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

FORM 10-K

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

For the fiscal year ended **December 31, 2022**

OR

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

Commission File Number: **001-36853**

ZILLOW GROUP, INC.

(Exact name of registrant as specified in its charter)

Washington
(State or other jurisdiction of
incorporation or organization)

47-1645716
(I.R.S. Employer
Identification No.)

1301 Second Avenue, Floor 31,
Seattle, Washington 98101
(Address of principal executive offices) (Zip Code)
(206) 470-7000
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock, par value \$0.0001 per share	ZG	The Nasdaq Global Select Market
Class C Capital Stock, par value \$0.0001 per share	Z	The 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 Section 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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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

Indicate by check mark whether the registrant 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. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

As of June 30, 2022, the last business day of the Registrant's most recently completed second fiscal quarter, the aggregate market value of the Registrant's Class A common stock and Class C capital stock held by non-affiliates based upon the closing price of such shares on The Nasdaq Global Select Market on such date was \$6,875,716,337.

As of February 9, 2023, 57,494,698 shares of Class A common stock, 6,217,447 shares of Class B common stock, and 170,631,589 shares of Class C capital stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

The information required by Part III of this Report, to the extent not set forth herein, is incorporated in this Report by reference to the Registrant's definitive proxy statement relating to the 2023 annual meeting of shareholders. The definitive proxy statement will be filed with the Securities and Exchange Commission within 120 days after the end of the 2022 fiscal year.

ZILLOW GROUP, INC.
Annual Report on Form 10-K
for the Fiscal Year Ended December 31, 2022

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As used in this Annual Report on Form 10-K, the terms “Zillow Group,” “the Company,” “we,” “us” and “our” refer to Zillow Group, Inc., unless the context indicates otherwise.

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, including the sections titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” “Risk Factors” and “Business,” contains forward-looking statements based on our management’s beliefs and assumptions and on information currently available to our management. Forward-looking statements include all statements that are not historical facts and generally may be identified by terms such as “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “could,” “would,” “project,” “plan,” “expect” or the negative or plural of these words or similar expressions.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those risks, uncertainties and assumptions described in Part I, Item 1A (Risk Factors) of this report, including, but not limited to risks related to:

- the current and future health and stability of the economy, financial conditions and residential housing market, including any extended downturn or slowdown;
- changes in general economic and financial conditions (including federal monetary policy, interest rates, inflation, home price fluctuations, housing inventory, labor shortages and supply chain issues) that may reduce demand for our products and services, lower our profitability or reduce our access to financing;
- investment of resources to pursue strategies and develop new products and services that may not prove effective or that are not attractive to customers and real estate partners or that do not allow us to compete successfully;
- ability to comply with multiple listing service rules and requirements to access and use listing data, and to maintain or establish relationships with listings and data providers;
- ability to obtain or maintain licenses and permits to support our current and future businesses;
- ability to operate and grow our mortgage origination business, including the ability to obtain sufficient financing and resell originated mortgages on the secondary market;
- the duration and impact of natural disasters and other catastrophic events (including public health crises) on our ability to operate, on demand for our products or services, or on general economic conditions;
- acquisitions, strategic partnerships, joint ventures, capital-raising activities or other corporate transactions or commitments by us or our competitors;
- ability to manage advertising inventory and pricing;
- effectivity of our technology and information security systems, or those of third parties on which we rely;
- actual or anticipated fluctuations in our financial condition and results of operations;
- changes in projected operational and financial results;
- ability to protect the information and privacy of our customers and other third parties;
- ability to attract and retain qualified employees and key personnel;
- ability to protect our brand and intellectual property;
- changes in laws or government regulation affecting our business; and
- the impact of pending or future litigation or regulatory actions.

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

You should not rely on forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, except as required by law, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements, and we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this report to conform these statements to actual results or to changes in our expectations.

In addition, statements such as “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based on information available to us as of the date of this Annual Report on Form 10-K. While we believe that such information provides a reasonable basis for these statements, that information may be limited or incomplete. Our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all relevant information. These statements are inherently uncertain, and investors are cautioned not to unduly rely on these statements.

NOTE REGARDING INDUSTRY AND MARKET DATA

This Annual Report on Form 10-K contains market and industry data that are based on our own internal estimates and research, as well as independent industry publications, trade or business organizations and other published statistical information from third parties. Third-party information generally states that the information contained therein has been obtained from sources believed to be reliable. While we are not aware of any misstatements regarding this third-party information, we have not independently verified any of the data from third-party sources nor have we validated the underlying economic assumptions relied on therein. The content of, or accessibility through, these market and industry data sources, except to the extent specifically set forth in this Annual Report on Form 10-K, does not constitute a portion of this report and are not incorporated herein, and any sources are an inactive textual reference only.

PART I

Item 1. Business.

Overview

We are reimagining real estate to make it easier to unlock life's next chapter. As the most visited real estate website in the United States, Zillow and its affiliates and partners offer customers an on-demand experience for selling, buying, renting or financing with transparency and ease. Hundreds of millions of people visit our mobile applications and websites every month to begin their journey.

At the core of Zillow is our living database of approximately 140 million U.S. homes and our differentiated content, most notably the Zestimate, our patented proprietary automated valuation model through which we provide home value estimates. With the launch of the Zestimate in 2006, we introduced important transparency to residential real estate in order to empower consumers to make better decisions. During 2022, our Zestimate had a median error rate of 2.7% for homes listed for sale and 7.6% for off-market homes. We believe our data and content has helped the Zillow brand become synonymous with residential real estate.

Our vision of a "housing super app" is to help customers across all their real estate needs serving as one ecosystem of connected solutions for all the tasks and services related to moving. We are focused on increasing customer transactions and revenue per customer transaction, which measures revenue attributable to each unique home purchase or sale transaction in which the homebuyer or seller uses Zillow Home Loans, Zillow Closing Services and/or involves a Premier Agent with whom the buyer or seller connected through Zillow Group. We estimate Zillow participated in approximately 360,000 customer transactions with both buyers and sellers in 2021, which is the first time we reported this metric. We anticipate providing this metric for 2022 in a future quarter. We believe focusing on these growth metrics allows us to build closer relationships with our customers to help them find and move into the places they call home, which is at the core of our mission. We also believe that the path to improving our growth metrics and "housing super app" vision involves product initiatives within five key growth pillars:

- *Touring* – Make it easier for high-intent customers to take in-person tours and connect with our partner agents
- *Financing* – Prepare customers to be transaction-ready with financing early in their home buying journey
- *Expanding seller services* – Continue to innovate on novel solutions to help sellers and seller agents
- *Enhancing our partner network* – Work with the best agents in real estate
- *Integrating our services* – Bring our engagement, products and services together to drive more transactions and more revenue per customer transaction

Prior to January 1, 2023, our business was organized into three segments, the Internet, Media & Technology ("IMT") segment, the Mortgages segment and the Homes segment. These segments reflect the way we evaluated business performance and managed our operations. The IMT segment includes the financial results for the Premier Agent and rentals marketplaces (including StreetEasy rentals product offerings) as well as Other IMT, which includes our new construction marketplace and revenue from the sale of other advertising and business technology solutions for real estate professionals, including display, StreetEasy for-sale product offerings and ShowingTime+, which houses ShowingTime, Bridge Interactive, dotloop and interactive floor plans. The Mortgages segment primarily includes financial results for mortgage originations through Zillow Home Loans and advertising sold to mortgage lenders and other mortgage professionals. The Homes segment includes the financial results from title and escrow services performed by Zillow Closing Services and certain indirect costs of the Homes segment which do not qualify as discontinued operations. Beginning in 2023, our chief operating decision maker began to manage our business, make operating decisions, and evaluate operating performance on the basis of the company as a whole. Accordingly, this change resulted in revisions to the nature and substance of information regularly provided to and used by the chief operating decision maker. This serves to align our reported results with our ongoing growth strategy and our intent to provide integrated customer solutions for all tasks and services related to facilitating real estate transactions. As a result, beginning in the first quarter of 2023, we plan to report our financial results as a single reportable segment.

In the fourth quarter of 2021, the Board of Directors of Zillow Group made the determination to wind down Zillow Offers, our iBuying business which purchased and sold homes directly in markets across the United States. The wind down was completed in the third quarter of 2022 and resulted in approximately a 25% reduction of Zillow Group's workforce. The

financial results of Zillow Offers have been presented in the accompanying consolidated financial statements as discontinued operations. For additional information, see Part II, Item 8 in Note 3 in our Notes to the Consolidated Financial Statements of this Annual Report on Form 10-K.

Customer Offerings

To deliver on our mission, we strive to provide a seamless, integrated transaction experience for movers through Zillow, our network of trusted partners, and affiliated brands. We do this through a range of services designed to help our customers in whatever stage of the home buying journey they may be in. This typically includes the need for multiple services simultaneously. Approximately 71%¹ of sellers are also buying at the same time, and among renters with plans to move within the next year, 45%² plan to buy their next home.

Our services are primarily designed for the following:

For Buyers, Sellers and Partners – When a buyer is ready to begin their home buying journey, we offer a variety of options depending on where they choose to start. After searching for a home on our mobile applications and websites, customers can choose to meet with a local real estate professional by connecting with a Premier Agent partner, schedule an in-person home tour or obtain financing through Zillow Home Loans. For customers who are focused on buying new construction homes, we connect them with our home builder partners. Once buyers find their home, they can choose to work with our Premier Agent partners and affiliated integrated services, including financing through Zillow Home Loans and title and escrow services through Zillow Closing Services, to facilitate a seamless transaction experience. For sellers, we are focused on providing multiple offerings for customers to find ways to sell their homes. For instance, we launched an exclusive multi-year partnership with Opendoor to provide our customers with the option to get a cash offer on their home. We have also announced the launch of ShowingTime+, a new brand to integrate and simplify Zillow’s technology offerings for agents, brokers and multiple listing services (“MLSs”).

For Renters – Over 67% more households move to a new rental than homes are sold in the U.S. (over 9.5 million leases executed³ versus 5.7 million homes sold⁴, comprised of 5.1 million existing homes sold⁴ and 0.6 million new homes sold⁴). Our rentals marketplace assists our partners with listings, advertising, and leasing services in the U.S. market of nearly 47 million rental units.⁵ We connect prospective renters with our property management and landlord partners in the Zillow Rental Network, which provides landlords access to the most visited online rental network⁶. We also provide renters with the ability to easily submit applications, sign leases and make rental payments through our platform.

For Borrowers – Approximately 87% of homes purchased in the U.S. are financed with mortgage debt⁷. We provide our customers with multiple ways to pursue mortgage financing for their transaction. We provide customers with the option to finance directly with Zillow Home Loans or to connect with our mortgage partners through our mortgage marketplace for both purchase and refinance opportunities. Zillow Home Loans, which is currently available in 48 states and jurisdictions, originates mortgage loans and then sells the loans on the secondary market.

Competitive Advantages

We believe we have the following competitive advantages:

- *Large and trusted brand.* The Zillow Group portfolio attracted an annual monthly high of 245 million unique users in August 2022 and approximately 10.5 billion visits in 2022, primarily to Zillow, Trulia and StreetEasy. Today, more people search for “Zillow” than “real estate,”⁸ and Zillow is the most visited⁹ and trusted¹⁰ brand in the online real estate industry.

¹ Source: Zillow Group’s 2022 Consumer Housing Trends Report

² Source: Zillow Group’s 2022 Consumer Housing Trends Report

³ Source: 2021 American Community Survey

⁴ December 2022 Economic Data published by the National Association of REALTORS®

⁵ Source: 2022 U.S. Census’ Current Population Survey

⁶ Source: 2022 Comscore Media Metrix® report

⁷ Source: National Association of REALTORS® “2022 Home Buyers and Sellers Generational Trends Report”

⁸ Source: 2022 Google Trends report

⁹ Source: 2022 Comscore Media Metrix® report

¹⁰ Source: 2022 Life Story® research

- *Living database of homes and superior data science and technology advantages.* Our living database of approximately 140 million U.S. homes is the result of substantial investment, sophisticated economic and statistical analysis and complex data aggregation of multiple sources of property, transaction and listing data, including user updates to more than 41 million property records. This data is the foundation of our proprietary Zestimate, Rent Zestimate, Zestimate Forecast and Zillow Home Value Index.
- *Superior industry partnerships.* Zillow Group partners with thousands of the most productive names in real estate, maintaining strong partnerships with leading real estate agents, brokers, mortgage professionals, property managers, landlords, home builders, regional MLSs and more. Zillow is a licensed brokerage entity, which serves to enhance our partnership with MLSs. We partner with high-performing and service-focused industry partners who share our interests in providing the best-possible services to our shared customers. Continually enhancing our partner network enables us to implement scalable testing of products and features, send more customers to our best-performing partners and offer our shared customers an improved mortgage product experience.
- *Experienced, proven management team.* We have a highly experienced management team who have successfully built Zillow and other brands into category leaders. We continue to add and develop executive talent with deep experience in building transaction-focused real estate, mortgage and e-commerce businesses. The skills and experiences of our management team provide strategic insights and abilities to deliver a seamless real estate transaction experience for our customers.
- *Strong culture of innovation and inclusion.* Zillow Group has built an award-winning culture of collaboration and innovation that is committed to employee equity and creating an environment where employees feel valued, supported and that they belong. We have been recognized for our commitment to these efforts, being named on the “Corporate Equality Index 2022” with a perfect score of 100 and “Best Place to Work for LGBTQ+ Equality”¹¹. Additionally, in 2022, Zillow Group was named one of the Best Workplaces for Real Estate, for Millennials, for Parents and for Women¹². Zillow Group was also named one of the Fortune 100 Best Companies to Work For® 2022 and was included on Bloomberg’s “2022 Gender Equality Index” and PEOPLE®’s 2022 “Companies That Care” list.
- *Strong financial position.* Our cash position, operating cash flow and now less capital-intensive operations as a result of the wind down of Zillow Offers, give us the flexibility to continue to invest in our growth strategy despite recent economic uncertainty and a volatile interest rate environment. We are mindful of our costs, while prioritizing our investments to drive our growth pillars and pursue the large opportunities we see ahead of us.

Total Addressable Market

We participate in large addressable markets of buying, selling, renting and financing residential real estate in the U.S. Our Total Addressable Market (“TAM”) includes Zillow’s estimate of total industry transaction fees derived from residential real estate transactions. In addition, we provide important adjacent services, including mortgages through Zillow Home Loans and title and escrow services through Zillow Closing Services. Our TAM also includes our complementary rentals marketplace which includes rentals advertising and property management software spend. The amounts listed below represent the estimated total industry size associated with these opportunities for the year ended December 31, 2022 (in billions):

¹¹ Source: Human Rights Campaign Foundation

¹² Source: Great Place to Work®

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Residential real estate industry transaction fees ¹³	\$	96
U.S. mortgage origination revenue ¹⁴		76
Title and escrow services transaction fees ¹⁵		20
Rentals advertising spend ¹⁶		11
Property management software revenue ¹⁷		7
TAM	\$	210

We also may explore additional opportunities in the future. The amounts listed in the table below represent the estimated total industry size associated with these additional opportunities (in billions):

Home insurance ¹⁸	\$	121
Home renovation services ¹⁹		657
Moving services ²⁰		19
Home appraisal services ²¹		10

Seasonality

Portions of our business are affected by seasonal fluctuations in the residential real estate market, advertising spending, and other factors. Traffic to our mobile applications and websites and resulting customer actions, such as real estate transactions, have historically peaked during the spring and summer months, consistent with peak residential real estate activity. For further discussion on seasonality, see our Quarterly Results of Operations in Part II, Item 7 of this Annual Report on Form 10-K.

¹³ Source: December 2022 Economic Data published by the National Association of REALTORS®; estimate derived from annual existing home sales data and average industry commission rates

¹⁴ Sources: 2022 Mortgage Bankers Association Reports; estimate derived from annual purchase and refinance mortgage origination volumes and average industry origination fees

¹⁵ Sources: American Land and Title press release dated May 6, 2022 and December 2022 Economic Data published by the National Association of REALTORS®; estimate derived from annual existing home sales and average industry title and escrow fee rates

¹⁶ Sources: November 2022 housing statistics published by the U.S. Census Bureau and Zillow Group internal data and estimates; estimate derived from annual rental unit inventory, average industry turnover rates and average industry advertising costs

¹⁷ Source: April 2022 report published by Fortune Business Insights which estimates North America's annual property management market opportunity

¹⁸ Source: August 2021 report published by IBISWorld which estimates the annual homeowners' insurance market opportunity

¹⁹ Source: 2022 Economy of Everything Home report published by Angi Inc. which estimates the annual home services market opportunity, inclusive of home improvements, home maintenance and home emergency repairs

²⁰ Source: June 2022 report published by IBISWorld which estimates the annual moving services market opportunity

²¹ Source: October 2022 report published by IBIS World which estimates the annual real estate appraisal services market opportunity

Competition

Our business depends on our ability to successfully attract, retain and provide customers with products and services that make real estate transactions faster, easier and less stressful.

The residential real estate landscape is highly fragmented and competitive from the beginning of the search process through the closing of a transaction, typically with single point service providers and new entrants joining at a rapid pace. Approximately 5.7 million existing and new homes were sold in the U.S. in 2022²², with over 202,000 real estate brokerages²³ and over 68,000 mortgage lenders²⁴ providing their services across more than 500 different MLSs that span the country²⁵. Zillow Home Loans currently makes up less than 0.05% of the mortgages originated in the U.S.

We compete for customers with companies that provide technology, products and services for real estate focused customers. Factors that may influence customer decisions include the quality of the experience, value and utility of the services offered, the breadth, depth and accuracy of information available, and brand awareness and reputation. For example, our Premier Agent business competes for customers based on price, visibility, perceived and actual value and quality of service. For customers shopping for a mortgage, Zillow Home Loans competes with other mortgage originators based on a combination of interest rates, origination fees, product selection, brand awareness and trust and the level of service we provide.

In addition, our business depends on our ability to attract and retain leading industry partners to advertise and provide services to our customer base. We compete for real estate partners based on the perceived transaction readiness of customers, return on investment, price and product offerings and the effectiveness and relevance of our products and services. Based on these and other factors, real estate partners could select other companies to work with to provide real estate, rental, new construction and mortgage information and services to real estate professionals, local brokerage sites and major internet portals, general search engines, e-commerce and social media sites. We also compete for a share of our partners' overall marketing budgets with traditional media as well as word-of-mouth referrals and leads from yard signs and other marketing.

Intellectual Property

We regard our intellectual property as a key differentiator that is critical to our success and rely on a combination of intellectual property laws, trade-secret protection, and contractual agreements to protect our proprietary technology and data.

Our Zestimate, which we consider to be a significant competitive advantage with respect to customer engagement, leverages patented, proprietary, automated valuation models to provide real-time home value estimates. As of December 31, 2022, we have 102 patents of varying lengths issued and 152 patent applications pending in the U.S. and internationally. These patents cover a variety of proprietary techniques relevant to our products and services, including determining a current value for real estate property and the collection, storage and display of home attribute values and creating interactive floor plans.

In addition, awareness and loyalty to our brand enables us to effectively attract and retain our customers. To support our brand, we have registered, or applied for the registration of, trademarks, service marks and copyrights in the U.S. and several other jurisdictions, including "Zillow," "Zestimate," and the Z in a house logo. We are also the registered holder of a variety of domestic and international domain names. We have licensed in the past, and we may license in the future, certain of our proprietary rights to third parties.

To further protect our proprietary rights, we enter into confidentiality and proprietary rights agreements with our employees, consultants, contractors and business partners. Our employees and contractors are also subject to invention assignment provisions. We control the use of our proprietary technology, data and intellectual property through provisions in both our general and product-specific terms of use and other restrictions on our mobile applications and websites.

Government Regulation

We operate in an increasingly complex legal and regulatory environment. Our business and the products and services that we offer are affected by a continually expanding and evolving range of local, state, federal, and international laws and regulations. For additional information on government regulation refer to Part I, Item 1A (Risk Factors) of this Annual Report on Form 10-K.

²² Source: December 2022 Economic Data published by the National Association of REALTORS®

²³ Source: National Association of REALTORS®

²⁴ Source: 2022 Nationwide Mortgage Licensing System Industry Report

²⁵ Source: Real Estate Standards Organization in 2022

Human Capital Resources

At Zillow, we believe that our long-term success is dependent upon attracting, developing and retaining talented employees, and maintaining a culture that allows each employee to do their best work. We value integrity, accountability, collaboration, creativity, respect and transparency as central to our core values.

As of December 31, 2022, we had 5,724 employees. Our internal data shows that 52% of our workforce self-identified as men and 48% self-identified as women, with women representing 40% of our leadership team (defined as director level and above). The ethnicity of our workforce was 59% White, 20% Asian, 8% LatinX, 8% Black and 5% for all other races. For leadership, the breakdown was 73% White, 16% Asian, 5% Black, 4% LatinX and 2% for all other races. The diversity of our workforce and leadership team continues to be an area of focus.

In connection with the wind down of Zillow Offers operations and other cost reduction measures, we reduced our workforce by approximately 25% in 2022, primarily during the first half of the year.

Zillow as a Flexible Workforce

Our focus on employees throughout 2022 has been critically important in light of the unique challenges brought on by evolving working norms and employee preferences. We are redefining the employee experience and the future of flexible work, beginning with our announcement of a permanent move to a flexible workforce in late 2020. In addition, we updated our compensation philosophy to view our roles competitively nationally and not just locally, in support of our flexible work philosophy of employees being able to work from anywhere in the United States and Canada. Our base pay compensation frameworks prioritize performance over geographic location when making pay decisions. As we have transitioned to a flexible workforce, we are also using this opportunity to diversify our workforce, as we are no longer bound by the geographic limits of our physical workspaces.

We expect that our offices will continue to be a place for teams to come together to enable productivity and collaboration, though on a far less frequent basis. Since our permanent move to a flexible workforce, we have redesigned our physical workspaces to provide more space for collaboration and engagement, especially to support team gatherings.

We continue to evolve our flexible work model to more effectively use our time together, provide more opportunities to work asynchronously, and allow all employees to thrive regardless of location. By implementing company-wide core collaboration hours and flexible working hours to enable employees to build their work life around their home life, we are resetting the expectation of availability and providing greater flexibility in how we work. In 2023, our focus will be on balancing flexible work with impactful in-person connections, where cross-functional teams and organizations come together periodically to build connections, trust and collaborate in person.

Equity and Belonging

We are committed to creating a workplace where diversity of gender, gender identity, age, race, ethnicity, sexual orientation, national origin, disability, military status and religion are represented, embraced and respected. Our dedicated Equity and Belonging team empowers Zillow Group employees to build a strong community, amplify underrepresented voices, and foster a company culture where everyone can learn, grow and thrive. We maintain equity and belonging programs that include unconscious bias training, nine employee-led affinity networks for community members and allies, and support diversity in our recruitment practices.

