufer	Director	February 24, 2022
/s/ Greg Schwartz Greg Schwartz	Director	February 24, 2022
/s/ Ian Smith Ian Smith	Director	February 24, 2022

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CarGurus®

CORPORATE INFORMATION

Board of Directors

- Langley Steinert, *Founder, Executive Chairman and Chairman of the Board*
- Steven Conine, *Co-Founder and Co-Chairman of Wayfair Inc.*
- Yvonne Hao, *Co-Founder, Managing Director and Advisor of Cove Hill Partners*
- Lori Hickok, *former Executive Vice President, Chief Financial and Development Officer of Scripps Networks Interactive, Inc.*
- Stephen Kaufer, *Co-Founder, President and Chief Executive Officer of TripAdvisor, Inc.*
- Greg Schwartz, *Co-Founder, Chief Executive Officer and Chairman of Tomo Networks Inc.*
- Ian Smith, *Managing Director at Allen & Company LLC*
- Jason Trevisan, *Chief Executive Officer*

Executive Officers

- Langley Steinert, *Executive Chairman and Chairman of the Board*
- Jason Trevisan, *Chief Executive Officer*
- Samuel Zales, *Chief Operating Officer and President*
- Thomas Caputo, *Chief Product Officer*
- Andrea Eldridge, *Chief People Officer*
- Scot Fredo, *Chief Financial Officer, Treasurer and Secretary*
- Matthew Quinn, *Chief Technology Officer*
- Dafna Sarnoff, *Chief Marketing Officer*

Corporate Headquarters

- 2 Canal Park, 4th Floor, Cambridge, MA 02141, USA

2022 Annual Meeting of Stockholders

- Our annual meeting is being held virtually on Tuesday, June 7, 2022 at 3:00 p.m., Eastern Time, conducted via live audio webcast at www.virtualshareholdermeeting.com/CARG2022.

Requests for Reports and Other Stockholder Inquiries

- Our quarterly and annual reports, including Forms 10-Q and 10-K, are available on the investor relations section of our website: https://investors.cargurus.com. Requests for additional copies and other stockholder inquiries should be directed to: CarGurus, Inc., Attn: Investor Relations, 2 Canal Park, 4th Floor, Cambridge, MA 02141, USA.

Stock Exchange Listing

- Our Class A common stock is listed on the Nasdaq Global Select Market under the symbol "CARG".

Stock Transfer Agent

- Broadridge Financial Solutions, Inc., Edgewood, NY, USA

Independent Registered Public Accounting Firm

- Ernst & Young LLP, Cambridge, MA, USA

This Annual Report includes forward-looking statements about our future results of operations, our mission, business strategies and plans, business environment and future growth. These statements are subject to risks and uncertainties (including those identified in the "Risk Factors" section of the Form 10-K included in this Annual Report), and our actual results could be materially different. Forward-looking statements represent our beliefs and assumptions only as of the date of this Annual Report and we have no obligation to update them.

CarGurus®

2 Canal Park
Cambridge, MA 02141
USA