Pay Equity

Zillow Group is committed to ensuring all employees in similar roles with similar qualifications are paid equitably regardless of their identity. In support of this commitment, we complete a comprehensive annual evaluation with the commitment to disclose results publicly on our corporate website. Based on our assessment of compensation in 2022, we have found that women and men with similar skills are paid within approximately 1% of each other when we control for job title and function. At Zillow Group, in 2022, White women, Black men and LatinX women and men had controlled pay of \$0.99 and Black women had controlled pay at \$0.98. Asian women and men at Zillow Group had pay equity of \$1.01.

While intersectionality of gender and ethnicity in our pay equity data is something we began assessing in 2020 and progress has been shown, we cannot ignore the disparities and recognize our work must continue. We will continue our commitment and comprehensive reviews of pay equity and will look to expand our data collection and analysis to include LGBTQ+ data in the future. We were included in the 2022 Bloomberg Gender Equality Index, which measures equality across internal company statistics, employee policies and practices and external community support and engagement.

Career and Leadership Development

At Zillow Group, we believe each of our employees should have the tools and support they need to grow their careers through experiences, resources and connections. We have a dedicated Talent Success team, which creates educational resources and conducts training on a wide range of topics including job-specific onboarding, effective communication, collaboration, as well as sophisticated leadership training programs and experiences with focused learning tracks for both new managers and experienced leaders. In 2022, we offered over 900 online learning opportunities through Zillow University, our internal online training platform. Zillow Group employees have completed nearly 60,000 hours of content in 2022 on Zillow University and LinkedIn Learning.

A key piece in development is cultivating a learning culture where learning is a habit, and learning agility is at the forefront. This means creating the right learning resources for our employees for their current and future roles. We have developed a robust Learning & Development portfolio that includes a number of key career development programs that support our employees to equip them with the knowledge and experience to grow their careers. Below is a summary of certain of these programs:

- Leadership Entrance Experience Program (LEEP) is a self-paced curriculum designed for individual contributors who want to explore people management and develop their leadership skills.
- Career Pathways Program provides employees with access to skills, connections and experiences aimed at creating development opportunities through cross-functional roles.
- Professional skills development through courses like Public Speaking, Insights Discovery® workshops, and access to virtual coaching.

Our people managers play a critical role in moving our business forward by coaching their team, developing their talent and providing strong communication to create team engagement. To help achieve this goal, we utilize our Leadership Blueprint, a leadership development guide that outlines our Leadership Philosophy, our expectations for leaders and the behaviors that are essential to create a consistent leadership experience at Zillow Group. The Blueprint provides the foundation of our leadership development programs.

To ensure an even smoother transition from Senior Director roles to Vice President, we provide new executives with additional support, including an executive coach and access to senior executive leadership roundtable discussions. Externally hired executives are also provided with extra tools and support to ensure their success. We also provide specific programming for Zillow Group women executives, which aims to build better relationships and connections and provide additional professional and leadership development. We are continuing to work to instill strong, consistent leadership that will lead us into the workplace of the future.

Talent Rewards

Talent Rewards includes the strategic oversight of compensation, benefits, and immigration/mobility programs whose purpose is to reinforce talent attraction, retention and development in support of Zillow's culture. Throughout 2022, the labor market remained highly competitive and as a result, we have continued to refine our rewards program. We have increased transparency and consistency in our candidate offers through a redesign of our total compensation package. We conduct ongoing reviews of employee compensation to ensure that our employees are paid fairly and in alignment with market expectations. In conjunction with these ongoing compensation reviews, in August 2022, upon recommendation of the Compensation Committee, the Board of Directors approved adjustments to the exercise price of certain outstanding vested and unvested option awards for eligible employees. In addition, the Board of Directors approved a supplemental grant of restricted stock units to eligible employees, which were granted in August 2022 and began vesting quarterly over a two-year period beginning in August 2022. For additional information, see Part II, Item 8 in Note 16 in our Notes to the Consolidated Financial Statements of this Annual Report on Form 10-K.

In addition, our robust benefits are reflected in investments in physical, family, mental and financial wellness programs to meet the needs of our diverse base of employees. These benefits include workplace-location flexibility, competitive health care coverage, fully paid parental leave, a sabbatical program, wellness reimbursements, tuition support and caregiver resources. We have also updated our benefits program through enhanced offerings around mental health, LGBTQ+ provider navigation support, as well as fertility and family planning. Beginning in 2023, we have enhanced our parental leave policy, which now allows for up to 20 weeks of paid parental leave. These ongoing investments continue to reinforce Zillow's commitment to an equitable, healthy, focused and dedicated workforce.

Where You Can Find More Information

Our filings with the Securities and Exchange Commission, or SEC, including our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports, are available on the “Investors” section of our website at www.zillowgroup.com, free of charge, as soon as reasonably practicable after the electronic filing of these reports with the SEC. The information contained on our website is not a part of this Annual Report on Form 10-K or any other document we file with the SEC.

Investors and others should note that Zillow Group announces material financial information to its investors using its press releases, SEC filings and public conference calls and webcasts. Zillow Group intends to also use the following channels as a means of disclosing information about Zillow Group, its services and other matters and for complying with its disclosure obligations under Regulation FD:

- Zillow Group Investor Relations Webpage (<https://investors.zillowgroup.com>)
- Zillow Group Blog (<https://www.zillowgroup.com/news/>)
- Zillow Group Twitter Account (<https://twitter.com/zillowgroup>)

The information Zillow Group posts through these channels may be deemed material. Accordingly, investors should monitor these channels, in addition to following Zillow Group’s press releases, SEC filings and public conference calls and webcasts. This list may be updated from time to time and reflects current updated channels as of the date of this Annual Report on Form 10-K. The information we post through these channels is not a part of this Annual Report on Form 10-K or any other document we file with the SEC, and the inclusion of our website addresses and Twitter account are as inactive textual references only.

Item 1A. Risk Factors.

Risk Factor Summary

Below is a summary of the principal factors that we believe make an investment in Zillow Group speculative or risky. This summary does not address all of the risks that we face. Additional discussion of the risks summarized in this risk factor summary, and other risks that we face, can be found after this summary, and should be carefully considered, together with other information in this Annual Report on Form 10-K and our other filings with the Securities and Exchange Commission ("SEC") before making an investment decision regarding Zillow Group, including investment in our Class A common stock or Class C capital stock.

Risks Related to Our Business and Industry

- Our business has and may continue to be impacted by the current and future health and stability of the economy and United States residential real estate industry, including inflationary conditions, interest rates, housing availability and affordability, labor shortages and supply chain issues.
- Our business could be harmed if our real estate partners reduce or end their advertising spending with us or if we are unable to effectively manage advertising inventory or pricing.
- We may not be able to establish or maintain relationships with listing and data providers, which could adversely affect traffic to our mobile applications and websites.
- If we do not comply with MLS rules and requirements, our use of listings data may be restricted.
- Our success depends on our ability to continue to innovate and compete successfully to attract customers and real estate partners.
- Zillow Home Loans depends on United States government-sponsored entities and government agencies, operates in a highly regulated industry, and may be unable to obtain or maintain sufficient financing to fund its origination of mortgages, may not meet customers' financing needs with its product offerings, may not be able to continue to grow its mortgage origination business, may not be able to resell originated mortgages on the secondary market, and may be impacted by interest rate and general market fluctuations.
- Natural disasters and catastrophic events (including pandemics such as COVID-19) may harm our business.
- If our data integrity suffers harm, our business may suffer and we may be held liable.
- Pending or future litigation and other disputes or enforcement actions may harm our business.
- Our success depends on attracting and retaining a highly skilled workforce.
- Acquisitions, investments, strategic partnerships, capital-raising activities, or other corporate transactions or commitments by us or our competitors could harm our business.
- Our fraud detection processes and information security systems may not be effective.
- We are subject to multiple risks related to accepting credit and debit card payments.
- If our security measures or technology systems, or those of third parties upon which we rely, are compromised or there is any significant disruption in service on our platforms or in our network, we may suffer significant losses and our business may be harmed.
- We rely on third-party services to support critical functions of our business.
- We have and may continue to be subject to outstanding real property or other claims following the wind down of our Zillow Offers operations.

Risks Related to Our Intellectual Property

- We may be unable to adequately protect or continue using our intellectual property or prevent others from copying, infringing upon, or developing similar intellectual property.
- We may be involved in costly intellectual property disputes and may be unable to adequately protect our intellectual property.
- Proprietary rights agreements with employees may not prevent disclosure of our proprietary information.

Risks Related to Regulatory Compliance and Legal Matters

- If we fail to comply with laws and regulations or to obtain or maintain required licenses, our business and operations could be harmed. At the same time, compliance with laws and regulations may be expensive and operationally burdensome.
- We are subject to stringent and evolving United States and Canadian laws, regulations, rules, contractual obligations, policies and other obligations related to data privacy and security. Our actual or perceived failure to comply with such obligations could lead to regulatory investigations or actions, litigation, fines and penalties, a disruption of our business operations, reputational harm, loss of revenue or profits, loss of customers and other adverse business consequences.
- We may be involved in proceedings that may result in adverse outcomes.

Risks Related to Our Financial Position

- Given current economic and residential housing market conditions and the significant changes to our business since November 2021, financial performance for prior and current periods may not be indicative of future performance.
- We have incurred significant operating losses in the past and may not be profitable over the long term.
- We may not be able to pay our debt, settle conversions of our convertible senior notes, or repurchase our convertible senior notes upon a fundamental change.
- Credit and debt facilities for Zillow Home Loans may subject us to interest rate risk and include provisions that may restrict our operating activities and harm our liquidity.
- We may not be able to raise additional capital or refinance on acceptable terms, or at all.
- Real or perceived inaccuracies in assumptions, estimates and data used to calculate our business metrics may harm our business or reputation.
- We expect our results of operations to fluctuate quarterly and annually.
- We could be subject to additional tax liabilities.
- Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

Risks Related to Ownership of Our Common and Capital Stock and Debt Instruments

- Our Class A common stock and Class C capital stock prices may be volatile and their value may decline.
- The structure of our capital stock concentrates voting control with our founders.
- Future sales of our stock could cause our stock price to decline.
- Securities, industry analyst or other third-party research and reports may affect our stock price and trading volume.
- Any additional equity securities or convertible debt we issue may dilute shareholders' investments.
- Currently outstanding and future use of capped call transactions may affect the value of our outstanding convertible senior notes and our Class C capital stock.
- Anti-takeover provisions could prevent an acquisition of us, limit shareholders' ability to affect management, and affect the price of our stock.

Our business is subject to numerous risks. You should carefully consider the following risk factors, as any of these risks could harm our business, results of operations, and future financial performance. Recovery pursuant to our insurance policies may not be available due to policy definitions of covered losses or other factors, and available insurance may be insufficient to compensate for damages, expenses, fines, penalties, and other losses we may incur as a result of these and other risks. In addition, risks and uncertainties not currently known to us or that we currently deem to be immaterial may materially and adversely affect our business, financial condition and operating results. If any of these risks occur, the trading price of our common and capital stock could decline, and you could lose all or part of your investment.

Risks Related to Our Business and Industry

Our Business and Operating Results Have and May Continue to Be Impacted by the Health of the United States Residential Real Estate Industry and May Be Negatively Affected by Downturns in This Industry and General Economic Conditions.

The success of our business depends, directly and indirectly, on the health of the United States residential real estate market. The health of the United States residential real estate market is affected, in part, by general economic conditions beyond our control. Recent market factors, including low housing inventory, fewer new for-sale listings, volatility in mortgage interest rates and home price fluctuations, inflationary conditions and high rental occupancy rates have impacted demand for our products and services by consumers and advertisers, which in turn has negatively impacted our financial performance. The extent to which these and additional economic factors, such as those described below, impact our results and financial position will depend on future developments, which are uncertain and difficult to predict:

- downturns in the United States residential real estate market – both seasonal and cyclical – which may be due to one or more factors, whether included in this list or not;
- changes in federal monetary policy or inflationary conditions;
- changes in international, national, regional, or local economic, demographic, or real estate market conditions;
- slow economic growth or recessionary conditions;
- increased levels of unemployment or a decrease in labor availability, and/or slowly growing or declining wages;
- declines in the value of residential real estate and/or the pace of home appreciation, or the lack thereof;
- illiquidity in residential real estate;

- overall conditions in the housing market, including macroeconomic shifts in demand, and increases in costs for homeowners such as property taxes, homeowners association fees and availability and affordability of insurance;
- low levels of customer confidence in the economy and/or the United States residential real estate industry;
- low home and/or rental inventory levels or lack of affordably priced homes and rentals;
- changes in interest rates, mortgage rates or down payment requirements and/or restrictions on mortgage financing availability;
- changes to real estate commissions;
- federal, state, or local legislative or regulatory changes that would negatively impact rental properties or the residential real estate industry, such as the Tax Cuts and Jobs Act of 2017 (the “Tax Act”), which limited deductions of certain mortgage interest expenses and property taxes;
- volatility and general declines in the stock market; and/or
- natural and man-made disasters and other catastrophic events, such as pandemics, hurricanes, earthquakes, wildfires, terrorist attacks and other events that disrupt local, regional, or national real estate markets.

If Real Estate, Rental and Mortgage Professionals, Home Builders, Property Managers or Other Real Estate Partners Reduce or End Their Advertising Spending With Us or if We Are Unable to Effectively Manage Advertising Inventory or Pricing, Our Business Could Be Harmed.

Our business depends in part on revenue generated through sales of advertising products and services to real estate agents and brokerages, rental professionals, mortgage professionals, home builders, property managers, and other real estate partners in categories relevant to real estate (collectively, “real estate partners”). Our ability to attract and retain real estate partners, and ultimately to generate advertising revenue, depends on a number of factors, including how successfully we can:

- increase the number of customers who use one or more of our products and services to effectuate transactions and the frequency of their use, provide them with tools to promote engagement between real estate market participants, and enhance their user experience so we can retain them;
- offer an attractive return on investment to our real estate partners for their advertising spending with us;
- continue to develop our advertising products and services to increase adoption by and engagement with our real estate partners;
- keep pace with and anticipate changes in technology to provide industry-leading products and services to real estate partners and customers; and
- compete effectively for advertising dollars with other options.

Premier Agent revenue accounted for 66% of total revenue for the year ended December 31, 2022. This level of revenue concentration suggests that even modest decreases in individual spending across the real estate partner population, caused by actual or perceived decreases to return on investment, preference for a competitive service, or other factors, could have a significant negative impact on our ability to use proceeds from our Premier Agent business to invest in our other businesses, which we view as a key competitive advantage. Any such decreases in spending could also adversely affect our results of operations. We do not have long-term contracts with many of our real estate partners. Our real estate partners could choose to modify or discontinue their relationships with us with little or no advance notice. For example, our auction-based account interface for Premier Agent partners allows agent partners to independently control the duration of their advertising commitments for varying terms.

We may not succeed in retaining existing real estate partners’ spending or capturing a greater share of such spending if we are unable to convince real estate partners of the effectiveness or superiority of our products as compared to alternatives. In addition, we continually evaluate and utilize various pricing and value delivery strategies in order to better align our revenue opportunities with the growth in usage of our mobile and web platforms and customer transactions. For example, we offer a pay for performance pricing model called “Flex” for Premier Agent advertising services in certain markets. With the Flex model, Premier Agents are provided with validated leads at no initial cost and pay a performance advertising fee only when a real estate transaction is closed with one of the leads. With this pricing model, the transaction price represents variable consideration, as the amount to which we expect to be entitled varies based on the number of validated leads that convert into real estate transactions and the value of those transactions. To estimate variable consideration and revenue associated with the Flex model, we use a number of assumptions, including estimating the conversion rate of a lead to a real estate transaction, estimating the velocity of conversions and estimating the fee amounts likely to be received. We use similar performance advertising models for our rentals pay per lease and StreetEasy Experts products.

Our estimates of variable consideration are primarily developed based on historical data and our future expectations based on current market trends. Our estimation methodology may be inaccurate and some or all of the revenue we recognize when our performance obligations are satisfied may be reversed. Realization of performance advertising revenue is also dependent on accurate reporting and remittance by our partners.

Future changes to our pricing or lead delivery methodologies for advertising services or product offerings may cause real estate partners to reduce or end their advertising with us or negatively impact our ability to manage revenue opportunities. If real estate partners reduce or end their advertising spending with us, or if we are unable to effectively manage inventory and pricing, our advertising revenue and business, results of operations and financial condition could be harmed. In addition, we use revenue generated from our real estate partners, in part, to fund our operations and investments in our five growth pillars: touring, financing, seller solutions, enhancing our partner network, and integrating our services. Significant decreases in revenue generated from our real estate partners may negatively impact our ability to fund operations and invest in our growth.

We May Not Be Able to Maintain or Establish Relationships With Real Estate Brokerages, Real Estate Listing Aggregators, Multiple Listing Services, Property Management Companies, Home Builders and Other Third-Party Listing Providers, Which Could Limit the Information We Have to Power Our Products and Services.

Our ability to attract customers to our mobile applications, websites and other tools depends to some degree on providing timely access to comprehensive and accurate real estate listings and information. To provide these listings and this information, we maintain relationships with real estate brokerages, real estate listing aggregators, multiple listing services (“MLSs”), property management companies, home builders, other third-party listing providers and homeowners and their real estate agents to include listing data in our services. Many of our agreements with real estate listing providers may be terminated with limited notice or cause. Many of our competitors and other real estate websites have similar access to MLSs and listing data and may be able to source certain real estate information faster or more efficiently than we can. Another industry participant or group could create a new listings data service, which could impact the relative quality or quantity of information of our listing providers. The loss of existing relationships with MLSs and other listing providers, whether due to termination of agreements, loss of MLS memberships, or otherwise, changes to our rights to use or timely access listing data or an inability to continue to add new listing providers or changes to the way real estate information is shared, may negatively impact our listing data quality. This could markedly decrease the quantity and quality of the sale and rental data we provide, reduce customer confidence in our products and services and cause customers to go elsewhere for real estate listings and information, which could severely harm our business, results of operations and financial condition.

We May Not Be Able to Maintain or Establish Relationships With Data Providers, Which Could Limit the Information We Are Able to Provide to Our Customers and Impair Our Ability to Attract or Retain Customers.

We obtain certain real estate data, such as transaction history, property descriptions, tax-assessed value and property taxes paid, under licenses from third-party data providers. We use this data to enable the development, maintenance and improvement of our marketplace and information services, including Zestimates, Rent Zestimates and our living database of homes. We have invested significant time and resources to develop proprietary algorithms, valuation models, software and practices to use and improve on this specific data. We may be unable to access certain of this data from vendors or government agencies if changes in local laws or regulations or other prohibitions on data sharing are implemented or because the quality and quantity of data available to these third parties changes. We may also be unable to renew our licenses with these data providers or enter into new data license agreements, or we may be able to do so only on terms that are less favorable to us, which could harm our ability to continue to develop, maintain and improve these information services and could harm our business, results of operations and financial condition.

If We Fail to Comply With the Rules and Compliance Requirements of MLSs, Our Access to and Use of Listings Data May Be Restricted or Terminated.

Our subsidiaries that access and use listings data through MLS memberships (the “MLS Members”) must comply with each MLS’s rules and compliance requirements to maintain their access to listings data and remain a member in good standing. Each MLS that the MLS Members belong to has adopted its own rules, policies, and agreement terms governing, among other things, how MLS data may be used and how listings data must be displayed on our websites and mobile applications. The MLS Members are also subject to compliance operations requirements and, as a result, must respond to complaints lodged by the MLS or other MLS participants on required timelines. The MLS rules and compliance requirements may not contemplate multi-jurisdictional licensed brokerage entities. MLS rules vary among markets and are in some cases inconsistent between MLSs, such that we are required to customize our websites, mobile applications, or services to accommodate differences between MLS rules. Handling complaints received by the MLS Members across markets may create heightened operational or financial risks with short response and resolution deadlines. Complying with the rules and compliance requirements of each MLS requires significant investment, including personnel, technology and development resources, and the exercise of considerable judgment. Rules and compliance requirements of MLSs may be changed across markets, including potential for targeted changes in response to our operations. If any of the MLS Members are deemed to be noncompliant with an MLS’s rules or to have provided improper responses to or resolution of complaints, they may face disciplinary sanctions by that MLS, which could include monetary fines, restricting or terminating our access to that MLS’s data, or other disciplinary measures. The loss or

degradation of this listings data could materially and adversely affect traffic to our mobile applications and websites, which could severely harm our business, results of operations and financial condition.

If We Do Not Innovate or Provide High-Quality Products and Services That Deliver Efficient and Integrated Transaction Experiences to Our Customers and Real Estate Partners, Our Business Could Be Harmed.

Our success depends on our continued innovation to provide new, and improve upon existing, products and services that make real estate transactions faster, easier and less stressful for our customers and provide value to real estate, rental and mortgage professionals, home buyers and our other real estate partners. As a result, we must continually invest significant resources in research and development to improve the attractiveness, competitiveness, and comprehensiveness of our products and services, enable smoother and more efficient real estate transactions, adapt to changes in technology and support new devices and operating systems. If we are unable to provide products and services that our customers want to use, on the devices they prefer, then those customers may become dissatisfied and use competitors' mobile applications, websites, products and services. If our customers begin to access more real estate information and services through other media and we fail to innovate, our business may be negatively impacted. If we are unable to continue offering high-quality, innovative products and services, we may be unable to attract additional customers and real estate partners or retain our current customers and real estate partners, which could harm our business, results of operations and financial condition.

We Face Competition for Customers in the Real Estate Category, Which Could Impair Our Ability to Attract Users of Our Mobile Applications, Websites and Other Products and Services, Which Could Harm Our Business, Results of Operations and Financial Condition.

Our business model depends on our ability to continue to attract customers to our mobile applications, websites, real estate services and other services and enhance their engagement with our products and services in a cost-effective manner. In addition, our ability to be successful depends, in part, on attracting customers who have historically shopped for or bought, sold, rented, or financed their homes through more traditional channels. New entrants continue to join the real estate space at a rapid pace and the tools and services for buying, selling, renting, or financing homes are significantly less developed than in other industries, such as books, music, travel and other customer products. Our existing and potential competitors include companies that operate, or could develop, national and local real estate, rental, new construction, mortgage, and title and escrow businesses. Such competitors range from companies offering traditional offline advertising media, like newspapers, to new mobile- or web-only technology companies and from real estate investors, like institutional investors and iBuyers, to mortgage lenders and title and settlement service providers. These companies could devote greater financial, technical and other resources than we have available to real estate services, sales, advertising or research and development, have a more accelerated time frame for deployment or leverage their existing customer bases and proprietary technologies to provide products and services that customers might view as superior to our offerings. Any of our future or existing competitors may introduce different services or solutions that attract customers or provide services or solutions similar to our own but with better branding or marketing resources. Any of our current or future competitors could merge with each other or a separate entity, which may enable them to compete with us even more vigorously and acquire more share of customer transactions and engagement. In addition, search engines are always evolving and changes to their models or algorithms may negatively impact our placement or require greater investment of resources to optimize our placement and attract customers. If the use of online products and services for shopping, renting, buying, selling, or financing residential real estate does not continue to develop and grow or we are not able to continue to attract customers to our mobile applications, websites, real estate services and other services, our business, results of operations and financial condition could be harmed.

We May Not Be Able to Compete Successfully Against Our Existing or Future Competitors in Attracting Customers for Our Products and Services or Real Estate Partners, Which Could Harm Our Business, Results of Operations and Financial Condition.

We face intense competition in each of our lines of business. We compete with a variety of real estate transaction service providers to attract customers engaging in real estate transactions and we also compete with traditional and online or mobile media sources to attract real estate partners. Please see "Competition" under Part 1, Item 1 of this Annual Report on Form 10-K for a general discussion of the competitive conditions in each of our businesses.

Competitors for our real estate transaction services include rental listing service providers, real estate brokers, real estate investors, mortgage lenders, mortgage brokers, financial institutions, and title and settlement service providers. Many of these competitors may have considerable competitive advantages, including longer operating histories, more extensive financial resources, stronger brand equity, more industry experience and greater knowledge and expertise. As a result, these competitors may have an advantage in attracting customers, recruiting highly skilled personnel, and growing or maintaining their businesses. They may also provide customers with real estate transaction services and experiences superior to or more cost-effective than ours.

We compete against mobile applications and websites dedicated to providing real estate, rental, new construction and mortgage information and services to real estate professionals and customers, major internet portals, general search engines, e-commerce and social media sites as well as other technology and media companies. We also compete for a share of our real estate partners' overall marketing budgets with traditional media such as television, magazines, newspapers and home/apartment guide publications, particularly with respect to advertising dollars spent at the local level by real estate professionals to advertise their qualifications and listings. Large companies with significant brand recognition have large numbers of direct sales personnel and substantial proprietary advertising inventory and mobile application and website traffic, which may provide a competitive advantage. To compete successfully for real estate transaction partners against future and existing competitors, we must continue to invest resources in developing our advertising platform and proving the effectiveness and relevance of our advertising products and services. Pressure from competitors seeking to acquire a greater share of our real estate partners' overall marketing budget could adversely affect our pricing and margins, lower our revenue and increase our research and development and marketing expenses.

If we are unable to compete successfully against our existing or future competitors, we could lose or fail to gain customer transaction share and our business, results of operations or financial condition would be harmed.

We Compete in a Dynamic Industry, and We May Invest Significant Resources to Pursue Strategies and Develop New Products and Services That Do Not Prove Effective.

The industry for residential real estate transaction services, technology, information marketplaces and advertising is dynamic, and the expectations and behaviors of customers and professionals shift constantly and rapidly. We continue to learn a great deal about the behaviors and objectives of residential real estate market participants as the industry evolves and invest significant resources to develop, test and launch products and services to address the needs of the market and improve the home buying, selling, financing, building and renting experience. Changes or additions to our products and services may not attract or engage our customers, may reduce confidence in our products and services, may negatively impact the quality of our brands, may upset our partners or other industry participants, may expose us to increased market or legal and regulatory risks, may subject us to new laws and regulations, and may result in reduced investor confidence or otherwise harm our business. Further, if we do not realize the benefits we expect from the strategic relationships we enter into, our business could be harmed. Customers may prefer other service providers because they offer different or superior services or those services are easier to use, faster or more cost effective than our services. We may not successfully anticipate or keep pace with industry changes, and we may invest considerable financial, personnel and other resources to pursue strategies that do not ultimately prove effective such that our results of operations and financial condition may be harmed.

If Zillow Home Loans is Unable to Obtain and Maintain Sufficient Financing to Fund Its Origination of Mortgages or is Unable to Resell Mortgages on the Secondary Market, Our Mortgages Business and the Mortgages Segment Financial Results May Suffer.

Zillow Home Loans funds substantially all of its lending operations using warehouse and loan repurchase facilities, intending to sell all loans and corresponding servicing rights to third-party financial institutions, government-sponsored entities or mortgage servicing rights purchasers after a holding period. A substantial portion of the amounts available under these warehouse and loan repurchase facilities are not committed, meaning the applicable lender is not obligated to, but may in its discretion, advance loan funds beyond the committed amounts up to the maximum borrowing capacity. Zillow Home Loans' borrowings are then generally repaid with the proceeds it receives from mortgage sales. To maintain and grow its business, Zillow Home Loans depends, in part, on having sufficient borrowing capacity under its current facilities or obtaining additional borrowing capacity under new facilities. If Zillow Home Loans is not able to negotiate with its lenders to advance loan funds beyond the committed amounts under its warehouse and repurchase facilities or to otherwise obtain and maintain debt financing with sufficient capacity or flexibility on acceptable terms, and does not have sufficient available cash on hand, then Zillow Home Loans may be unable to maintain or increase the volume of mortgage loans that it originates, may be limited in the type or quantity of loans it can fund, may lose customers to other mortgage lenders and its business may suffer. If Zillow Home Loans is unable to form or retain relationships with third-party financial institutions to purchase its loans or is unable to comply with any covenant in its agreements with these institutions, or is unable to do so on acceptable terms, it may be unable to sell its loans on the secondary market on favorable terms or at all. If Zillow Home Loans is unable to sell its loans or is required to repurchase the loans from third parties, it may be required to hold the loans for investment or sell them at a discount.

Zillow Home Loans Product Offerings May Not Meet Customers' Financing Needs, Which Could Cause Them to Use Other Lenders.

Zillow Home Loans currently offers a number of mortgage products to customers including conventional conforming and non-conforming programs and government loan guarantee programs. Such offerings are subject to change based on various factors such as availability, business needs and customer demand. If these programs do not meet the financing needs of our

customers, and we do not adapt to market changes and customer preferences, customers may opt to obtain financing from other lenders who offer different or more competitive rates or loan products. Similarly, if any of the government sponsored entities or government loan guarantee programs amend the terms of an existing loan program, cease offering the program, limit our ability to use the program or revoke the authority of Zillow Home Loans to offer such programs, we may have to make changes to or discontinue the mortgage products that we offer, which may negatively affect our business.

Zillow Home Loans May Not Be Able to Continue to Grow its Mortgage Loan Origination Business, Which Could Negatively Affect Our Mortgages Segment, Financial Condition and Results of Operations.

The Zillow Home Loans mortgage loan origination business consists of providing purchase money loans to homebuyers and refinancing existing loans. The origination of purchase money mortgage loans by Zillow Home Loans is influenced by customers purchasing homes using other Zillow products and services who elect to finance their home through Zillow Home Loans and traditional business clients in the home buying process such as realtors and builders. Changes to the other products and services that Zillow or its real estate partners provide, such as with the prior wind down of Zillow Offers operations, may negatively impact demand for Zillow Home Loans. In addition, our ability to secure relationships with traditional business clients may influence our ability to grow our loan origination business. Our production and customer direct lending operations are also subject to overall market factors that can impact our ability to grow our loan production volume. For example, higher interest rates, increased competition from new and existing market participants, reductions in the overall level of refinancing activity or slow growth in the level of new home purchase activity can impact our ability to continue to grow our loan production volumes, and we may be forced to accept lower margins in our respective businesses in order to continue to compete and keep our volume of activity consistent with past or projected levels. If we are unable to continue to grow our loan origination business, this could adversely affect our business.

Zillow Home Loans Is Dependent on United States Government-Sponsored Entities and Government Agencies, and Any Actions by These Entities or Changes in These Entities or Their Operations Could Adversely Affect Our Mortgage Business, Liquidity, Financial Condition and Results of Operations.

The ability of Zillow Home Loans to generate revenue through loan sales depends, in part, on its participation in programs administered by government agencies such as the United States Department of Housing and Urban Development's Federal Housing Administration, the United States Department of Veterans Affairs, the United States Department of Agriculture, or government-sponsored entities ("GSEs") such as the Federal National Mortgage Association ("Fannie Mae") or the Federal Home Loan Mortgage Corporation ("Freddie Mac"). Presently, some of the loans Zillow Home Loans originates are sold on a direct basis to a GSE, while others are sold "whole loan" to individual investors on the secondary market. If any of these government agencies or GSEs limit Zillow Home Loans' ability to participate in any of these programs, or if the operation of any of these government agencies or GSEs or the programs they administer are eliminated or changed, our Mortgages segment, liquidity, financial condition, and results of operations may be adversely affected.

A number of legislative proposals have been introduced in recent years that would wind down or phase out the GSEs, including proposals to end the conservatorship and privatize Fannie Mae and Freddie Mac. It is not possible to predict the scope and nature of the actions that the United States government, including the current administration, will ultimately take with respect to the GSEs. Any changes in laws and regulations affecting the relationship between Fannie Mae and Freddie Mac and their regulators or the United States federal government, and any changes in leadership at any of these entities could adversely affect our Mortgages segment and prospects. Any discontinuation of, or significant reduction in, the operation of Fannie Mae or Freddie Mac or any significant adverse change in their capital structure, financial condition, activity levels in the primary or secondary mortgage markets or underwriting criteria could materially and adversely affect our Mortgages segment, liquidity, financial condition, and results of operations. A discontinuation or reduction in the operations of the GSEs could also affect "whole loan" sales on the secondary market, as there is a potential that this could cause a sharp decline in investor appetite.

Zillow Home Loans Operates in a Highly Regulated Industry, and Federal, State, and Local Laws and Regulations, Including Many That Are Continually Changing, Could Materially and Adversely Affect Our Business, Financial Condition and Results of Operations.

Zillow Home Loans is required to comply with a wide array of federal, state and local laws and regulations that regulate, among other things, the manner in which it conducts its loan origination business. These regulations directly impact the Zillow Home Loans business and require constant compliance, monitoring and internal and external audits.

Zillow Home Loans' failure to operate effectively and in compliance with these laws, regulations and rules could subject us to lawsuits or governmental actions and damage our reputation, which could materially and adversely affect our business, financial condition and results of operations. For example, Zillow Home Loans' failure to comply with these laws, regulations and rules may result in increased costs of doing business, changes to the way we operate our business, reduced payments by

borrowers, modification of the original terms of loans, permanent forgiveness of debt, delays in the foreclosure process, forfeiture or refunds on fees collected on loan originations, increased servicing advances, litigation, reputational damage, enforcement actions, and repurchase and indemnification obligations.

In addition, Zillow Homes Loans must ensure that our lending operations serve consumers in accordance with a variety of federal and state fair lending laws and regulations, including without limitation the Fair Housing Act, the Equal Credit Opportunity Act, the Home Mortgage Disclosure Act, and the prohibition against engaging in Unfair, Deceptive, or Abusive Acts or Practices pursuant to the Dodd-Frank Act. Our inability to conduct our lending operations in compliance with fair lending laws and regulations may expose Zillow Home Loans to regulatory action, litigation, and reputational damage, among other things.

Our Mortgages Segment is Impacted by Interest Rates. Changes in Prevailing Interest Rates May Have an Adverse Effect on the Financial Results for Our Mortgages Segment.

The financial performance of our Mortgages segment is directly affected by changes in prevailing interest rates and home prices, which in turn, impact the affordability of a home. The financial performance of our Mortgages segment may be adversely affected or be subject to substantial volatility because of changes in prevailing interest rates, which may be impacted by a number of factors. For example, in 2022, due to inflationary pressures, there was an increased degree of uncertainty and unpredictability concerning current interest rates, future interest rates and potential negative interest rates, which had an adverse effect on the results of operations for our Mortgages segment.

Consumer demand for certain mortgage products and loan types are frequently driven by changes in market conditions, interest rates, lender fees, and other transaction costs. If interest rates continue to rise, our business could be adversely affected if we are unable to increase our share of purchase mortgages or if affordability challenges contract the total addressable market. In either case, our mortgage origination business and the financial results for our Mortgages segment could be harmed.

Zillow Home Loans uses derivatives and other instruments to reduce exposure to adverse changes in interest rates. Hedging interest rate risk is a complex process, requiring sophisticated models and constant monitoring. Zillow Home Loans' hedging activity may fail to provide adequate coverage for interest rate exposure due to market volatility, hedging instruments that do not directly correlate with the interest rate risk exposure being hedged or counterparty defaults on obligations. Certain of our hedges related to newly originated mortgages may be subject to margin calls, which, if made, could adversely impact our liquidity. There may be periods during which Zillow Home Loans elects not to hedge some or all of its interest rate risk.

Natural Disasters and Catastrophic Events May Disrupt Real Estate Markets, Damage or Destroy Our Properties, or Otherwise Harm Our Business.

The occurrence of a significant natural disaster or other catastrophic event such as a pandemic, health crisis, earthquake, hurricane, windstorm, fire, flood, power loss, telecommunications failure, cyber-attack, war, civil unrest, terrorist attack or other similar event, may damage or destroy our properties, disrupt our operations, impair local and regional real estate markets or economies and negatively impact our business, results of operations and financial condition. For example, the COVID-19 pandemic, including the reactions of governments, markets, and the general public to the COVID-19 pandemic, caused adverse consequences for our business and results of operations.

Zillow provides products and services to customers throughout the United States and to a lesser extent, in Canada. In addition, through Zillow Home Loans, we are licensed to originate loans in 48 states and the District of Columbia. The occurrence of a natural disaster or other catastrophic event in any of these localities could have a significant negative impact on those real estate markets and the success of our business in the affected regions.

Although the majority of our workforce has shifted to a distributed work environment, we maintain large employee populations, including those supporting our licensed operations, in Seattle, Washington; New York, New York; Atlanta, Georgia; San Francisco, California; Irvine, California and Denver, Colorado. An earthquake or other natural disaster or catastrophic event in any of these cities could disrupt our engineering, sales, operations and/or mortgage origination teams and equipment critical to the operation of our business. Similarly, a significant natural disaster or other catastrophic event in any major United States city could negatively impact a large number of our real estate partners and customers and cause a decrease in our revenue or traffic.

Business continuity and disaster recovery planning is important, and if we are unable to develop adequate plans to ensure that our business functions continue to operate during and after a disaster or catastrophic event, and successfully execute on those plans in the event of a disaster, catastrophic event, or other emergency, our business and reputation may be harmed.

If Our Data Integrity Suffers Real or Perceived Harm, Customers and Real Estate Partners May Decrease Use or Cease Using Our Products and Services, and We May Be Subject to Legal Liability.

Because homes represent significant investments, and many customer decisions regarding homes are data-driven, our ability to attract and retain customers and real estate partners to our products and services is dependent upon our ability to publish, and reputation for publishing, accurate and complete residential real estate information, including the output of proprietary models, through our mobile applications and websites. As discussed above, a significant amount of the data we publish on our mobile applications and websites is derived from third parties, and we have limited ability to control the quality of the information we receive from them. We also publish a significant amount of customer-generated content, and our tools and processes designed to ensure the accuracy, quality and legality of such content may not always be effective. Data we generate independently are subject to error, unauthorized modification by way of third-party viruses and other factors. As the volume of data we publish increases, and potential threats to data quality become more complex, the risk of harm to our data integrity also increases. If our data integrity suffers real or perceived harm, we may be subject to legal liability, reputational damage and customers and real estate partners may decrease their use or cease using our products and services, which would harm our results of operations and financial condition.

Our Dedication to Making Decisions Based Primarily on the Best Interests of Customers May Cause Us to Forgo Short-Term Gains.

Our guiding principle is to build our business by making decisions based primarily on the best interests of our customers, which we believe has been essential to our success in increasing our customer growth rate and engagement and has served the long-term interests of our company and our shareholders. In the past, we have forgone, and we will in the future forgo, certain expansion or short-term revenue opportunities that we do not believe are in the best interests of customers, even if such decisions negatively impact our short-term results of operations. In addition, our philosophy of putting customers first may negatively impact our relationships with our existing or prospective real estate partners. This could result in a loss of real estate partners, which could harm our revenue and results of operations. For example, in November 2021, we announced plans to wind down Zillow Offers operations, in part, because it served too narrow a portion of our customers, instead opting to develop and offer other products and services primarily focused within our five growth pillars. In addition, we require our Premier Agent partners to maintain a minimum customer experience score and if they fail to do so after a probation period, we have canceled advertising from those partners on our platforms. Our customer focus may also negatively impact our relationships with real estate brokerages, MLSs, and other industry participants on whom we rely for listings information. Zillow Home Loans and Zillow Closing Services as well as some of our business-to-business products, for example, may be perceived as impinging upon the business models of real estate agents, brokerages and lenders, which may cause them to terminate or decrease the scope of their relationships with us. Such risks could have a materially negative impact on our results of operations. Our principle of making decisions based primarily on the best interests of customers may not result in the long-term benefits that we expect, in which case our user traffic and engagement, business and results of operations could be harmed.

We Are Subject to Disputes and Current or Proposed Rules and Regulations Regarding the Accuracy or Display of Our Zestimates and Rent Zestimates.

We provide our customers with Zestimate and Rent Zestimate home and rental valuations. Zestimates are our estimated current market values of a home based on our proprietary automated valuation models that apply advanced algorithms to analyze our data; they are not appraisals. A Rent Zestimate is our estimated current monthly rental price of a home, using similar automated valuation models that we have designed to address the unique attributes of rental homes. We are, from time to time, involved in disputes with property owners and others who disagree with the accuracy or display of a Zestimate or Rent Zestimate, and such disputes may result in costly litigation in the future. Further, revisions to our automated valuation models, or the algorithms that underlie them, poor data quality, or other factors may cause certain Zestimates or Rent Zestimates to vary from expectations for those Zestimates or Rent Zestimates. Any such dispute or variation in Zestimates or Rent Zestimates could result in distraction from our business or potentially harm our reputation and financial condition. Among other things, we are also subject to proposed legislation that may impose liability or disclosure of our proprietary algorithms, which could impact our competitive advantage and potentially harm our financial position or business results. This legislation could also result in an increased occurrence of enforcement actions or legal disputes as discussed above.

We Rely on the Performance of Highly Skilled Personnel, and if We Are Unable to Attract, Retain and Motivate Well-Qualified Employees, Our Business Could Be Harmed.

We believe our success has depended, and continues to depend, on the efforts and talents of our management and our highly skilled team of employees, including our software engineers, operations personnel, loan officers, statisticians, marketing professionals and advertising sales staff. Our future success depends on our continuing ability to attract, develop, motivate and retain highly qualified and skilled employees. The loss of any of our senior management or key employees could materially

adversely affect our ability to build on the efforts they have undertaken and to execute our business plan, and we may not be able to find adequate replacements. The market for highly skilled personnel is very competitive. We cannot ensure that we will be able to retain the services of any members of our senior management or other key employees. Furthermore, we have in the past and may in the future take measures in order to slow attrition. For example, to support retention of employees, in August 2022, we issued certain equity grants and repriced certain outstanding unvested stock options. If we do not succeed in attracting well-qualified employees, retaining and motivating existing employees in a cost-effective manner, or engaging in succession planning, our business could be harmed.

We Have and May Continue to Make Acquisitions and Investments, Which Could Result in Operating Difficulties, Dilution and Other Harmful Consequences.

We continue to evaluate a wide array of potential strategic opportunities, including acquisitions and investments. For example, we acquired ShowingTime.com, Inc. in September 2021, and we acquired VRX Media Group LLC in December 2022. Any transactions that we enter into could be material to our financial condition and results of operation. The transactions we pursue may not result in the intended benefits to our business, and we may not successfully evaluate or utilize the acquired products, technology, or personnel, or accurately forecast the financial impact of an acquisition transaction. The process of closing a transaction and integrating an acquired company, business or technology could create unforeseen operating difficulties and expenditures. Potential risks include: diversion of management time and focus from operating our business to acquisition closing and integration challenges; customer and industry acceptance of products and services offered by the acquired company; implementation or remediation of controls, procedures and policies at the acquired company; compliance with differing laws and regulations applicable to international jurisdictions, if applicable; coordination of product, engineering and sales and marketing functions; retention of employees from the acquired company; liability for activities of the acquired company before the acquisition; litigation or other claims arising in connection with the acquired company; and impairment charges associated with goodwill and other acquired intangible assets. For example, during March 2020, we recognized a non-cash impairment charge of \$72 million related to our Trulia trade names and trademarks intangible asset.

Our failure to address these risks or problems encountered in connection with our past or future acquisitions and investments could cause us to fail to realize the anticipated benefits of such acquisitions or investments, incur unanticipated liabilities, and harm our business, results of operations and financial condition.

Our Fraud Detection Processes and Information Security Systems May Not Successfully Detect All Fraudulent Activity by Third Parties Aimed at Our Employees or Customers, Which Could Adversely Affect Our Reputation and Business Results.

Third-party actors have attempted in the past, and may attempt in the future, to conduct fraudulent activity by engaging with our customers by, for example, posting fake real estate and rental listings on our sites and attempting to solicit personal information or money from customers, and by engaging with our employees by, for example, making fake requests for transfer of funds or sensitive information. We make a large number of wire transfers in connection with loan and real estate closings and process sensitive personal data in connection with these transactions. We also enable certain rental transactions through our Zillow Rental Manager products, which may be separately subject to a risk of fraudulent activity. Though we have sophisticated fraud detection processes and have taken other measures to identify fraudulent activity on our mobile applications, websites and internal systems, we may not be able to detect and prevent all such activity. Similarly, the third parties we use to effectuate these transactions may fail to maintain adequate controls or systems to detect and prevent fraudulent activity. Persistent or pervasive fraudulent activity may cause customers and real estate partners to lose trust in us and decrease or terminate their usage of our products and services, or could result in financial loss, thereby harming our business and results of operations.

We Are Subject to Multiple Risks Related to the Credit Card and Debit Card Payments We Accept.

We accept payments through credit and debit card transactions. For credit and debit card payments, we pay interchange and other fees, which may increase over time. An increase in those fees may require us to increase the prices we charge and increase our operating expenses, either of which could harm our business, financial condition and results of operations.

We depend on processing vendors to complete credit and debit card transactions, both for payments owed to Zillow Group directly and for payments to other third parties, such as payments made between two third-party platform users such as renters and landlords in our rental payments product. If we or our processing vendors fail to maintain adequate systems for the authorization and processing of credit card transactions, it could cause one or more of the major credit card companies to disallow our continued use of their payment products. If these systems fail to work properly and, as a result, we do not charge our customers' credit cards on a timely basis or at all, our business, revenue, results of operations and financial condition could be harmed. In addition, if we add, eliminate or change any of our processing vendors, we may experience processing disruptions and increased operating expenses, either of which could harm our business, financial condition, or results of operations.

The payment methods that we offer also subject us to potential fraud and theft by criminals, who are becoming increasingly sophisticated, seeking to obtain unauthorized access to or exploit weaknesses that may exist in the payment systems. If we fail to comply with applicable rules or requirements for the payment methods we accept, or if payment-related data are compromised due to a breach of data, we may be liable for significant costs incurred by payment card issuing banks and other third parties or subject to fines and higher transaction fees, or our ability to accept or facilitate certain types of payments may be impaired. In addition, our customers could lose confidence in certain payment types, which may result in a shift to other payment types or potential changes to our payment systems that may result in higher costs. If we fail to adequately control fraudulent credit card transactions, we may face civil liability, diminished public perception of our security measures, and significantly higher credit card-related costs, each of which could harm our business, results of operations and financial condition.

We are also subject to payment card association operating rules, certification requirements and rules governing electronic funds transfers, which could change or be reinterpreted to make it more difficult for us to comply. We are required to comply with payment card industry security standards. Failing to comply with those standards may violate payment card association operating rules, federal and state laws and regulations, and the terms of our contracts with payment processors. Any failure to comply fully also may subject us to fines, penalties, damages and civil liability, reputational risk and may result in the loss or impairment of our ability to accept credit and debit card payments. Further, there is no guarantee that such compliance will prevent illegal or improper use of our payment systems or the theft, loss, or misuse of data pertaining to credit and debit cards, card holders and transactions.

If we are unable to maintain our chargeback rate or refund rates at acceptable levels, our processing vendors may increase our transaction fees or terminate their relationships with us. Any increases in our credit and debit card fees could harm our results of operations, particularly if we elect not to raise our rates for our service to offset the increase. The termination of our ability to process payments on any major credit or debit card could significantly impair our ability to operate our business.

Some of Our Potential Losses May Not Be Covered by Insurance. We May Not Be Able to Obtain or Maintain Adequate Insurance Coverage.

We maintain insurance to cover costs and losses from certain risk exposures in the ordinary course of our operations, but our insurance may not cover 100% of the costs and losses from all events. We are responsible for certain retentions and deductibles that vary by policy, and we may suffer losses that exceed our insurance coverage by a material amount. We may also incur costs or suffer losses arising from events against which we have no insurance coverage. In addition, large scale insurance market trends or the occurrence of adverse events in our business may raise our cost of procuring insurance or limit the amount or type of insurance we are able to secure. We may not be able to maintain our current coverage, or obtain new coverage in the future, on commercially reasonable terms or at all.

Environmentally Hazardous Conditions May Adversely Affect Us.

Under various federal, state and local environmental laws, a current or previous owner or operator of real property may be liable for the cost of removing or remediating hazardous or toxic substances on such property. Such laws often impose liability whether or not the owner or operator knew of, or was responsible for, the presence of such hazardous or toxic substances. Even if more than one person may have been responsible for the contamination, each person covered by applicable environmental laws may be held responsible for all of the clean-up costs incurred. In addition, third parties may sue the owner or operator of a site for damages based on personal injury, natural resources or property damage or other costs, including investigation and clean-up costs, resulting from the environmental contamination. The presence of hazardous or toxic substances on one of our properties, including homes previously held in our inventory in connection with Zillow Offers operations, or the failure to properly remediate a contaminated property, could give rise to a lien in favor of the government for costs it may incur to address the contamination. A property owner who violates environmental laws may be subject to sanctions which may be enforced by governmental agencies or, in certain circumstances, private parties. The cost of defending against environmental claims, of compliance with environmental regulatory requirements or of remediating any contaminated property could materially and adversely affect us.

Compliance with new or more stringent environmental and climate-related laws or regulations or stricter interpretation of existing laws may require material expenditures by us. We cannot assure you that future laws, ordinances or regulations will not impose any material environmental or other liability to us. In addition, we may be required to comply with various local, state and federal fire, health, life-safety and similar regulations. Failure to comply with applicable laws and regulations could result in fines and/or damages, suspension of personnel, civil liability or other sanctions.

If Our Security Measures or Technology Systems, or Those of Third Parties Upon Which We Rely, Are Compromised, We May Be Subject to Legal Claims and Suffer Significant Losses, and Customers May Curtail Use of Our Products and Services and Our Real Estate Partners May Reduce or Eliminate Their Advertising on Our Mobile Applications and Websites.

Our products and services involve the transmission, processing, and/or storage of users' information, some of which may be private or include personally identifiable information such as social security numbers, financial account information, and credit card information. For example, our dotloop real estate transaction management software stores sensitive personal and financial information, our Mortech mortgage product and pricing software for mortgage professionals processes social security numbers, our rental applications product allows customers to obtain credit and background checks containing sensitive personal and financial information, and both Zillow Home Loans and Zillow Closing Services, our mortgage origination business and real estate closings business, respectively, receive, handle and transmit highly sensitive personal and financial information about their customers. Cyber-attacks, malicious internet-based activity, online and offline fraud, administrative or technical failures and other similar activities threaten the confidentiality, integrity and availability of our information technology systems, including those of the third parties upon which we rely, and our sensitive data, including customer, employee and real estate partner data as well as intellectual property and other confidential business information, which could result in potential significant liability and litigation. Such threats are prevalent and continue to rise, are increasingly difficult to detect and come from a variety of sources, including traditional computer "hackers", threat actors, "hacktivists", organized criminal threat actors, personnel (such as through theft or misuse), sophisticated nation states and nation-state-supported actors.

Some actors now engage and are expected to continue to engage in cyber-attacks, including without limitation nation-state actors for geopolitical reasons and in conjunction with military conflicts and defense activities. During times of war and other major conflicts, we and the third parties upon which we rely may be vulnerable to a heightened risk of these attacks, including retaliatory cyber-attacks, that could materially disrupt our systems and operations, supply chain and ability to produce, sell and distribute our services.

We and the third parties upon which we rely may be subject to a variety of evolving threats, including but not limited to social-engineering attacks (including through phishing attacks), malicious code (such as viruses and worms), malware (including as a result of advanced persistent threat intrusions), denial-of-service attacks (such as credential stuffing), credential harvesting, personnel misconduct or error, ransomware attacks, supply-chain attacks, software bugs, server malfunctions, software or hardware failures, loss of data or other information technology assets, adware, telecommunications failures, earthquakes, fires, floods and other similar threats. In particular, severe ransomware attacks are becoming increasingly prevalent and can lead to significant interruptions in our operations, loss of sensitive data and income, reputational harm and diversion of funds. Extortion payments may alleviate the negative impact of a ransomware attack, but we may be unwilling or unable to make such payments due to, for example, applicable laws or regulations prohibiting such payments.

Remote work has become more common and has increased risks to our information technology systems and data, as more of our employees utilize network connections, computers and devices outside our premises or network, including working at home, while in transit and in public locations. Additionally, future or past business transactions (such as acquisitions or integrations) could expose us to additional cybersecurity risks and vulnerabilities, as our systems could be negatively affected by vulnerabilities present in acquired or integrated entities' systems and technologies. Outside parties may attempt to fraudulently induce employees, officers, directors, customers or real estate partners to disclose sensitive information in order to gain access to our information or our customers' or real estate partners' information, and our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to user error, malfeasance or other disruptions. If we experience compromises to our security that result in the loss or unauthorized disclosure of confidential information, our customers and real estate partners may lose trust in us, customers may decrease the use of our mobile applications or websites or stop using our mobile applications, websites, or services in their entirety, real estate partners may decrease or stop advertising on our mobile applications or websites, and we may be subject to legal claims and liability, government investigation and additional state and federal legal requirements. If we experience compromises to our security that result in the loss of availability of our data, our mobile applications, websites, or services may be unable to function at a level necessary to meet our customers' needs.

Our reliance on vendors could introduce new cybersecurity risks and vulnerabilities, including supply-chain attacks, and other threats to our business operations. We engage a variety of vendors to process and store sensitive data, including certain customer information, some of which may be private or include personally identifiable information. We also depend on vendors to host many of the systems and infrastructure used to provide our products and services. Our ability to monitor these vendors' information security practices is limited and these vendors may not have adequate information security measures in place. If our vendors experience a security incident or other interruption, we could experience adverse consequences, including harm to our business, results of operations and financial condition. Further, a security breach at our vendor could be perceived by customers

or our real estate partners as a breach of our systems and could result in damage to our reputation and expose us to other losses. While we may be entitled to damages if our vendors fail to satisfy their privacy or security-related obligations to us, any award may be insufficient to cover our damages, or we may be unable to recover such award. In addition, supply-chain attacks have increased in frequency and severity, and we cannot guarantee that third parties' infrastructure in our supply chain or our third-party partners' supply chains have not been compromised.

Any of the previously identified or similar threats could cause a security incident or other interruption that could result in unauthorized, unlawful or accidental acquisition, modification, destruction, loss, alteration, encryption, disclosure of or access to our sensitive data of our information technology systems, or those of the third parties upon whom we rely. A security incident or other interruption could disrupt our ability (and that of third parties upon whom we rely) to provide our services.

While we have implemented security measures designed to protect against security incidents, there can be no assurance that these measures will be effective. Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently, often are not recognized until launched against a target, and may originate from less regulated and remote areas around the world, we may be unable to proactively address all these techniques or to implement adequate preventative measures. We may be unable in the future to detect vulnerabilities in our information technology systems because such threats and techniques change frequently and are often sophisticated in nature. Further, we may experience delays in developing and deploying remedial measures designed to address any such identified vulnerabilities.

Applicable data privacy and security obligations may require us to notify relevant stakeholders of security incidents. Such disclosures are costly and the disclosure or the failure to comply with such requirements could lead to adverse consequences.

If we (or a third party upon whom we rely) experience a security incident or are perceived to have experienced a security incident, we may experience adverse consequences. These consequences may include: government enforcement actions (for example, investigations, fines, penalties, audits and inspections); additional reporting requirements and/or oversight; restrictions on processing sensitive data (including personal data); litigation (including class action claims); indemnification obligations; negative publicity; reputational harm; monetary fund diversions; interruptions in our operations including availability of data); financial loss and other similar harms. Any or all of these consequences could negatively impact our ability to attract new customers and increase engagement by existing customers, cause existing customers to curtail or stop use of our products or services or close their accounts, cause existing real estate partners to cancel their contracts, thereby harming our business, results of operations and financial condition.

Our contracts may not contain limitations of liability, and even where they do, there can be no assurance that limitations of liability in our contracts are sufficient to protect us from liabilities, damages or claims related to our data privacy and information security obligations. We cannot be sure that our insurance coverage will be adequate or sufficient to protect us from or to mitigate liabilities arising out of our privacy and security practices, that such coverage will continue to be available on commercially reasonable terms or at all or that such coverage will pay future claims.

Any Significant Disruption in Service on Our Mobile Applications or Websites or in Our Network Could Damage Our Reputation and Brands, and Result in a Loss of Customers of Our Products and Services and of Our Real Estate Partners, Which Could Harm Our Business, Results of Operations and Financial Condition.

Our brand, reputation and ability to attract customers and real estate partners and deliver quality products and services depend on the reliable performance of our network infrastructure and content delivery processes. Our mobile applications and websites are exposed to attempts to overload our servers with denial-of-service attacks or similar disruptions from unauthorized use of our computer systems. We have experienced minor interruptions in these systems in the past, including server failures that temporarily slowed the performance of our mobile applications and websites, and we may experience interruptions in the future. Interruptions in these systems, whether due to system failures, computer viruses, software errors or physical or electronic break-ins, could affect the security or availability of our products and services on our mobile applications and websites and prevent or inhibit the ability of customers to access or effect transactions using our services. Since our customers may rely on our products and services, including our real estate transaction services and customer relationship management tools, for important aspects of their personal lives and businesses, problems with the reliability, availability or security of our systems could damage our customers' businesses, harm our reputation, delay or inhibit a customer from completing a real estate transaction, result in a loss of customers of our products and services and of real estate partners and result in additional costs, any of which could harm our business, results of operations and financial condition.

To deliver mobile and web Zillow Group brand content while ensuring scalability and redundancy, as well as internal support for our enterprise, we utilize both third-party web services for cloud computing and storage and shared data centers in Seattle, Washington, Ashburn, Virginia, and Santa Clara, California.

We do not own or control the operation of certain of these facilities. Our systems and operations are vulnerable to damage or interruption from fire, flood, power loss, telecommunications failure, terrorist attacks, acts of war, electronic and physical break-ins, computer viruses, earthquakes and similar events. The occurrence of any of the foregoing events could result in damage to our systems and hardware or could cause them to fail completely, and our insurance may not cover such events or may be insufficient to compensate us for losses that may occur.

A failure of our systems at one site could result in reduced functionality for our customers, and a total failure of our systems could cause our mobile applications or websites to be inaccessible or for us to be unable to carry out day-to-day operations. Problems faced by our third-party web-hosting providers with the telecommunications network providers with which they contract or with the systems by which they allocate capacity among their customers, including us, could adversely affect the experience of our customers. Our third-party web-hosting providers could decide to close their facilities without adequate notice. Any financial difficulties, such as bankruptcy reorganization, faced by our third-party web-hosting providers or any of the service providers with whom they contract may have negative effects on our business, the nature and extent of which are difficult to predict. If our third-party web-hosting providers are unable to keep up with our growing needs for capacity, our customers, real estate partners and business could be harmed. In addition, if distribution channels for our mobile applications experience disruptions, such disruptions could adversely affect the ability of users and potential users to access or update our mobile applications, which could harm our business.

We may not carry business interruption insurance sufficient to compensate us for the potentially significant losses, including the potential harm to the future growth of our business, which may result from interruptions in our service as a result of system failures. Any errors, defects, disruptions or other performance problems with our services could harm our reputation, business, results of operations and financial condition.

We Rely Upon Certain Third-Party Services to Support Critical Functions of Our Business and Any Disruption of or Interference with our Use of those Third-Party Services Could Adversely Impact Our Operations and Our Business.

A limited number of third-party services support essential functions of our business, including Amazon Web Services (“AWS”) and certain other cloud communications platform-as-a-service (“CPaaS”), Infrastructure-as-a-Service (“IaaS”) and Software-as-a-Service (“SaaS Services”) technologies hosted by third parties (together with CPaaS and IaaS, “Cloud Services”). AWS provides us with a distributed computing infrastructure platform for business operations, which is commonly referred to as a “cloud” computing service. Certain of our computer systems utilize data processing, storage capabilities and other services provided by AWS, and we currently run the vast majority of computing to power our mobile applications, websites, and other technology products and services on AWS. In addition, we use Cloud Services to support important functions of our business, including enterprise resource planning, accounting, including revenue recognition, real estate transaction services, customer communications, and customer relationship management. We store a significant amount of information about our customers, real estate partners, employees, and business on AWS and in the Cloud Services, and we rely on these third-party service providers to provide services on a timely and effective basis. Their failure to perform as expected or as required by contract could result in significant disruptions and costs to our operations. In light of our reliance on AWS and Cloud Services, coupled with the complexity of obtaining replacement services, any disruption of or interference with our use of these third-party services could adversely impact our operations and business.

We Have and May Continue to be Subject to Outstanding Claims Related to Zillow Offers Following the Wind Down of Our Zillow Offers Operations.

Although we concluded the wind down of our Zillow Offers operations in 2022, we have and may in the future be subject to, claims, suits, government investigations, enforcement actions and proceedings arising from or related to Zillow Offers, including actions with respect to the purchase, renovation and resale of properties; Zillow Offers operations; and the subsequent wind down of operations. For example, on March 10, 2022, May 5, 2022 and July 20, 2022 shareholder derivative suits were filed in the U.S. District Court for the Western District of Washington and on July 25, 2022, a shareholder derivative suit was filed in the Superior Court of the State of Washington, King County, against us and certain of our executive officers and directors seeking unspecified damages on behalf of us and certain other relief, such as reform to corporate governance practices. The plaintiffs (including us as a nominal defendant) allege, among other things, that the defendants breached their fiduciary duties by failing to maintain an effective system of internal controls, which purportedly caused the losses we incurred when we decided to wind down Zillow Offers operations. Plaintiffs also allege, among other things, violations of Section 14(a) and Section 20(a) of the Securities Exchange Act of 1934, as amended, insider trading and waste of corporate assets. On June 1, 2022 and September 14, 2022, the U.S. District Court for the Western District of Washington issued orders consolidating the three federal derivative suits and staying the consolidated action until further order of the court. On September 15, 2022, the Superior Court of the State of Washington entered a temporary stay in the state derivative suit, which stay was lifted on January 23, 2023. This and other similar claims, suits, government investigations, and proceedings are inherently uncertain, and their results cannot be predicted with certainty. Regardless of the outcome, any such legal proceedings can have an adverse impact on us because of legal costs, diversion of management and other personnel, and other factors. In addition, it is possible that a

resolution of one or more such proceedings could result in reputational harm, liability, fines, penalties, or sanctions, as well as judgments, consent decrees, or orders, which could in the future materially and adversely affect our business, operating results and financial condition.

Risks Related to Our Intellectual Property

We May Be Unable to Adequately Protect Our Intellectual Property, Which Could Harm the Value of Our Brands and Our Business.

We regard our intellectual property as critical to our success, and we rely on trademark, copyright and patent law, trade secret protection and contracts to protect our proprietary rights. If we are not successful in protecting our intellectual property, the value of our brands and our business, results of operations and financial condition could be harmed.

While we believe that our issued patents and pending patent applications help to protect our business, we cannot ensure that our operations do not, or will not, infringe valid, enforceable patents of third parties or that competitors will not devise new methods of competing with us that are not covered by our patents or patent applications. We cannot ensure that our patent applications will be approved, that any patents issued will adequately protect our intellectual property, that such patents will not be challenged by third parties or found to be invalid or unenforceable, or that our patents will be effective in preventing third parties from utilizing a “copycat” business model to offer the same products or services. The technology underlying our Zestimate home valuation, for example, which we consider to be a trade secret affording us a key competitive advantage with respect to customer engagement, is currently protected by patents, the loss of which could benefit comparable services provided by our competitors and result in decreased user traffic and engagement with our mobile applications and websites, thereby harming our results of operations and financial condition. In addition to our patented technology, our Zestimate home valuation uses a significant amount of proprietary, trade secret methodology. Any accidental disclosure, or disclosure in response to litigation or regulatory inquiries that do not include confidential information protection could harm our competitive advantage.

Effective trademark, service mark, copyright and trade secret protection may not be available in every country in which our products and services may be provided. The laws of certain countries do not protect proprietary rights to the same extent as the laws of the United States and, therefore, in certain jurisdictions, we may be unable to protect intellectual property and our proprietary technology adequately against unauthorized third-party copying or use, which could harm our competitive position. We have licensed in the past, and expect to license in the future, certain of our proprietary rights, such as trademarks or copyrighted material, to third parties. These licensees may take actions that might diminish the value of our proprietary rights or harm our reputation, even if we have agreements prohibiting such activity. Though certain of these third parties are obligated to indemnify us for breaches of our intellectual property rights, they may be unable to meet these obligations. In addition, we rely on intellectual property and technology developed or licensed by third parties, and we may not be able to obtain licenses and technologies from these third parties on reasonable terms or at all. Any of these events could harm our business, results of operations or financial condition.

In addition, we may actively pursue entities that infringe our intellectual property, including through legal action. Taking such action may be costly, and we cannot ensure that such actions will be successful. Any increase in the unauthorized use of our intellectual property could make it more expensive for us to do business and harm our results of operations or financial condition.

Intellectual Property Disputes Are Costly to Defend and Could Harm Our Business, Results of Operations, Financial Condition and Reputation.

From time to time, we face allegations that we have infringed the trademarks, copyrights, patents and other intellectual property rights of third parties. We are currently subject to intellectual property infringement claims, including actions brought by International Business Machines Corporation. These claims allege, among other things, that aspects of our technology infringe upon the plaintiffs’ intellectual property. If we are not successful in defending ourselves against these claims, we may be required to pay damages and may be subject to injunctions, each of which could harm our business, results of operations, financial condition and reputation. As we grow our business and expand our operations, we expect that we will continue to be subject to intellectual property claims and allegations. Patent and other intellectual property disputes or litigation may be protracted and expensive, and the results are difficult to predict and may require us to stop offering certain products, services or features, purchase licenses that may be expensive to procure, or modify our products or services. In addition, patent or other intellectual property disputes or litigation may result in significant settlement costs. Any of these events could harm our business, results of operations, financial condition and reputation.

In addition, we use open source software in our services and will continue to use open source software in the future. From time to time, we may be subject to claims brought against companies that incorporate open source software into their products or services, claiming ownership of, or demanding release of, the source code, the open source software and/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, and we may be required to purchase a costly license or remove open source software, devote additional research and development resources to changing our products or services, make generally available the source code for our proprietary technology, or waive certain of our intellectual property rights, any of which would have a negative effect on our business and results of operations.

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

We May Be Unable to Continue to Use the Domain Names That We Use in Our Business, or Prevent Third Parties From Acquiring and Using Domain Names That Infringe on, Are Similar to, or Otherwise Decrease the Value of Our Brand or Our Trademarks or Service Marks.

We have registered domain names for our websites that we use in our business. If we lose the ability to use a domain name, we may incur significant expenses to market our products and services under a new domain name, which could harm our business. In addition, our competitors could attempt to capitalize on our brand recognition by using domain names similar to ours. Domain names similar to ours have been registered in the United States and elsewhere. We may be unable to prevent third parties from acquiring and using domain names that infringe on, are similar to, or otherwise decrease the value of our brand or our trademarks or service marks. Protecting and enforcing our rights in our domain names and determining the rights of others may require litigation, which could result in substantial costs and diversion of management's attention.

Proprietary Rights Agreements With Employees and Others May Not Adequately Prevent Disclosure of Trade Secrets and Other Proprietary Information.

In order to protect our technologies and strategic business and operations information, we rely in part on proprietary rights agreements with our employees, independent contractors, vendors, licensees, and other third parties. These agreements may not be enough to fully mitigate the possibility of inadvertent disclosure of confidential information, including trade secrets, and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. The loss of trade secret protection could make it easier for third parties to compete with our products by copying functionality. Others may independently discover our trade secrets and proprietary information, and in such cases, we could not assert any trade secret rights against such parties. Further, if 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 in related or resulting know-how and inventions. Any changes in, or unfavorable interpretations of, intellectual property laws may compromise our ability to enforce our trade secret and intellectual property rights. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain protection of our trade secrets or other proprietary information could harm our business, results of operations, reputation and competitive position.

We May Not Be Able to Halt the Operations of Websites That Aggregate or Misappropriate Our Data.

From time to time, third parties have misappropriated our data through website scraping, robots or other means, and aggregated this data on their websites with data from other companies. In addition, copycat websites have misappropriated data on our network and attempted to imitate our brand or the functionality of our websites. When we have become aware of such websites, we have employed technological or legal measures in an attempt to halt their operations. We may not be able, however, to detect all such websites in a timely manner and, even if we could, technological and legal measures may be insufficient to halt their operations. In some cases, particularly in the case of websites operating outside of the United States, our available remedies may not be adequate to protect us against the impact of the operation of such websites. In addition, if such activity creates confusion among customers or real estate partners, our brands and business could be harmed. This misappropriation of data may also harm our relationships with any third party data providers who originally licensed the data to us, including potentially breaching our agreements with these third parties depending on the terms of each license agreement. Regardless of whether we can successfully enforce our rights against the operators of these websites, any measures that we may take could require us to expend significant financial or other resources, which could harm our business, results of operations or financial condition.

Risks Related to Regulatory Compliance and Legal Matters

Failure to Comply with Federal, State and Local Laws, Rules and Regulations or to Obtain and Maintain Required Licenses or Authorizations, Could Materially and Adversely Affect our Business, Financial Condition and Results of Operations.

We provide products and services to customers and real estate partners in heavily regulated industries through a number of different channels across the United States and to some extent, in Canada. As a result, we are currently subject to a variety of, and may in the future become subject to additional or newly enacted, international, federal, state and local laws and regulations in various jurisdictions, which are subject to change at any time, including laws regarding the real estate, rental, mortgage and insurance industries, mobile and internet based businesses and other businesses that rely on advertising, as well as privacy, data security, and consumer protection laws, and employment laws. These laws are complex and can be costly to comply with, require significant management time and effort, and subject us to claims, government enforcement actions, civil and criminal liability or other remedies, including suspension of business operations. These laws may conflict with each other, and if we comply with the laws of one jurisdiction, it may require us to adjust our practices in other jurisdictions. Our distributed workforce may subject us to employment laws, including employment taxes, in many states and localities in the United States, many provinces in Canada and other locations where employees perform work, and may increase the costs and expenses we incur to comply with or seek compliance with these laws. Presence of our employees located in Serbia requires us to conform to employment, tax and other applicable requirements in Serbia and may increase costs and expenses we incur to comply with or seek compliance with these requirements. In addition, our contingent workers throughout the United States, Canada and other current and future global locations may subject us to laws and taxes in those jurisdictions and may increase the costs and expenses we incur to comply with applicable laws and maintain adequate protection of our rights, including intellectual property rights.

In addition, by providing a medium through which users can post content and communicate with one another, we may also be subject to laws governing intellectual property ownership, obscenity, libel, and privacy, among other issues. The real estate agents, mortgage professionals, banks, property managers, rental agents and certain of our other customers and advertisers are subject to various state and federal laws and regulations, including, but not limited to those relating to real estate, rentals and mortgages, which may impact their use of our mobile applications and websites. We cannot ensure that these entities will comply with applicable laws and regulations, including any future changes to those laws and regulations, at all times. We endeavor to ensure that any content created by Zillow Group is consistent with such laws and regulations by obtaining assurances of compliance from our advertisers and customers for their activities through, and the content they provide on, our mobile applications and websites.

In connection with the real estate transaction products and services that we provide, we maintain real estate brokerage, title and escrow, mortgage broker, insurance agent/producer and mortgage lender licenses in the markets in which we operate those regulated products and services. Certain of our mortgage marketing products are operated by our wholly owned subsidiary, Zillow Group Marketplace, Inc., a licensed mortgage broker, and we originate residential mortgages through Zillow Home Loans, a licensed mortgage lender. Zillow Group Marketplace, Inc. and Zillow Home Loans are subject to stringent state and federal laws and regulations and to the scrutiny of state and federal government agencies as a licensed mortgage broker and licensed mortgage lender, respectively. Mortgage products are regulated at the state level by licensing authorities and administrative agencies, and also by the CFPB and other federal agencies. These laws generally regulate the manner in which lending and lending-related activities are marketed or made available, including advertising and other consumer disclosures, payments for services and record keeping requirements; these laws include but are not limited to the Real Estate Settlement Procedures Act, the Fair Credit Reporting Act, the Truth in Lending Act, the Equal Credit Opportunity Act, the Fair Housing Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act and various federal, state and local laws. The CFPB also has broad authority to enforce prohibitions on practices that it deems to be unfair, deceptive or abusive.

The growing CFPB focus on artificial intelligence/automated underwriting, digital mortgage comparison shopping platforms, property valuation and marketing models, coupled with rapidly changing fair housing enforcement priorities by the CFPB and other regulators may impact our ability to adapt our business and maintain compliance, which may affect our business operations, financial condition or results of operations. State laws may restrict the amount and nature of interest and fees that may be charged by a lender or mortgage broker, or otherwise regulate the manner in which lenders or mortgage brokers operate or advertise.

We hold real estate brokerage licenses through multiple entities in multiple states and may apply for additional real estate brokerage licenses as needed to support our business. To maintain these licenses, we must comply with the requirements governing licensed real estate activities and brokerage-related businesses in the markets where we operate. We may be subject to additional local, state and federal laws and regulations governing residential real estate transactions, including those

administered by the Department of Housing and Urban Development (“HUD”), and the states and municipalities in which we transact. Further, due to the geographic scope of our operations and the nature of the services we provide, certain of our other subsidiaries maintain title and escrow licenses in certain states in which we operate, including in connection with Zillow Closing Services.

A number of our personnel are required to maintain individual real estate agent or broker licenses, title and escrow agent licenses, mortgage broker, mortgage loan originator licenses and mortgage lender licenses. In addition, for certain company licenses that we hold, we are required to designate individual licensed brokers of record, qualified individuals and control persons. We cannot assure you that we, or our licensed personnel, are and will remain at all times, in full compliance with real estate, title and escrow, and mortgage licensing and consumer protection laws and regulations and we may be subject to fines or penalties in the event of any non-compliance. If we, or our licensed personnel, apply for new licenses, we may become subject to additional licensing requirements, which we may not be in compliance with at all times. If in the future a state agency were to determine that we, or our licensed personnel, are required to obtain additional licenses in that state in order to operate our business, or if we or our licensed personnel lose or do not renew an existing license or are otherwise found to be in violation of a law or regulation, we or our licensed personnel may be subject to fines or legal penalties, lawsuits, enforcement actions, void contracts, or our business operations in that state may be suspended or prohibited. Compliance with these laws and regulations is complicated and costly and may inhibit our ability to innovate or grow.

Zillow Home Loans operates its Federal Housing Administration loan program under authority granted by HUD. In the event that HUD determines that Zillow Home Loans has failed or refused to comply with all relevant terms and conditions necessary to maintain its authority active and in good standing, then such authority could be suspended, revoked or materially altered, which would materially and adversely affect the ability of Zillow Home Loans to conduct its business.

If we are unable to comply with these laws or regulations in a cost-effective manner, we may modify impacted products and services, which could require a substantial investment and loss of revenue, or require that we cease providing the impacted product or service altogether. If we are found to have violated laws or regulations, we may be subject to significant fines, penalties, and other losses.

We Are Subject to Stringent and Evolving Laws, Regulations, Rules, Contractual Obligations, Policies and Other Obligations Related to Data Privacy and Security in the United States and Canada and May Be Subject to Similar Data Privacy and Security Obligations in Other Jurisdictions Where We Have Operations and/or Vendors. Our Actual or Perceived Failure to Comply With Such Obligations Could Lead to Regulatory Investigations or Actions; Litigation; Fines and Penalties; Disruptions of Our Business Operations; Reputational Harm; Loss of Revenue or Profits; Loss of Customers and Other Adverse Business Consequences.

In the ordinary course of business, we collect, receive, store, process, generate, use, transfer, disclose, make accessible, protect, secure, dispose of, transmit, and share (collectively, processing) personal data and other sensitive data, which may include proprietary and confidential business data, trade secrets, intellectual property, sensitive third-party data, business plans, transactions, social security numbers, financial account information, and credit card information.

Our data processing activities may subject us to numerous data privacy and security obligations, such as various laws, regulations, guidance, industry standards, external and internal privacy and security policies, contractual requirements, and other obligations relating to data privacy and security.

In the United States, federal, state, and local governments have enacted numerous data privacy and security laws, including data breach notification laws, personal data privacy laws, consumer protection laws (e.g., Section 5 of the Federal Trade Commission Act), and other similar laws (e.g., wiretapping laws). For example, the California Consumer Privacy Act of 2018 (“CCPA”) requires businesses to provide specific disclosures in privacy notices and honor requests of California residents to exercise certain privacy rights. The CCPA provides for civil penalties of up to \$7,500 per violation and allows private litigants affected by certain data breaches to recover significant statutory damages. In addition, the California Privacy Rights Act of 2020 (“CPRA”), which becomes operative January 1, 2023, will expand the CCPA’s requirements, including applying to personal information of business representatives and employees and establishing a new regulatory agency to implement and enforce the law.

Other states, such as Virginia, Colorado, Connecticut and Utah, have also passed comprehensive privacy laws, and similar laws are being considered in several other states, as well as at the federal and local levels. We also have operations outside of the United States, including in Canada, and Canada’s Personal Information Protection and Electronic Documents Act

(“PIPEDA”) imposes strict requirements for processing personal data and there are also various provincial and territorial privacy laws that govern the protection of personal data. These developments may further complicate compliance efforts and may increase legal risk and compliance costs for us and the third parties upon whom we rely.

Additionally, laws, regulations, and standards covering marketing and advertising activities conducted by telephone, email, mobile devices, and the internet, may be applicable to our business, such as the Telephone Consumer Protection Act, the Telemarketing Sales Rule, the Controlling the Assault of Non-Solicited Pornography and Marketing Act, and similar state consumer protection laws. We also assist with the processing of customer credit card transactions and consumer credit report requests, originate mortgage loans, perform real estate closings and provide other product offerings, which results in us receiving or facilitating transmission of personally identifiable information. Processing of this type of information is increasingly subject to legislation and regulation in the United States, including under the Fair Credit Reporting Act and the Gramm-Leach-Bliley Act. These laws and regulations are generally intended to protect the privacy and security of personal information, including credit card information that is collected, processed and transmitted. We could be adversely affected if government regulations require us to significantly change our business practices with respect to this type of information or if the third parties that we engage with to provide processing and screening services violate applicable laws and regulations. Further, restrictions implemented on the platforms through which our websites and applications are accessed, such as mobile operating systems, may impede the effectiveness of our marketing efforts and ability to measure the effectiveness of those efforts, reducing our ability to market our products and services and grow our customer base. A number of states have in place laws regulating the interception of electronic communications; if a court were to conclude that our monitoring of user activity violates such laws, our ability to understand our customers, and therefore the effectiveness of our product offerings and marketing efforts, could be reduced.

In addition to data privacy and security laws, we may be contractually subject to industry standards adopted by industry groups and may become subject to such obligations in the future. We may also be bound by other contractual obligations related to data privacy and security, and our efforts to comply with such obligations may not be successful. For example, we may be subject to the Payment Card Industry Data Security Standard (“PCI DSS”) requirements. The PCI DSS requires companies to adopt certain measures to ensure the security of cardholder information, including using and maintaining firewalls, adopting proper password protections for certain devices and software, and restricting data access. Noncompliance with PCI-DSS can result in penalties ranging from \$5,000 to \$100,000 per month by credit card companies, litigation, damage to our reputation, and revenue losses. We may also rely on vendors to process payment card data; those vendors may be subject to PCI DSS, and our business may be negatively affected if our vendors are fined or suffer other consequences as a result of PCI DSS noncompliance.

We may publish privacy notices, marketing materials, and other statements, such as compliance with certain certifications or self-regulatory principles, regarding data privacy and security. If these policies, materials or statements are found to be deficient, lacking in transparency, deceptive, unfair, or misrepresentative of our practices, we may be subject to investigation, enforcement actions by regulators, or other adverse consequences.

Obligations related to data privacy and security are quickly changing, becoming increasingly stringent, and creating regulatory uncertainty. Additionally, these obligations may be subject to differing applications and interpretations, which may be inconsistent or conflict among jurisdictions. Preparing for and complying with these obligations requires us to devote significant resources and may necessitate changes to our services, information technologies, systems, and practices and to those of any third parties that process personal data on our behalf.

We may at times fail (or be perceived to have failed) in our efforts to comply with our data privacy and security obligations. Moreover, despite our efforts, our personnel or third parties on whom we rely may fail to comply with such obligations, which could negatively impact our business operations. If we or the third parties on which we rely fail, or are perceived to have failed, to address or comply with applicable data privacy and security obligations, we could face significant consequences, including but not limited to: government enforcement actions (e.g., investigations, fines, penalties, audits, inspections, and similar); litigation (including class-action claims); additional reporting requirements and/or oversight; bans on processing personal data; and orders to destroy or not use personal data. Any of these events could have a material adverse effect on our reputation, business, or financial condition, including but not limited to: loss of customers; inability to process personal data or to operate in certain jurisdictions; limited ability to develop or commercialize our products and services; expenditure of time and resources to defend any claim or inquiry; adverse publicity; or substantial changes to our business model or operations.

We are From Time to Time Involved In, or May in the Future be Subject to, Claims, Suits, Government Investigations, and Other Proceedings That May Result in Adverse Outcomes.

We are from time to time involved in, or may in the future be subject to, claims, suits, government investigations, enforcement actions and proceedings arising from our business, including actions with respect to intellectual property, privacy, consumer protection, information security, mortgage brokering, mortgage origination, real estate, real estate brokerage, environmental, data protection, antitrust, the Real Estate Settlement Procedures Act of 1974 (RESPA), fair housing or fair lending, compliance with securities laws, or law enforcement matters, tax matters, labor and employment, and commercial claims, as well as actions involving content generated by our customers, shareholder derivative actions, purported class action lawsuits, and other matters, including those matters described in Part II, Item 8 in Note 18 under the subsection titled “Legal Proceedings” in our Notes to Consolidated Financial Statements in this Annual Report on Form 10-K. Such claims, suits, government investigations, and proceedings are inherently uncertain, and their results cannot be predicted with certainty. Regardless of the outcome, any such legal proceedings can have an adverse impact on us because of legal costs, diversion of management and other personnel, and other factors. In addition, it is possible that a resolution of one or more such proceedings could result in reputational harm, liability, fines, penalties, or sanctions, as well as judgments, consent decrees, or orders preventing us from offering certain features, functionalities, products, or services, or requiring a change in our business practices, products or technologies, which could in the future materially and adversely affect our business, operating results and financial condition.

In some instances, third parties may have an obligation to indemnify us for liabilities related to litigation or governmental investigations, and they may be unable to, or fail to, fulfill such obligations. If such third parties failed to indemnify us, we may be financially responsible, which could adversely affect our financial condition and cash flow.

Risks Related to Our Financial Position

We Incurred Significant Operating Losses in the Past and We May Not Be Able to Generate Sufficient Revenue to Be Profitable Over the Long Term.

We have incurred significant net operating losses in the past and, as of December 31, 2022, we had an accumulated deficit of \$1.6 billion. It is possible that our growth rate may decline in the future as the result of a variety of factors, including the maturation of our business or if we are unable to successfully execute on our growth strategy. At the same time, we also expect certain of our costs to increase in future periods as we continue to expend substantial financial resources to develop and expand our business, including with respect to:

- expansion of Zillow Home Loans;
- product and services development;
- sales and marketing;
- technology infrastructure;
- strategic opportunities, including commercial relationships and acquisitions; and
- general and administrative expenses, including legal and accounting expenses related to being a public company.

These investments may not result in increased revenue or growth in our business. If we fail to continue to grow our revenue and overall business and to manage our expenses, we may incur significant losses in the future and not be able to achieve or maintain profitability.

A failure by Zillow Home Loans to operate at a profit could also place its Federal Housing Administration Title II lender authorization in jeopardy, adversely impact our relationship with Fannie Mae and Freddie Mac, limit our ability to sell loans to third party financial institutions and may adversely impact our ability to utilize our loan repurchase facilities and warehouse lines of credit. Any such adverse impacts could threaten Zillow Home Loans’ ability to continue operations.

Servicing Our Debt Requires a Significant Amount of Cash, and We May Not Have Sufficient Cash Flow From Our Business to Pay Our Substantial Debt, Settle Conversions of Our Convertible Senior Notes, or Repurchase Our Convertible Senior Notes Upon a Fundamental Change.

We utilize several forms of debt to provide capital for the continued growth and operation of our business, such as tranches of convertible senior notes and warehouse and repurchase facilities for Zillow Home Loans. Our indebtedness includes the \$608 million aggregate principal amount under our Convertible Senior Notes due in 2024 (the “2024 Notes”), the \$565 million aggregate principal amount under our Convertible Senior Notes due in 2025 (the “2025 Notes”), the \$499 million

aggregate principal amount under our Convertible Senior Notes due in 2026 (the “2026 Notes”), and mortgage debt facilities (aggregate maximum borrowing capacity of \$250 million as of December 31, 2022). Our ability to make payments on the principal of, to pay interest on or to refinance our indebtedness depends on our future performance and, if applicable, the value of collateral, which is subject to economic, industry, competitive and other factors beyond our control. Our business may not continue to generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to extend or refinance our indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations, including our convertible senior notes, credit facilities, or otherwise.

Holders of our convertible senior notes have the right to require us to repurchase their notes upon the occurrence of a fundamental change at a repurchase price equal to 100% of the principal amount of the notes to be repurchased, plus accrued and unpaid interest. Holders of our convertible senior notes may elect to convert their notes at various times and pursuant to specific circumstances, as provided in the corresponding indenture. When such an election is made, we may opt to settle any such conversion by delivering solely shares of our Class C capital stock, solely cash payments, or a combination of Class C capital stock and cash payments after consideration of various factors, including the price of our Class C capital stock, market factors, liquidity, and the needs of our business. Upon conversion of our convertible senior notes, unless we elect to deliver solely shares of our Class C capital stock to settle such conversion (other than paying cash in lieu of delivering any fractional share), we will be required to make cash payments in respect of the notes being converted. We may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of the notes surrendered therefore or at the time the notes are being converted. Our failure to repurchase our convertible senior notes at a time when the repurchase is required by the indenture or to pay any cash payable on future conversions of the notes would constitute an event of default. If the repayment of any indebtedness were to be accelerated because of such event of default (whether under the notes or otherwise), we may not have sufficient funds to repay the indebtedness and repurchase the notes or make cash payments upon conversions thereof. An event of default under the indenture may lead to an acceleration of our convertible senior notes. Any such acceleration could result in our bankruptcy. In a bankruptcy, the holders of our convertible senior notes would have a claim to our assets that is senior to the claims of our equity holders.

In addition, our significant indebtedness, combined with our other financial obligations and contractual commitments, could have other important consequences. For example, it could:

- make us more vulnerable to adverse changes in general United States and worldwide economic, industry and competitive conditions and adverse changes in government regulation;
- limit our flexibility in planning for, or reacting to, changes in our business and our industry;
- place us at a disadvantage compared to our competitors who have less debt; and
- limit our ability to borrow additional amounts for working capital and other general corporate purposes, including to fund possible acquisitions of, or investments in, complementary businesses, products, services and technologies.

Any of these factors could materially and adversely affect our business, financial condition and results of operations. In addition, if we incur additional indebtedness, the risks related to our business and our ability to service or repay our indebtedness would increase.

The Credit and Debt Facilities that Provide Capital for Zillow Home Loans Include Covenants and Other Provisions that May Restrict Our Operating Activities, and Have a Material Effect on Our Liquidity. They Also Incorporate Variable Interest Rates that May Subject Us to Interest Rate Risk, Which Could Cause Our Debt Service Obligations to Increase Significantly.

Zillow Home Loans has entered into warehouse financing agreements, including credit and repurchase agreements, to provide capital for the growth and operation of our mortgage origination businesses. The terms of these warehouse financing agreements and related financing documents require Zillow Home Loans to comply with a number of customary financial and other covenants, such as maintaining certain levels of liquidity, tangible net worth, leverage ratios, net income and adequate insurance coverage. These covenants may limit our operational flexibility and may restrict our ability to engage in transactions that we believe would otherwise be in the best interests of our shareholders. Additionally, undrawn amounts are not committed, meaning the applicable lender is not obligated to advance loan funds in excess of outstanding borrowings. Refer to Note 13 of our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for additional information on our Zillow Home Loans warehouse financing facilities. Upon the occurrence of any event of default under these warehouse financing agreements, the lenders could elect to declare all borrowings outstanding, together with accrued and unpaid interest and fees, to be immediately due and payable, even in the absence of a payment default. A default under one of

our warehouse financing agreements could result in a cross-default under other warehouse financing agreements and our lenders could elect to declare outstanding amounts due and payable or terminate their commitments. If we fail to repay the amounts due under our warehouse financing agreements, the lenders of such warehouse financing agreements may proceed against the collateral granted to secure the credit facilities. The majority of loans originated by Zillow Home Loans are pledged as collateral to secure such indebtedness. As a result, a default under applicable debt covenants could have an adverse effect on our financial condition or results of operations.

Certain of our debt agreements are subject to margin calls based on the lender's opinion of the value of the collateral securing such financing. A margin call would require the borrower to repay a portion of the outstanding borrowings. A large, unanticipated margin call could have a material effect on our liquidity.

At December 31, 2022, \$37 million of our borrowings under our warehouse financing agreements was at variable rates of interest, thereby exposing us to interest rate risk. If interest rates increase, our debt service obligations on the variable rate indebtedness would increase even if the amount borrowed remained the same, and our net loss would increase.

We May Need to Raise Additional Capital to Grow Our Business and We May Not Be Able to Raise Additional Capital on Terms Acceptable to Us, or At All.

Growing and operating our business, including through the development of new and enhanced products and services, may require significant cash outlays, liquidity reserves and capital expenditures. If cash on hand, cash generated from operations and cash equivalents and investment balances are not sufficient to meet our cash and liquidity needs or fund future growth and development, we may need to seek additional capital and we may not be able to raise the necessary cash on terms acceptable to us, or at all. Refer to Note 13 of our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for additional information on our warehouse and loan repurchase facilities. In addition, in February 2021, we entered into an Equity Distribution Agreement pursuant to which we may offer and sell from time to time, through certain financial institutions, shares of our Class C capital stock having an aggregate gross sales price of up to \$1 billion, and as of November 2022, our board of directors has authorized the repurchase of up to a total of \$1.8 billion of our Class A common stock, Class C capital stock, a combination thereof, or our outstanding convertible senior notes. We may decide to raise additional capital or repurchase outstanding stock or debt through these arrangements at levels or under terms that prove to be unfavorable or at times and share prices that prove to be disadvantageous based on changes in market conditions. Such decisions may negatively impact our financial position and/or future ability to raise capital. Financing arrangements we maintain, pursue or assume may require us to grant certain rights, take certain actions, or agree to certain restrictions, that could negatively impact our business. If additional capital is not available to us on terms acceptable to us or at all, we may need to modify our business plans, which would harm our ability to grow our operations.

We Rely on Assumptions, Estimates, and Business Data to Calculate our Key Performance Indicators and Other Business Metrics, and Real or Perceived Inaccuracies in These Metrics May Harm our Reputation and Negatively Affect our Business.

Certain of our performance metrics are calculated using third party applications or internal company data that have not been independently verified. While these numbers are based on what we believe to be reasonable calculations for the applicable period of measurement, there are inherent challenges in measuring such information. For example, our measurement of visits and unique users may be affected by applications that automatically contact our servers to access our mobile applications and websites with no user action involved, and this activity can cause our system to count the user associated with such a device as a unique user or as a visit on the day such contact occurs.

We regularly review and may adjust our processes for calculating our performance metrics to improve accuracy. Our measure of certain metrics may differ from estimates published by third parties or from similarly-titled metrics of our competitors due to differences in methodology. If real estate professionals, our real estate partners or investors do not perceive our visits or unique users to be an accurate representation of our user engagement, or if we discover material inaccuracies in our visits or unique users, our reputation may be harmed, and real estate professionals and advertisers may be less willing to allocate their resources to our products and services, which could negatively affect our business and operating results.

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 our control. The other risk factors discussed in this "Risk Factors" section may contribute to the variability of our quarterly and annual results. In addition, our results may fluctuate as a result of seasonal variances of home sales, which historically peak in the spring and summer seasons, fluctuations in the quantity of

homes available, our remnant advertising, and the size and seasonal variability of our real estate partners' marketing budgets. The seasonal variance and cyclical nature of home sales may contribute to the variability of our revenue and results of operations for our Mortgages segment, in particular, which seasonality may be masked by segment growth. 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 our stock price.

We Could Be Subject to Additional Tax Liabilities.

We are subject to income taxes in the United States (federal and state), Canada, and Serbia. Tax laws, regulations, and administrative practices in various jurisdictions may be subject to significant change, with or without notice, due to economic, political, and other conditions. New tax laws, regulations and administrative practices could be enacted or adopted at any time, and existing tax laws, regulations and administrative practices could be interpreted, modified or applied adversely to us, possibly with retroactive effect. These changes could require us to pay additional taxes, penalties, interest and other related costs, and also could increase our compliance, operating and other costs. For instance, the recently enacted Inflation Reduction Act imposes, among other rules, a 15% minimum tax on the book income of certain large corporations and a 1% excise tax on certain corporate stock repurchases.

Significant judgment is required in evaluating and estimating the taxes imposed under such tax laws. Our effective tax rates could be affected by numerous factors, such as entry into new businesses and geographies, changes to our existing business and operations, acquisitions and investments and how they are financed, changes in our stock price, changes in our deferred tax assets and liabilities and their valuation, and changes in the relevant tax, accounting, and other laws, regulations, administrative practices, principles, and interpretations. We are required to take positions regarding the interpretation of complex statutory and regulatory tax rules and on valuation matters that are subject to uncertainty, and the Internal Revenue Service or other tax authorities may challenge the positions we take.

Our Ability to Use Our Net Operating Loss Carryforwards and Certain Other Tax Attributes May Be Limited.

We have incurred losses during our history. To the extent that we continue to generate losses, unused losses will carry forward to offset future taxable income, if any, until such unused losses expire, if at all. Under the Tax Act, as modified by the Coronavirus Aid, Relief, and Economic Security Act, United States federal net operating loss carryforwards generated in taxable years beginning after December 31, 2017, may be carried forward indefinitely, but the deductibility of such net operating loss carryforwards in taxable years beginning after December 31, 2020 is limited to 80% of taxable income.

In addition, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the "Code"), if a corporation undergoes an "ownership change", the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes, such as research and development credits, to offset its post-change taxable income or income tax liability may be limited. An "ownership change" occurs for these purposes if one or more shareholders (including certain groups of shareholders) that each owns at least 5% of the corporation's stock by value increase their aggregate ownership by more than 50 percentage points over their lowest ownership percentages within a rolling three-year period. Similar rules may apply under state tax laws. We have undergone ownership changes in the past, and we may experience ownership changes in the future because of shifts in our stock ownership, many of which are outside of our control. As a result, if we achieve profitability, our ability to use our net operating loss carryforwards and other tax attributes to offset future United States federal taxable income or income tax liabilities may be, or may become, subject to limitations, which could result in increased future tax liability to us.

Risks Related to Ownership of Our Common and Capital Stock and Debt Instruments

Our Class A Common Stock and Class C Capital Stock Prices May Be Volatile, and the Value of an Investment in Our Class A Common Stock and Class C Capital Stock May Decline.

An active, liquid and orderly market for our Class A common stock and Class C capital stock may not be sustained, which could depress the trading price of our Class A common stock and Class C capital stock. The trading price of our Class A common stock and Class C capital stock has at times experienced price volatility and may continue to be volatile. For example, during the last three fiscal years ending December 31, 2022, the closing price of our Class A common stock has ranged from \$23.51 per share to \$203.79 per share. During the same time period, the closing price of our Class C capital stock has ranged from \$25.01 per share to \$199.90 per share. The market price of our Class A common stock and Class C capital stock could be

subject to wide fluctuations in response to many of the risk factors discussed in this Annual Report on Form 10-K and others beyond our control, including:

- actual or anticipated fluctuations in our financial condition and results of operations;
- changes in projected operational and financial results;
- addition or loss of significant customers;
- actual or anticipated changes in our growth rate relative to that of our competitors;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital-raising activities or commitments;
- announcements of technological innovations or new offerings by us or our competitors;
- additions or departures of key personnel;
- changes in laws or regulations applicable to our services;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- the inclusion, exclusion, or deletion of our Class A common stock and Class C capital stock from any trading indices, such as the S&P 500 Index;
- issuance of new or updated research or reports by securities analysts;
- sales of our Class A common stock and Class C capital stock by us or our shareholders;
- repurchases of our Class A common stock and Class C capital stock by us or our shareholders;
- issuances of our Class C capital stock upon conversion of our 2024 Notes, 2025 Notes or 2026 Notes;
- stock price and volume fluctuations attributable to inconsistent trading volume levels of our shares; and
- general economic and market conditions.

Furthermore, the stock markets in recent years have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of the equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such as recessions, changes to federal monetary policy, interest rates or international currency fluctuations, may negatively impact the market price of our Class A common stock and Class C capital stock. In the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We have in the past been and are currently the target of this type of litigation, and we may continue to be the target of this type of litigation in the future. Past, current, and future securities litigation against us could result in substantial costs and divert management's attention from other business concerns, which could harm our business, results of operations or financial condition.

The Structure of Our Capital Stock as Contained in Our Charter Documents Has the Effect of Concentrating Voting Control With Our Founders, and Limits Your Ability to Influence Corporate Matters.

Since Zillow Group's inception, our capital structure has included authorized Class A common stock and authorized Class B common stock. Our Class A common stock entitles its holder to one vote per share, and our Class B common stock entitles its holder to 10 votes per share. All shares of Class B common stock have been and are held or controlled by our founders, Richard Barton and Lloyd Frink. As of December 31, 2022, Mr. Barton's holdings and Mr. Frink's holdings represented approximately 31.6% and 20.5%, respectively, of the voting power of our outstanding capital stock.

For the foreseeable future, Mr. Barton and Mr. Frink will therefore have significant control over our management and affairs and will be able to control most matters requiring shareholder approval, including the election or removal (with or without cause) of directors and the approval of any significant corporate transaction, such as a merger or other sale of us or our assets. In addition, because our Class C capital stock carries no voting rights (except as required by applicable law or as expressly provided in our amended and restated articles of incorporation), the issuance of Class C capital stock (instead of Class A common stock) could prolong the duration of Mr. Barton's and Mr. Frink's relative ownership of our voting power. This concentrated control could delay, defer or prevent a change of control, merger, consolidation, takeover, or other business combination involving us that you, as a shareholder, may otherwise support. This concentrated control could also discourage a potential investor from acquiring our Class A common stock or Class C capital stock due to the limited voting power of such stock relative to the Class B common stock and might harm the market price of our Class A common stock and Class C capital stock.

Future Sales of Our Stock in the Public Market Could Cause Our Stock Price to Decline.

We cannot predict the effect, if any, that market sales of shares or the availability of shares for sale will have on the prevailing trading price of our Class A common stock and Class C capital stock from time to time. There is currently no contractual restriction on our ability to issue additional shares, and all of our outstanding shares are generally freely tradable,

except for shares held by our “affiliates” as defined in Rule 144 under the Securities Act of 1933, as amended, which may be sold in compliance with the volume restrictions of Rule 144. Sales of a substantial number of shares of our Class A common stock and Class C capital stock could cause our stock price to decline. In addition, we may in the future issue shares of Class C capital stock for financings, acquisitions, equity incentives, including under our Equity Distribution Agreement or to settle our outstanding convertible notes. If we issue shares of Class C capital stock in the future, such issuances would have a dilutive effect on the economic interest of our Class A common stock.

If Securities or Industry Analysts or Other Third Parties Do Not Publish Research or Publish Inaccurate or Unfavorable Research About Our Business, Our Class A Common Stock and Class C Capital Stock Price and Trading Volume Could Decline.

The trading market for our Class A common stock and Class C capital stock depends in part on the research and reports that securities or industry analysts or other third parties publish about our company. If few or no securities or industry analysts or other third parties cover our company, the market price of our publicly-traded stock could be negatively impacted. If securities or industry analysts or other third parties cover us and if one or more of such analysts downgrade our stock or publish inaccurate or unfavorable research about our business, our stock price would likely decline. If one or more of the analysts covering us fail to publish reports on us regularly, demand for our stock could decline, which could cause our stock price and trading volume to decline.

If We Issue Additional Equity Securities or Convertible Debt to Raise Capital or Elect to Settle Conversions of Our Convertible Senior Notes in Stock, It May Have a Dilutive Effect on Shareholders’ Investment.

If we raise additional capital through further issuances of equity or convertible debt securities or elect to settle conversions of our convertible senior notes in shares of our Class C capital stock, our existing shareholders could suffer significant dilution in their percentage ownership of us. Moreover, any new equity securities we issue could have rights, preferences and privileges senior to those of holders of our common stock.

The Capped Call Transactions May Affect the Value of Our 2024 Notes, 2026 Notes and Our Class C Capital Stock.

In connection with the pricing of each of the 2024 Notes and 2026 Notes, we entered into capped call transactions with certain financial institutions (the “option counterparties”). The capped call transactions are expected generally to reduce the potential dilution in connection with the conversion of the 2024 Notes or 2026 Notes and/or offset any cash payments we are required to make in excess of the principal amount of converted notes, as the case may be. In connection with our Convertible Senior Notes due in 2021 (“2021 Notes”) and 2023 (“2023 Notes”), the balance of which we redeemed in late 2020 and mid-2021 respectively, we exercised our right to keep the associated capped call confirmations open through the expiration of the 2021 Notes and 2023 Notes, which caused short term dilution. We may pursue similar options with the capped call confirmations associated with each of the 2024 Notes and 2026 Notes in the future.

The option counterparties or their respective affiliates may modify their hedge positions by entering into or unwinding various derivative transactions with respect to our Class C capital stock and/or purchasing or selling our Class C capital stock or other securities of ours in secondary market transactions prior to the maturity of each of the 2024 Notes and 2026 Notes (and are likely to do so during any observation period related to a conversion of 2024 Notes or 2026 Notes or in connection with any repurchase of 2024 Notes or 2026 Notes by us). This activity could cause or avoid an increase or a decrease in the market price of our Class C capital stock, the 2024 Notes or the 2026 Notes.

Anti-Takeover Provisions in Our Charter Documents and Under Washington Law Could Make an Acquisition of Us More Difficult, Limit Attempts by Shareholders to Replace or Remove Our Management and Affect the Market Price of Our Stock.

Provisions in our articles of incorporation and bylaws, as amended and restated, may have the effect of delaying or preventing a change of control or changes in our management. Our amended and restated articles of incorporation or amended and restated bylaws include provisions, some of which will become effective only after the date, which we refer to as the threshold date, on which the Class B common stock controlled by our founders represents less than 7% of the aggregate number of shares of our outstanding Class A common stock and Class B common stock, that:

- set forth the structure of our capital stock, which concentrates voting control of matters submitted to a vote of our shareholders with the holders of our Class B common stock, which is held or controlled by our founders;

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- authorize our board of directors to issue, without further action by our shareholders, up to 30,000,000 shares of undesignated preferred stock, subject, prior to the threshold date, to the approval rights of the holders of our Class B common stock;
- establish that our board of directors will be divided into three classes, Class I, Class II and Class III, with each class serving three-year staggered terms;
- prohibit cumulative voting in the election of directors;
- provide that, after the threshold date, our directors may be removed only for cause;
- provide that, after the threshold date, vacancies on our board of directors may be filled only by the affirmative vote of a majority of directors then in office or by the sole remaining director;
- provide that only our board of directors may change the board's size;
- specify that special meetings of our shareholders can be called only by the chair of our board of directors, our board of directors, our chief executive officer, our president or, prior to the threshold date, holders of at least 25% of all the votes entitled to be cast on any issue proposed to be considered at any such special meeting;
- establish an advance notice procedure for shareholder proposals to be brought before a meeting of shareholders, including proposed nominations of persons for election to our board of directors;
- require the approval of our board of directors or the holders of at least two-thirds of all the votes entitled to be cast by shareholders generally in the election of directors, voting together as a single group, to amend or repeal our bylaws; and
- require the approval of not less than two-thirds of all the votes entitled to be cast on a proposed amendment, voting together as a single group, to amend certain provisions of our articles of incorporation.

Prior to the threshold date, our directors can be removed with or without cause by holders of our Class A common stock and Class B common stock, voting together as a single group, and vacancies on the board of directors may be filled by such shareholders, voting together as a single group. Given the structure of our capital stock, our founders, Richard Barton and Lloyd Frink, who hold or control our Class B common stock, will have the ability for the foreseeable future to control these shareholder actions. See the risk factor above titled “The Structure of Our Capital Stock as Contained in Our Charter Documents Has the Effect of Concentrating Voting Control With our Founders, and Limits Your Ability to Influence Corporate Matters.”

The provisions described above, after the threshold date, may frustrate or prevent any attempts by our shareholders to replace or remove our current management by making it more difficult for shareholders to replace members of our board of directors, which board is responsible for appointing our management. In addition, because we are incorporated in the State of Washington, we are governed by the provisions of Chapter 23B.19 of the Washington Business Corporation Act, which prohibits certain business combinations between us and certain significant shareholders unless specified conditions are met. These provisions may also have the effect of delaying or preventing a change of control of our company, even if this change of control would benefit our shareholders.

Item 1B. Unresolved Staff Comments.

Not applicable.

Item 2. Properties.

We have various operating leases for office space which are summarized as of December 31, 2022 in the table below. Given the permanent move to a flexible workforce, our operating leases no longer support specific reportable segments. We believe that our facilities are adequate for our current needs.

Location	Purpose	Approximate Square Feet (1)	Principal Lease Expiration Dates
Seattle, Washington	Corporate headquarters for Zillow Group	264,745	2032
San Francisco, California	General office space	92,562	2032
Irvine, California	General office space	80,952	2027
New York, New York	General office space	76,199	2030
Overland Park, Kansas	General office space	70,373	2024
Atlanta, Georgia	General office space	51,822	2025

(1) Excludes square footage of subleased space.

In addition, we lease office space in several other locations in the United States and Canada. See Note 2 and Note 12 of Part II, Item 8 of this Annual Report on Form 10-K for more information about our lease commitments.

Item 3. Legal Proceedings.

For information regarding legal proceedings in which we are involved, see Note 18 under the subsection titled “Legal Proceedings” in our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

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 and Holders

Our Class A common stock has traded on The Nasdaq Global Select Market under the symbol “ZG” since August 17, 2015 and under the symbol “Z” from July 20, 2011 through August 14, 2015.

Our Class B common stock is not listed and there is no established public trading market.

Our Class C capital stock has traded on The Nasdaq Global Select Market under the symbol “Z” since August 17, 2015. Prior to that time, there was no public market for our Class C capital stock.

Holders of Record

As of February 9, 2023, there were 316, three, and 131 holders of record of our Class A common stock, our Class B common stock, and our Class C capital stock, respectively.

Dividends

We have never declared or paid a cash dividend on our common or capital stock and we intend to retain all available funds and any future earnings to fund the development and growth of our business. We therefore do not anticipate paying any cash dividends on our common or capital stock in the foreseeable future. Any future determinations to pay dividends on our common or capital stock would depend on our results of operations, our financial condition and liquidity requirements, restrictions that may be imposed by applicable law or our contracts and any other factors that our board of directors may consider relevant.

Recent Sales of Unregistered Securities and Use of Proceeds from Registered Securities

Recent Sales of Unregistered Securities

There were no sales of unregistered securities during the three months ended December 31, 2022.

Purchases of Equity Securities by the Issuer

The following table summarizes our Class A common stock and Class C capital stock repurchases during the three months ended December 31, 2022 (in millions, except share data which are presented in thousands, and per share amounts):

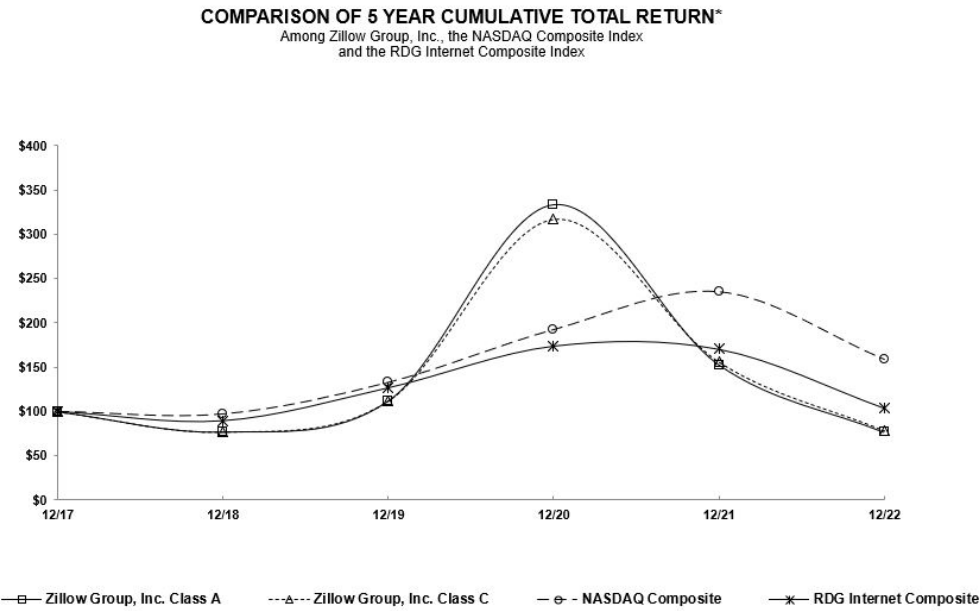
Period	Total Number of Shares Purchased		Average Price Paid Per Share		Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs (1)
	Class A common stock	Class C capital stock	Class A common stock	Class C capital stock		
October 1 - October 31, 2022	—	—	\$ —	\$ —	—	\$ 674
November 1 - November 30, 2022	592	3,530	34.23	34.93	4,122	531
December 1 - December 31, 2022	111	688	37.11	37.57	799	500
Total	<u>703</u>	<u>4,218</u>			<u>4,921</u>	

(1) On December 2, 2021, the Board of Directors authorized a stock repurchase program granting the authority to repurchase up to \$750 million of our Class A common stock, Class C capital stock or a combination of both. On May 4, 2022, the Board of Directors authorized the repurchase of up to an additional \$1 billion (together the “Repurchase Authorizations”) of our Class A common stock, Class C capital stock or a combination thereof. On November 1, 2022, the Board of Directors further expanded the Repurchase Authorizations to allow for the repurchase of a portion of our outstanding convertible senior notes. There were no repurchases of convertible senior notes during the year ended December 31, 2022. The Repurchase Authorizations do not have an expiration date.

Performance Graph

The following graph compares our cumulative total shareholder return on Zillow Group’s common and capital stock with the Nasdaq Composite Index and the RDG Internet Composite Index.

The information contained in the graph is based on historical data and is not intended to forecast possible future performance.



*\$100 invested on 12/31/17 in stock or index, including reinvestment of dividends.
Fiscal year ending December 31.

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

The following discussion of our financial condition and results of operations should be read in conjunction with our audited consolidated financial statements and the related notes included elsewhere in this Annual Report on Form 10-K. In the fourth quarter of 2021, we began to wind down the operations of Zillow Offers, our iBuying business which purchased and sold homes directly in certain markets across the country. The wind down of Zillow Offers operations was completed in the third quarter of 2022, and we have presented the financial results of Zillow Offers as discontinued operations in our consolidated financial statements for all periods presented. The discussion of 2021 and 2020 financial condition, results of operations and year-to-year comparisons within the sections below have been revised to conform with this current period presentation.

In addition to historical financial information, the following discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results may differ materially from those described in or implied by any forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in the section titled "Risk Factors".

Overview of our Business

Zillow Group is reimagining real estate to make it easier to unlock life's next chapter. As the most visited real estate website in the United States, Zillow and its affiliates offer customers an on-demand experience for selling, buying, renting or financing with transparency and ease.

Our portfolio of consumer brands includes Zillow Premier Agent, Zillow Home Loans, our affiliate lender, Zillow Closing Services, Zillow Rentals, Trulia, StreetEasy, HotPads and Out East. In addition, Zillow Group provides a comprehensive suite of marketing software and technology solutions for the real estate industry which include Mortech, New Home Feed and ShowingTime+, which houses ShowingTime, Bridge Interactive, dotloop and interactive floor plans.

Discontinued Operations

In the fourth quarter of 2021, the Board of Directors (the "Board") of Zillow Group made the determination to wind down the operations of Zillow Offers, our iBuying business which purchased and sold homes directly in certain markets across the United States. The wind down was completed in the third quarter of 2022 and resulted in approximately a 25% reduction of Zillow Group's workforce. The financial results of Zillow Offers have been presented in the accompanying consolidated financial statements as discontinued operations and, therefore, are excluded from the following discussion of the results of our continuing operations. In addition, the discussion of 2021 and 2020 financial condition, results of operations and year-to-year comparisons within the sections below have been revised to conform with this current period presentation. Given the wind down of Zillow Offers and corresponding shift in our strategic plans, financial performance for prior and current periods may not be indicative of future performance. For additional information regarding discontinued operations, see Note 3 in our Notes to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

August 2022 Equity Award Actions

On August 3, 2022, upon the recommendation of the Compensation Committee of the Board, the Board approved adjustments to the exercise price of certain outstanding vested and unvested option awards for eligible employees. The exercise price of eligible option awards was reduced to \$38.78, which was the closing market price of our Class C capital stock on August 8, 2022. No other changes were made to the terms and conditions of the eligible option awards. In addition, the Board approved a supplemental grant of restricted stock units to eligible employees that was granted on August 8, 2022 and vests quarterly over a two-year period beginning in August 2022. The repricing of eligible option awards and the issuance of supplemental restricted stock units (collectively the "August 2022 Equity Award Actions") is expected to result in total incremental share-based compensation expense of approximately \$189 million, \$77 million of which was recognized during the year ended December 31, 2022. The remaining expense will be recognized over the remaining requisite service period, which is largely over the next two years. For additional information regarding the August 2022 Equity Award, see Note 16 in our Notes to the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Reportable Segments and Revenue Overview

Zillow Group has three reportable segments: the Internet, Media & Technology ("IMT") segment, the Mortgages segment and the Homes segment.

The IMT segment includes the financial results for the Premier Agent and rentals marketplaces (including StreetEasy rentals product offerings) as well as Other IMT, which includes our new construction marketplace and revenue from the sale of

other advertising and business technology solutions for real estate professionals, including display, StreetEasy for-sale product offerings and ShowingTime+, which houses ShowingTime, Bridge Interactive, dotloop and interactive floor plans. In the fourth quarter of 2021, we began to include the financial results of ShowingTime in the IMT segment. For additional information regarding the September 2021 acquisition of ShowingTime, see Note 9 in our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K. The Mortgages segment primarily includes financial results for mortgage originations through Zillow Home Loans and advertising sold to mortgage lenders and other mortgage professionals. The Homes segment includes the financial results from title and escrow services performed by Zillow Closing Services and certain indirect costs of the Homes segment which do not qualify as discontinued operations.

Premier Agent revenue is generated by the sale of advertising services, as well as marketing and technology products and services, to help real estate agents and brokers grow and manage their businesses. We offer these products and services through our Premier Agent program. Premier Agent products, which include the delivery of validated customer connections, or leads, are primarily offered on a share of voice basis. Connections are distributed to Premier Agent partners in proportion to their share of voice, or an agent advertiser's share of total advertising purchased in a particular zip code. Connections are delivered when customer contact information is provided to Premier Agent partners. Connections are provided as part of our suite of advertising services for Premier Agent partners; we do not charge a separate fee for these customer leads.

We also offer a pay for performance pricing model called "Flex" for Premier Agent services in certain markets to select partners. With the Flex model, Premier Agent partners are provided with validated leads at no initial cost and pay a performance fee only when a real estate transaction is closed with one of the leads within two years.

Rentals revenue includes advertising sold to property managers, landlords and other rental professionals on a cost per lead, click, lease, listing or impression basis or for a fixed fee for certain advertising packages through both Zillow and StreetEasy. Rentals revenue also includes revenue generated from our rental applications product, through which potential renters can submit applications to multiple properties for a flat service fee.

Other IMT revenue primarily includes revenue generated by our new construction marketplace and revenue from the sale of other advertising and business technology solutions for real estate professionals, including display, StreetEasy for-sale product offerings and ShowingTime+. New construction revenue primarily includes advertising services sold to home builders on a cost per residential community or cost per impression basis. Our dotloop real estate transaction management software-as-a-service solution is a monthly subscription service allowing real estate partners to efficiently manage their transactions. Display revenue consists of graphical mobile and web advertising sold on a cost per impression or cost per click basis to advertisers promoting their brands on our mobile applications and websites. StreetEasy revenue includes advertising services sold to real estate professionals serving the New York City for-sale market primarily on a cost per listing or performance fee basis. ShowingTime revenue is primarily generated by Appointment Center, a software-as-a-service and call center solution allowing real estate agents, brokerages and multiple listing services to efficiently schedule real estate viewing appointments on behalf of their customers. Appointment Center services also include call center specialists who provide scheduling support to customers. Appointment Center revenue is primarily billed in advance on a monthly basis.

In our Mortgages segment, we primarily generate revenue through mortgage originations and the related sale of mortgages on the secondary market through Zillow Home Loans and from advertising sold to mortgage lenders and other mortgage professionals on a cost per lead basis, including our Custom Quote and Connect services.

Homes segment revenue relates to revenue associated with title and escrow services provided through Zillow Closing Services and was not material for the periods presented.

For additional information regarding our revenue recognition policies, see Note 2 of our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Financial Overview

For the years ended December 31, 2022 and 2021, we generated revenue of \$2.0 billion and \$2.1 billion, respectively, representing a year-over-year decrease of 8%. The decrease in total revenue was primarily attributable to the following:

- Mortgages segment revenue decreased by \$127 million to \$119 million for the year ended December 31, 2022 compared to \$246 million for the year ended December 31, 2021, driven primarily by a decrease in revenue generated by Zillow Home Loans, as total loan origination volumes decreased 62% primarily resulting from a decrease in demand for refinance mortgages attributable to the rising and volatile interest rate environment. The decrease in Mortgages segment revenue was also impacted by a decrease in revenue from Custom Quote and Connect advertising services.

- Premier Agent revenue decreased by \$105 million to \$1.3 billion for the year ended December 31, 2022 compared to \$1.4 billion for the year ended December 31, 2021. The decrease in Premier Agent revenue was primarily due to macro housing market factors including interest rate and home price increases and volatility, as well as tight housing inventory levels. These factors resulted in a 10% decrease in Premier Agent revenue per visit.
- The decreases noted above were partially offset by a \$48 million increase in Other IMT revenue to \$274 million for the year ended December 31, 2022 compared to \$226 million for the year ended December 31, 2021, primarily due to the addition of ShowingTime revenue beginning in the fourth quarter of 2021.

For the years ended December 31, 2022 and 2021, we generated total gross profit of \$1.6 billion and \$1.8 billion, respectively, representing a year-over-year decrease of 12%, due to the combined factors discussed below.

Health of Housing Market

Our financial performance is impacted by changes in the health of the housing market, which is impacted, in turn, by general economic conditions. Current market factors, including low housing inventory, fewer new for-sale listings, increases and volatility in mortgage interest rates as well as home price fluctuations, inflationary conditions and changing rental occupancy rates may have a negative impact on the number of transactions that consumers complete using our products and services and on demand for our advertising services. The extent to which these factors impact our results and financial position will depend on future developments, which are uncertain and difficult to predict.

COVID-19 Impact

The effect and extent of the impact of the COVID-19 pandemic on our business continues to be uncertain and difficult to predict. While we have seen recovery in our business and the businesses of our customers and real estate partners from the initial economic effects of the pandemic, the duration and impact of the COVID-19 pandemic (including variants) may continue to affect our financial results. The extent to which COVID-19 (including any variants) continues to impact our results and financial position will depend on future developments, which are uncertain and difficult to predict.

Key Metrics

Management has identified visits, unique users and the volume of loans originated through Zillow Home Loans as relevant to investors' and others' assessment of our financial condition and results of operations. We no longer consider the number of homes sold as a key metric given the wind down of Zillow Offers operations.

Visits

The number of visits is an important metric because it is an indicator of consumers' level of engagement with our mobile applications, websites and other services. We believe highly engaged consumers are more likely to use our products and services, including Zillow Homes Loans, or be transaction-ready real estate market participants and therefore are more sought-after by our Premier Agent partners.

We define a visit as a group of interactions by users with the Zillow, Trulia and StreetEasy mobile applications and websites. A single visit can contain multiple page views and actions, and a single user can open multiple visits across domains, web browsers, desktop or mobile devices. Visits can occur on the same day, or over several days, weeks or months.

Zillow and StreetEasy measure visits with Google Analytics, and Trulia measures visits with Adobe Analytics. Visits to Trulia end after thirty minutes of user inactivity. Visits to Zillow and StreetEasy end either: (i) after thirty minutes of user inactivity or at midnight; or (ii) through a campaign change. A visit ends through a campaign change if a visitor arrives via one campaign or source (for example, via a search engine or referring link on a third-party website), leaves the mobile application or website, and then returns via another campaign or source.

The following table presents the number of visits to our mobile applications and websites for the periods presented (in millions, except percentages):

	Year Ended December 31,			2021 to 2022 % Change	2020 to 2021 % Change
	2022	2021	2020		
Visits	10,470	10,207	9,627	3 %	6 %

Unique Users

Measuring unique users is important to us because much of our revenue depends in part on our ability to connect home buyers and sellers, renters and individuals with or looking for a mortgage to real estate, rental and mortgage professionals, products and services. Growth in consumer traffic to our mobile applications and websites increases the number of impressions, clicks, connections, leads and other events we can monetize to generate revenue. For example, our revenue depends in part, on users accessing our mobile applications and websites to engage in the sale, purchase and financing of homes, including with Zillow Home Loans, and our Premier Agent revenue, rentals revenue and display revenue depend on advertisements being served to users of our mobile applications and websites.

We count a unique user the first time an individual accesses one of our mobile applications using a mobile device during a calendar month and the first time an individual accesses one of our websites using a web browser during a calendar month. If an individual accesses our mobile applications using different mobile devices within a given month, the first instance of access by each such mobile device is counted as a separate unique user. If an individual accesses more than one of our mobile applications within a given month, the first access to each mobile application is counted as a separate unique user. If an individual accesses our websites using different web browsers within a given month, the first access by each such web browser is counted as a separate unique user. If an individual accesses more than one of our websites in a single month, the first access to each website is counted as a separate unique user since unique users are tracked separately for each domain. Zillow, StreetEasy and HotPads measure unique users with Google Analytics, and Trulia measures unique users with Adobe Analytics.

Due to third-party technological limitations, user software settings, or user behavior, Google Analytics may assign a unique cookie to different instances of access by the same individual to our mobile applications and websites. In such instances, Google Analytics would count different instances of access by the same individual as separate unique users. Accordingly, reliance on the number of unique users counted by Google Analytics may overstate the actual number of unique users who access our mobile applications and websites during the period.

The following table presents our average monthly unique users for the periods presented (in millions, except percentages):

	Year Ended December 31,			2021 to 2022 % Change	2020 to 2021 % Change
	2022	2021	2020		
Average monthly unique users	220	218	212	1 %	3 %

Loan Origination Volume

Loan origination volume is an important metric as it is a measure of how successful we are at the origination and subsequent sale of mortgage loan products through our mortgage origination business, Zillow Home Loans, which directly impacts our Mortgages segment revenue. Loan origination volume represents the total value of mortgage loan originations closed through Zillow Home Loans during the period.

The following table presents loan origination volume by purpose and in total for Zillow Home Loans for the periods presented (in millions, except percentages):

	Year Ended December 31,			2021 to 2022 % Change	2020 to 2021 % Change
	2022	2021	2020		
Purchase loan origination volume	\$ 794	\$ 1,035	\$ 540	(23)%	92 %
Refinance loan origination volume	750	3,023	1,213	(75)%	149 %
Total loan origination volume	\$ 1,544	\$ 4,058	\$ 1,753	(62)%	131 %

During the year ended December 31, 2022, total loan origination volume decreased 62% compared to the year ended December 31, 2021, driven primarily by higher interest rates which decreased demand for refinance mortgages. During the year ended December 31, 2021, total loan origination volume increased 131% compared to the year ended December 31, 2020, driven primarily by low interest rates coupled with growth of our mortgage originations business.

Results of Operations

Given continued uncertainty surrounding the health of the housing market, interest rate environment, inflationary conditions and the COVID-19 pandemic, financial performance for current and prior periods may not be indicative of future performance.

Revenue

	Year Ended December 31,				2021 to 2022		2020 to 2021		% of Total Revenue		
	Year Ended December 31,			\$ Change	% Change	\$ Change	% Change	Year Ended December 31,			
	2022	2021	2020					2022	2021	2020	
(in millions, except percentages)											
Revenue:											
IMT segment:											
Premier Agent	\$ 1,291	\$ 1,396	\$ 1,047	\$ (105)	(8)%	\$ 349	33 %	66 %	65 %	64 %	
Rentals	274	264	222	10	4	42	19	14	12	14	
Other	274	226	181	48	21	45	25	14	11	11	
Total IMT segment revenue	1,839	1,886	1,450	(47)	(2)	436	30	94	88	89	
Mortgages segment	119	246	174	(127)	(52)	72	41	6	12	11	
Total revenue	\$ 1,958	\$ 2,132	\$ 1,624	\$ (174)	(8)%	\$ 508	31 %	100 %	100 %	100 %	

Year Ended December 31, 2022 compared to year ended December 31, 2021

Total revenue decreased \$174 million, or 8%, to \$2.0 billion:

- Mortgages segment revenue decreased 52% to \$119 million primarily due to a decline in mortgage originations revenue which drove 72% of the decrease in Mortgages segment revenue, and a decline in our Custom Quote and Connect advertising services revenue which drove 28% of the decrease in Mortgages segment revenue. The decrease in mortgage originations revenue was primarily due to a 62% decrease in loan origination volume from \$4.1 billion to \$1.5 billion, primarily resulting from a decrease in demand for refinance mortgages attributable to the rising and volatile interest rate environment. The decrease in mortgage originations revenue was also attributable to a 25% decrease in gain on sale margin driven by industry margin compression. Gain on sale margin represents the net gain on sale of mortgage loans divided by total loan origination volume for the period. Net gain on sale of mortgage loans includes all components related to the origination and sale of mortgage loans, including the net gain on sale of loans into the secondary market, loan origination fees, unrealized gains and losses associated with changes in fair value of interest rate lock commitments and mortgage loans held for sale, realized and unrealized gains or losses from derivative financial instruments and the provision for losses relating to representations and warranties. The decrease in our Custom Quote and Connect advertising revenue was primarily due to a 37% decrease in leads generated from marketing products sold to mortgage professionals. This decrease was driven by a decrease in demand for mortgages attributable to the rising and volatile interest rate environment, as well as an increase in leads consumed by Zillow Home Loans.
- IMT segment revenue decreased 2% to \$1.8 billion, primarily due to a decrease of \$105 million, or 8%, in Premier Agent revenue, partially offset by a \$48 million, or 21%, increase in Other IMT revenue. The decrease in Premier Agent revenue was driven by macro housing market factors including interest rate and home price increases and volatility, as well as tight housing inventory levels. These factors resulted in a decrease in Premier Agent revenue per visit, which decreased by 10% to \$0.123 for the year ended December 31, 2022 from \$0.137 for the year ended December 31, 2021. We calculate Premier Agent revenue per visit by dividing the revenue generated by our Premier Agent programs by the number of visits in the period. Other IMT revenue increased primarily as a result of the addition of ShowingTime revenue beginning in the fourth quarter of 2021.

Beginning in the first quarter of 2023, we plan to report our financial results as a single reportable segment and plan to report revenue categories of Residential, Rentals, Mortgages and Other. The Residential revenue category will primarily include revenue for our Premier Agent and new construction marketplaces, as well as StreetEasy for-sale product offerings, Zillow Closing Services and ShowingTime+, which houses ShowingTime, Bridge Interactive, dotloop and interactive floor plans. Our Rentals and Mortgages revenue categories will remain consistent with our historical presentation, and our Other revenue category will primarily include revenue generated from display advertising.

Year Ended December 31, 2021 compared to year ended December 31, 2020

Total revenue increased \$508 million, or 31%, to \$2.1 billion:

- IMT segment revenue increased 30% to \$1.9 billion, due to increases of \$349 million, or 33%, in Premier Agent revenue, \$45 million, or 25%, in Other IMT revenue, and \$42 million, or 19%, in rentals revenue.
 - Premier Agent revenue increased 33% to \$1.4 billion, primarily driven by an increase in Premier Agent revenue per visit, which increased by 26% to \$0.137 for the year ended December 31, 2021 from \$0.109 for the year ended December 31, 2020, driven primarily by continued strong demand across the residential real estate industry and growth in monetization of customer connections. The increase in visits increased the number of impressions and leads we could monetize in our Premier Agent marketplace. Additionally, Premier Agent revenue for the year ended December 31, 2020 was negatively impacted by temporary discounts offered to our Premier Agent partners in response to the COVID-19 pandemic.
 - Other IMT increased 25% to \$226 million, primarily due to a 126% increase in StreetEasy for-sale revenue due to growth in StreetEasy Experts, a 58% increase in display revenue due to increased discretionary marketing spend after lower spend in 2020 as a result of the COVID-19 pandemic, and as a result of the addition of ShowingTime revenue beginning in the fourth quarter of 2021.
 - Rentals revenue increased 19% to \$264 million, primarily due to an increase in revenue generated by our rentals flat fee, pay per listing and rental applications products. The increase in rentals revenue was also impacted by COVID-19 related discounts offered during the first half of 2020.
- Mortgages segment revenue increased 41% to \$246 million, primarily due to growth in mortgage originations revenue, which drove 57% of the increase in Mortgages segment revenue, and growth in our Custom Quote and Connect advertising services revenue, which accounted for 41% of the increase in Mortgages segment revenue. The increase in mortgage originations revenue was primarily driven by an increase in loan origination volume from \$1.8 billion to \$4.1 billion, or 131%, as we continued to grow our mortgage originations business. We believe low interest rates coupled with growth of our mortgage originations business, driven by purchase origination growth from Zillow Offers, supported strong refinance and home purchase activity during the year ended December 31, 2021. This was partially offset by a 36% decrease in gain on sale margin driven by industry margin compression. The increase in our Custom Quote and Connect advertising revenue was primarily due to a 20% increase in leads generated from marketing products sold to mortgage professionals.

Income (Loss) from Continuing Operations Before Income Taxes

	Year Ended December 31,			2021 to 2022		2020 to 2021		% of Revenue		
	2022			2021		2020		Year Ended December 31,		
	2022	2021	2020	\$ Change	% Change	\$ Change	% Change	2022	2021	2020
(in millions, except percentages)										
Income (loss) from continuing operations before income taxes:										
IMT segment	\$ 160	\$ 545	\$ 262	\$ (385)	(71)%	\$ 283	108 %	9 %	29 %	18 %
Mortgages segment	(167)	(52)	5	(115)	(221)	(57)	(1140)	(140)	(21)	3 %
Homes segment	(93)	(254)	(153)	161	63	(101)	(66)	N/A	N/A	N/A
Corporate items (1)	15	(138)	(117)	153	111	(21)	(18)	N/A	N/A	N/A
Total income (loss) from continuing operations before income taxes	\$ (85)	\$ 101	\$ (3)	\$ (186)	(184)%	\$ 104	3467 %	(4)%	5 %	— %

(1) Certain corporate items are not directly attributable to any of our segments, including the gain (loss) on extinguishment of debt, interest income earned on our short-term investments included in other income, net and interest costs on our convertible senior notes included in interest expense.

Adjusted EBITDA

The following table summarizes net loss, which includes the impact of discontinued operations, and Adjusted EBITDA in total and for each segment, both of which exclude the impact of discontinued operations (in millions, except percentages):

	Year Ended December 31,			2021 to 2022		2020 to 2021		% of Revenue		
	Year Ended December 31,							Year Ended December 31,		
	2022	2021	2020	\$ Change	% Change	\$ Change	% Change	2022	2021	2020
Net loss:	\$ (101)	\$ (528)	\$ (162)	\$ 427	81 %	\$ (366)	(226)%	(5)%	(25)%	(10)%
Adjusted EBITDA:										
IMT segment	672	854	556	(182)	(21)	298	54	37	45	38
Mortgages segment	(92)	(9)	30	(83)	(922)	(39)	(130)	(77)	(4)	17
Homes segment	(66)	(191)	(125)	125	65	(66)	(53)	N/A	N/A	N/A
Total Adjusted EBITDA	<u>\$ 514</u>	<u>\$ 654</u>	<u>\$ 461</u>	<u>\$ (140)</u>	<u>(21)%</u>	<u>\$ 193</u>	<u>42 %</u>	<u>26 %</u>	<u>31 %</u>	<u>28 %</u>

To provide investors with additional information regarding our financial results, we have disclosed Adjusted EBITDA in total and for each segment, each a non-GAAP financial measure, within this Annual Report on Form 10-K. We have provided a reconciliation below of Adjusted EBITDA in total to net loss and Adjusted EBITDA by segment to income (loss) from continuing operations before income taxes for each segment, the most directly comparable U.S. generally accepted accounting principles (“GAAP”) financial measures.

We have included Adjusted EBITDA in total and for each segment in this Annual Report on Form 10-K as they are key metrics used by our management and board of directors to measure operating performance and trends and to prepare and approve our annual budget. In particular, the exclusion of certain expenses in calculating Adjusted EBITDA facilitates operating performance comparisons on a period-to-period basis.

Our use of Adjusted EBITDA in total and for each segment has limitations as an analytical tool, and you should not consider these measures in isolation or as a substitute for analysis of our results as reported under GAAP. Some of these limitations are:

- Adjusted EBITDA does not reflect changes in, or cash requirements for, our working capital needs;
- Adjusted EBITDA does not reflect the results of discontinued operations;
- Adjusted EBITDA does not consider the potentially dilutive impact of share-based compensation;
- Although depreciation and amortization are non-cash charges, the assets being depreciated and amortized may have to be replaced in the future, and Adjusted EBITDA does not reflect cash capital expenditure requirements for such replacements or for new capital expenditures or contractual commitments;
- Adjusted EBITDA does not reflect impairment and restructuring costs;
- Adjusted EBITDA does not reflect acquisition-related costs;
- Adjusted EBITDA does not reflect gain (loss) on extinguishment of debt;
- Adjusted EBITDA does not reflect interest expense or other income (expense), net;
- Adjusted EBITDA does not reflect income taxes; and
- Other companies, including companies in our own industry, may calculate Adjusted EBITDA differently from the way we do, limiting its usefulness as a comparative measure.

Because of these limitations, you should consider Adjusted EBITDA in total and for each segment alongside other financial performance measures, including various cash flow metrics, net loss, income (loss) from continuing operations before income taxes for each segment and our other GAAP results.

The following tables present a reconciliation of Adjusted EBITDA to the most directly comparable GAAP financial measure, which is net loss on a consolidated basis and income (loss) from continuing operations before income taxes for each segment, for each of the periods presented (in millions):

Year Ended December 31, 2022					
	IMT	Mortgages	Homes	Corporate Items (2)	Consolidated
Reconciliation of Adjusted EBITDA to Net Loss and Income (Loss) From Continuing Operations Before Income Taxes:					
Net loss (1)	N/A	N/A	N/A	N/A	\$ (101)
Loss from discontinued operations, net of income taxes	N/A	N/A	N/A	N/A	13
Income taxes	N/A	N/A	N/A	N/A	3
Income (loss) from continuing operations before income taxes	\$ 160	\$ (167)	\$ (93)	\$ 15	\$ (85)
Other expense (income), net	7	(3)	—	(47)	(43)
Depreciation and amortization	137	11	2	—	150
Share-based compensation	356	60	17	—	433
Restructuring costs	12	4	8	—	24
Interest expense	—	3	—	32	35
Adjusted EBITDA	<u>\$ 672</u>	<u>\$ (92)</u>	<u>\$ (66)</u>	<u>\$ —</u>	<u>\$ 514</u>

Year Ended December 31, 2021					
	IMT	Mortgages	Homes	Corporate Items (2)	Consolidated
Reconciliation of Adjusted EBITDA to Net Loss and Income (Loss) From Continuing Operations Before Income Taxes:					
Net loss (1)	N/A	N/A	N/A	N/A	\$ (528)
Loss from discontinued operations, net of income taxes	N/A	N/A	N/A	N/A	630
Income taxes	N/A	N/A	N/A	N/A	(1)
Income (loss) from continuing operations before income taxes	\$ 545	\$ (52)	\$ (254)	\$ (138)	\$ 101
Other income, net	—	(5)	—	(2)	(7)
Depreciation and amortization	99	8	13	—	120
Share-based compensation	201	34	41	—	276
Acquisition-related costs	9	—	—	—	9
Loss on extinguishment of debt	—	—	—	17	17
Restructuring costs	—	1	9	—	10
Interest expense	—	5	—	123	128
Adjusted EBITDA	<u>\$ 854</u>	<u>\$ (9)</u>	<u>\$ (191)</u>	<u>\$ —</u>	<u>\$ 654</u>

	Year Ended December 31, 2020				
	IMT	Mortgages	Homes	Corporate Items (2)	Consolidated
Reconciliation of Adjusted EBITDA to Net Loss and Income (Loss) From Continuing Operations Before Income Taxes:					
Net loss (1)	N/A	N/A	N/A	N/A	\$ (162)
Loss from discontinued operations, net of income taxes	N/A	N/A	N/A	N/A	167
Income taxes	N/A	N/A	N/A	N/A	(8)
Income (loss) from continuing operations before income taxes	\$ 262	\$ 5	\$ (153)	\$ (117)	\$ (3)
Other income, net	(5)	(2)	—	(18)	(25)
Depreciation and amortization	90	7	8	—	105
Share-based compensation	135	15	20	—	170
Gain (loss) on extinguishment of debt	—	—	—	(1)	(1)
Impairment and restructuring costs	74	3	—	—	77
Interest expense	—	2	—	136	138
Adjusted EBITDA	\$ 556	\$ 30	\$ (125)	\$ —	\$ 461

(1) We use income (loss) from continuing operations before income taxes as our profitability measure in making operating decisions and assessing the performance of our segments; therefore, net loss and income taxes are calculated and presented only on a consolidated basis within our financial statements.

(2) Certain corporate items are not directly attributable to any of our segments, including the gain (loss) on extinguishment of debt, interest income earned on our short-term investments included in other income, net and interest costs on our convertible senior notes included in interest expense.

Costs and Expenses, Gross Profit and Other Items

								% of Total Revenue		
	Year Ended December 31,			2021 to 2022		2020 to 2021		Year Ended December 31,		
	2022	2021	2020	\$ Change	% Change	\$ Change	% Change	2022	2021	2020
(in millions, except percentages)										
Cost of revenue	\$ 367	\$ 323	\$ 255	\$ 44	14 %	\$ 68	27 %	19 %	15 %	16 %
Gross profit	1,591	1,809	1,369	(218)	(12)	440	32	81	85	84
Operating expenses:										
Sales and marketing	664	715	535	(51)	(7)	180	34	34	34	33
Technology and development	498	421	324	77	18	97	30	25	20	20
General and administrative	498	414	324	84	20	90	28	25	19	20
Restructuring costs	24	10	77	14	140	(67)	(87)	1	—	5
Acquisition-related costs	—	9	—	(9)	N/A	9	N/A	—	—	—
Integration costs	—	1	—	(1)	N/A	1	N/A	—	—	—
Total operating expenses	1,684	1,570	1,260	114	7	310	25	86	74	78
Gain (loss) on extinguishment of debt	—	(17)	1	17	100	(18)	(1800)	—	(1)	—
Other income, net	43	7	25	36	514	(18)	(72)	2	—	2
Interest expense	(35)	(128)	(138)	93	73	10	(7)	(2)	(6)	(8)
Income tax benefit (expense)	(3)	1	8	(4)	(400)	(7)	(88)	—	—	—

Cost of Revenue

Cost of revenue consists of expenses related to operating our mobile applications and websites, including associated headcount-related expenses, such as salaries, benefits, bonuses and share-based compensation expense, as well as revenue-sharing costs related to our commercial business relationships, depreciation expense, and costs associated with hosting our mobile applications and websites. Cost of revenue also includes amortization costs related to capitalized website and development activities, amortization of software, amortization of certain intangible assets and other costs to obtain data used to populate our mobile applications and websites, and amortization of certain intangible assets recorded in connection with acquisitions, including developed technology. For our IMT and Mortgages segments, cost of revenue also includes credit card fees and ad serving costs paid to third parties. For our Mortgages segment, cost of revenue also consists of direct costs to originate loans, including underwriting and processing costs.

Year Ended December 31, 2022 compared to year ended December 31, 2021

Cost of revenue increased \$44 million, or 14%, due primarily to an increase of \$72 million in our IMT segment, partially offset by decreases of \$16 million in our Mortgages segment and \$12 million in our Homes segment.

- The increase in cost of revenue in our IMT segment was primarily attributable to a \$41 million increase in depreciation and amortization expense driven by an increase in capitalized website and development activities, a \$16 million increase in headcount-related expenses, including share-based compensation expense, which was impacted by the August 2022 Equity Award Actions, and a \$9 million increase in data acquisition costs.
- The decrease in cost of revenue in our Mortgages segment was primarily attributable to a \$13 million decrease in lead acquisition costs due to a decrease in volume associated with the macro housing market environment and a \$3 million decrease in headcount-related expenses, including share-based compensation expense, partially offset by a \$2 million increase in depreciation and amortization expense.
- The decrease in cost of revenue in our Homes segment was primarily attributable to a \$7 million decrease in depreciation and amortization expense, a \$5 million decrease in data acquisition costs and a \$2 million decrease in software and hardware costs, resulting from the wind down of Zillow Offers and the reduction in indirect costs related to the Homes segment. The decrease was partially offset by an increase of \$3 million in headcount-related expenses, including share-based compensation expense, which was impacted by the August 2022 Equity Award Actions.

We expect cost of revenue to increase in absolute dollars for the three months ending March 31, 2023 due to increased headcount-related spend as we continue to invest to support the growth of our business.

Year Ended December 31, 2021 compared to year ended December 31, 2020

Cost of revenue increased \$68 million, or 27%, due primarily to increases of \$45 million in our Mortgages segment, \$13 million in our Homes segment and \$10 million in our IMT segment.

- The increase in cost of revenue in our Mortgages segment was primarily attributable to an increase in headcount-related expenses, including share-based compensation expense, of \$18 million, an increase in lead acquisition costs of \$18 million associated with growth in our Zillow Home Loans business, and an increase in mortgage loan processing costs of \$4 million corresponding with the increase in loan origination volume.
- The increase in cost of revenue in our Homes segment was primarily attributable to an increase in headcount-related expenses, including share-based compensation expense, of \$7 million, and an increase in depreciation and amortization expense of \$3 million.
- The increase in cost of revenue in our IMT segment was primarily attributable to an increase of \$13 million in depreciation and amortization expense, an increase of \$9 million in direct product costs, an increase of \$7 million in lead acquisition costs, and an increase of \$7 million in headcount-related expenses, including share-based compensation expense, partially offset by a decrease of \$28 million in data acquisition costs.

Gross Profit

Gross profit is calculated as revenue less cost of revenue. Gross margin is gross profit expressed as a percentage of revenue. Our gross profit has and will continue to be affected by a number of factors, including the mix of revenue from our segments.

Year Ended December 31, 2022 compared to year ended December 31, 2021

Gross profit decreased by \$218 million, or 12%, primarily due to decreases in gross profit of \$119 million in our IMT segment and \$111 million in our Mortgages segment, partially offset by an increase of \$12 million in our Homes segment. Total gross margin decreased from 85% to 81%.

- The decrease in IMT segment gross profit was driven by a decrease in revenue due to macro housing market factors, including rising interest rates and housing prices and volatility, which have reduced our Premier Agent revenue per visit compared to the year ended December 31, 2021, coupled with the increase in cost of revenue, discussed above. Gross margin decreased from 89% for the year ended December 31, 2021 to 85% for the year ended December 31, 2022.
- The decrease in Mortgages segment gross profit was driven by decreases in mortgage originations and Custom Quote and Connect advertising services revenue, discussed above. Gross margin decreased from 66% for the year ended December 31, 2021 to 43% for the year ended December 31, 2022.

Year Ended December 31, 2021 compared to year ended December 31, 2020

Gross profit increased by \$440 million, or 32%, primarily due to increases of gross profit of \$426 million in our IMT segment and \$27 million in our Mortgages segment, partially offset by a decrease of \$13 million in our Homes segment. Total gross margin increased from 84% to 85%.

- The increase in IMT segment gross profit was driven by an improvement in gross margin from 87% to 89%, primarily associated with increased revenue, discussed above.
- The increase in Mortgages segment gross profit was driven by an increase in revenue, discussed above. However, gross margin declined from 78% to 66%, driven by increases in cost of revenue, primarily associated with additional lead acquisition costs and headcount-related expenses as a result of increased origination volume, which outpaced the growth in revenue, primarily due to industry margin compression.

Sales and Marketing

Sales and marketing expenses consist of advertising costs and other sales expenses related to promotional and marketing activities, headcount-related expenses, including salaries, commissions, benefits, bonuses and share-based compensation expense for sales, sales support, customer support, including the customer connections team, marketing and public relations employees, depreciation expense and amortization of certain intangible assets recorded in connection with acquisitions, including trade names and trademarks and customer relationships. For our Mortgages segment, sales and marketing expenses include headcount-related expenses for loan officers and specialists supporting Zillow Home Loans.

Year Ended December 31, 2022 compared to year ended December 31, 2021

Sales and marketing expenses decreased \$51 million, or 7%, due to decreases of \$41 million in our Homes segment and \$30 million in our Mortgages segment, partially offset by an increase of \$20 million in our IMT segment.

- The decrease in sales and marketing expenses in the Homes segment was primarily attributable to a \$20 million decrease in marketing and advertising costs and a \$17 million decrease in headcount-related expenses, including share-based compensation expense. The decreases resulted from the wind down of Zillow Offers and the reduction in indirect costs related to the Homes segment.
- The decrease in sales and marketing expenses in the Mortgages segment was primarily attributable to a \$19 million decrease in headcount-related expenses, including share-based compensation expense, and a \$12 million decrease in marketing and advertising costs driven by active cost management.

- The increase in sales and marketing expenses in the IMT segment was primarily attributable to a \$45 million increase in headcount-related expenses, including share-based compensation expense, primarily driven by the impact of the August 2022 Equity Award Actions, an \$8 million increase in both travel expenses and trade shows and events expenses, and a \$4 million increase in software and hardware costs. These increases were partially offset by a \$32 million decrease in marketing and advertising costs, a \$9 million decrease in professional services, both driven by active cost management, and a \$4 million decrease in depreciation and amortization expenses.

Year Ended December 31, 2021 compared to year ended December 31, 2020

Sales and marketing expenses increased \$180 million, or 34%, due to increases of \$111 million in our IMT segment, \$49 million in our Mortgages segment and \$20 million in our Homes segment.

- The increase in sales and marketing expenses in the IMT segment was primarily attributable to a \$69 million increase in marketing and advertising costs and an increase in headcount-related expenses, including share-based compensation expense, of \$46 million. Marketing and advertising costs for the year ended December 31, 2021 were higher than the comparable prior year period due to our pause in most discretionary spending associated with liquidity preservation in response to the COVID-19 pandemic in the year ended December 31, 2020.
- The increase in sales and marketing expenses in the Mortgages segment was primarily attributable to an increase in headcount-related expenses, including share-based compensation expense, of \$32 million, and a \$15 million increase in marketing and advertising expenses associated with growth of our Zillow Home Loans business.
- The increase in sales and marketing expenses in the Homes segment was primarily attributable to an \$11 million increase in marketing and advertising costs and an increase in headcount-related expenses, including share-based compensation expense, of \$7 million.

Technology and Development

Technology and development expenses consist of headcount-related expenses, including salaries, benefits, bonuses and share-based compensation expense for individuals engaged in the design, development and testing of our products, mobile applications and websites and the tools and applications that support our products. Technology and development expenses also include equipment and maintenance costs and depreciation expense.

Year Ended December 31, 2022 compared to year ended December 31, 2021

Technology and development expenses increased \$77 million, or 18%, primarily due to increases of \$120 million in our IMT segment and \$18 million in our Mortgages segment, partially offset by a decrease of \$61 million in our Homes segment.

- The increase in technology and development expenses in the IMT segment was primarily attributable to a \$96 million increase in headcount related costs, including share-based compensation expense, primarily driven by the August 2022 Equity Award Actions, and a \$14 million increase in professional services.
- The increase in technology and development expenses in the Mortgages segment was primarily attributable to an \$11 million increase in headcount-related costs, including share-based compensation expense, primarily driven by the August 2022 Equity Award Actions, and a \$6 million increase in professional services.
- The decrease in technology and development expenses in the Homes segment was primarily attributable to a \$55 million decrease in headcount-related costs, including share-based compensation expense, which was primarily driven by the wind down of Zillow Offers and the reduction in indirect costs related to the Homes segment.

We expect technology and development expenses to increase in absolute dollars for the three months ending March 31, 2023 due to increased headcount-related spend as we continue to invest to support the growth of our business.

Year Ended December 31, 2021 compared to year ended December 31, 2020

Technology and development expenses increased \$97 million, or 30%, primarily due to increases of \$58 million in our IMT segment, \$30 million in our Homes segment and \$9 million in our Mortgages segment.

- The increase in technology and development expenses for each of our segments was primarily attributable to increases in headcount-related expenses, including share-based compensation expense, of \$54 million, \$28 million and \$5 million for our IMT, Homes and Mortgages segments, respectively.

General and Administrative

General and administrative expenses consist of headcount-related expenses, including salaries, benefits, bonuses and share-based compensation expense for executive, finance, accounting, legal, human resources, recruiting, corporate information technology costs and other administrative support. General and administrative expenses also include legal settlement costs and estimated legal liabilities, legal, accounting and other third-party professional service fees, rent expense, depreciation expense and bad debt expense.

Year Ended December 31, 2022 compared to year ended December 31, 2021

General and administrative expenses increased \$84 million, or 20%, due to increases of \$117 million in our IMT segment and \$13 million in our Mortgages segment, partially offset by a decrease of \$46 million in our Homes segment.

- The increase in general and administrative expenses for our IMT segment was primarily attributable to a \$94 million increase in headcount-related expenses, including share-based compensation expense, primarily driven by the August 2022 Equity Award Actions, a \$9 million increase in professional services and a \$6 million increase in software and hardware costs.
- The increase in general and administrative expenses for our Mortgages segment was primarily attributable to an \$11 million increase in headcount-related expenses, including share-based compensation expense, primarily driven by the August 2022 Equity Award Actions.
- The decrease in general and administrative expenses for our Homes segment was primarily attributable to a \$28 million decrease in headcount-related expenses, including share-based compensation expense, and \$6 million decreases in both facilities costs and software and hardware costs, which were primarily driven by the wind down of Zillow Offers and the reduction in indirect costs related to the Homes segment.

Year Ended December 31, 2021 compared to year ended December 31, 2020

General and administrative expenses increased \$90 million, or 28%, due to increases of \$33 million in our IMT segment, \$29 million in our Homes segment and \$28 million in our Mortgages segment.

- The increase in general and administrative expenses for our IMT and Mortgages segments was primarily attributable to increases in headcount-related expenses, including share-based compensation expense, of \$40 million and \$20 million for our IMT and Mortgages segments, respectively, as we continued to invest in human capital to grow our businesses.
- The increase in general and administrative expenses for our Homes segment was primarily attributable to an increase in headcount-related expenses, including share-based compensation expense, of \$21 million, a \$3 million increase in professional services and a \$3 million increase in software and hardware costs.

Impairment and Restructuring Costs

Restructuring costs of \$24 million and \$10 million for the years ended December 31, 2022 and 2021, respectively, were attributable to the wind down of Zillow Offers operations and additional cost actions to streamline our operations and prioritize investments. Restructuring costs within our IMT and Mortgages segments and certain indirect costs of the Homes segment which do not qualify as discontinued operations related to employee termination costs and totaled \$12 million, \$4 million, and \$8 million, respectively, for the year ended December 31, 2022, and \$9 million and \$1 million for the Homes and Mortgages segments, respectively, for the year ended December 31, 2021. For additional information regarding the restructuring, see Note 3 of our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Impairment costs of \$77 million for the year ended December 31, 2020 consist of a \$72 million non-cash impairment related to the Trulia trade names and trademarks intangible asset, of which \$69 million was recorded to the IMT segment and \$3 million was recorded to the Mortgages segment. Refer to Note 10 of our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for additional information on the impairment costs related to the Trulia trade names and trademarks intangible asset. Additionally, impairment costs include a \$5 million non-cash impairment related to our October 2016 equity investment, the entirety of which was recorded to the IMT segment.

Acquisition-Related Costs

Acquisition-related costs consist of investment banking, legal, accounting and tax costs associated with effecting acquisitions. We did not record any material acquisition-related costs for the years ended December 31, 2022 or December 31, 2020. Acquisition-related costs were \$9 million for the year ended December 31, 2021, primarily as a result of our September 2021 acquisition of ShowingTime.

Gain (Loss) on Extinguishment of Debt

We recorded a \$17 million loss on extinguishment of debt during the year ended December 31, 2021 associated with conversions of the convertible senior notes maturing in 2023 ("2023 Notes"), 2024 ("2024 Notes") and 2026 ("2026 Notes"). For additional information on the loss on extinguishment of debt, see Note 13 of our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Other Income, net

Other income, net consists primarily of interest income earned on our cash, cash equivalents and investments and fair value adjustments on an outstanding warrant.

Other income, net increased \$36 million, for the year ended December 31, 2022 as compared to the year ended December 31, 2021. The increase was primarily driven by increases in returns on corporate investments due to rising interest rates, partially offset by a \$7 million fair value adjustment on an outstanding warrant recorded within our IMT segment.

Other income, net decreased \$18 million, for the year ended December 31, 2021 as compared to the year ended December 31, 2020. The decrease was primarily due to a decrease of \$16 million in corporate other income not directly attributable to our segments driven by lower cash and investment balances during the second half of the year ended December 31, 2021. There was also a decrease of \$5 million of other income, net in our IMT segment related to the gain recognized on the sale of our October 2016 equity investment during the year ended December 31, 2020.

Interest Expense

Our corporate interest expense consists of interest and deferred issuance costs associated with our convertible senior notes. On January 1, 2022, we adopted guidance which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts in an entity's own equity. Upon adoption, we de-recognized the remaining debt discounts on the convertible senior notes and no longer recognize amortization of debt discounts to interest expense. Refer to Note 13 of our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for stated interest rates and interest payment dates for each of our convertible senior notes.

For our Mortgages segment, interest expense includes interest on the warehouse line of credit and interest on the master repurchase agreements related to our Zillow Home Loans business. For additional details related to our credit facilities, see Note 13 to our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Year Ended December 31, 2022 compared to year ended December 31, 2021

Interest expense decreased \$93 million, or 73%, primarily due to a \$91 million decrease in corporate interest expense not attributable to any of our segments. The decrease in corporate interest expense not attributable to any of our segments was primarily due to the adoption of guidance which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, which, as discussed above, eliminated the debt discounts on the convertible senior notes that were previously amortized to interest expense prior to adoption. Additionally, the settlement of conversions and redemptions of the 2023 Notes, 2024 Notes and 2026 Notes during the year ended December 31, 2021 decreased the outstanding principal balances of our convertible senior notes upon which interest was incurred.

Year Ended December 31, 2021 compared to year ended December 31, 2020

Interest expense decreased \$10 million, or 7%, due to a \$13 million decrease in corporate interest expense not attributable to any of our segments, partially offset by a \$3 million increase related to our Mortgages segment.

The decrease in corporate interest expense not attributable to any of our segments was primarily attributable to the settlement of the convertible senior notes due in 2020 (the "2020 Notes") and the 2021 Notes during the year ended December 31, 2020 and the settlement of 2023 Notes, 2024 Notes and 2026 Notes during the year ended December 31, 2021, which decreased the outstanding principal balances of our convertible senior notes upon which interest was incurred. The decrease in

corporate interest expense was partially offset by the impact of additional interest for the May 2020 issuance of the convertible senior notes due in 2025 (the “2025 Notes”).

The increase in Mortgages segment interest expense was due to increased borrowings on our repurchase agreements and warehouse line of credit.

Income Taxes

We are subject to income taxes in the United States (federal and state), Canada, and Serbia. As of December 31, 2022 and December 31, 2021, we have provided a valuation allowance against our net deferred tax assets that we believe, based on the weight of available evidence, are not more likely than not to be realized. There is a reasonable possibility that within the next several years, sufficient positive evidence will become available to demonstrate that a significant portion of the valuation allowance against our U.S. net deferred tax assets will no longer be required. We have accumulated federal tax losses of approximately \$1.8 billion as of December 31, 2022, which are available to reduce future taxable income. We have accumulated state tax losses of approximately \$63 million (tax effected) as of December 31, 2022.

We recorded income tax expense of \$3 million for the year ended December 31, 2022, primarily driven by state taxes. We recorded an income tax benefit of \$1 million for the year ended December 31, 2021 that was comprised of a \$3 million income tax benefit from a decrease in the valuation allowance associated with our September 2021 acquisition of ShowingTime, partially offset by the recognition of \$2 million of tax expense related to state and foreign income taxes. We recorded an income tax benefit of \$8 million for the year ended December 31, 2020, primarily driven by a \$10 million income tax benefit associated with the \$72 million non-cash impairment we recorded during the year ended December 31, 2020. Refer to Note 10 of our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for additional information on this non-cash impairment charge.

Quarterly Results of Operations

The following tables set forth our unaudited quarterly statements of operations data for each of the periods presented below. In the opinion of management, the data has been prepared on the same basis as the audited consolidated financial statements included in this Annual Report on Form 10-K, and reflects all necessary adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the data. The results of historical periods are not necessarily indicative of the results of operations of any future period, particularly given continued uncertainty surrounding the health of the housing market, interest rate environment and the COVID-19 pandemic. You should read the data together with our consolidated financial statements and the related notes included elsewhere in this Annual Report on Form 10-K. Amounts are in millions, except per share data which are presented in thousands, unaudited, and we have presented the financial results of Zillow Offers as discontinued operations (see Note 3 in our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for additional details regarding discontinued operations).

	Three Months Ended							
	December 31, 2022	September 30, 2022	June 30, 2022	March 31, 2022	December 31, 2021	September 30, 2021	June 30, 2021	March 31, 2021
Revenue	\$ 435	\$ 483	\$ 504	\$ 536	\$ 535	\$ 550	\$ 533	\$ 514
Gross profit	346	394	407	444	440	468	460	441
Income (loss) from continuing operations	(83)	(51)	5	36	32	55	55	97
Net income (loss) from continuing operations	(72)	(51)	10	25	6	18	19	59
Net income (loss)	(72)	(53)	8	16	(261)	(329)	10	52
Net income (loss) from continuing operations per share:								
Basic	\$ (0.31)	\$ (0.21)	\$ 0.04	\$ 0.10	\$ 0.02	\$ 0.07	\$ 0.08	\$ 0.24
Diluted	\$ (0.31)	\$ (0.21)	\$ 0.04	\$ 0.10	\$ 0.02	\$ 0.07	\$ 0.07	\$ 0.23
Net income (loss) per share:								
Basic	\$ (0.31)	\$ (0.22)	\$ 0.03	\$ 0.06	\$ (1.03)	\$ (1.29)	\$ 0.04	\$ 0.21
Diluted	\$ (0.31)	\$ (0.22)	\$ 0.03	\$ 0.06	\$ (1.00)	\$ (1.24)	\$ 0.04	\$ 0.20
Weighted-average shares outstanding:								
Basic	236,246	240,080	243,942	248,542	254,013	254,074	248,152	243,234
Diluted	236,246	240,080	245,163	265,945	261,181	265,112	261,495	259,346

Total revenue decreased in all quarters presented with the exception of the three months ended March 31, 2022, which remained flat with the preceding quarter. The sequential decreases in revenue throughout 2022 were attributable to the ongoing macro housing market factors, including interest rate and home price increases, as well as tight housing inventory levels. Total revenue increased sequentially in all quarters in 2021 with the exception of the three months ended December 31, 2021. The sequential decrease in revenue for the three months ended December 31, 2021 was attributable to a decrease in visits driven by seasonality related to the normal cycles of the residential real estate market coupled with tighter inventory due to a new COVID-19 variant. Total revenue increased in all other quarters throughout 2021 due primarily to increases in visits and unique users and persistent low interest rates throughout 2021.

Seasonality

Portions of our business are affected by seasonal fluctuations in the residential real estate market, advertising spending and other factors. We believe that customers' responses to macro housing market factors including interest rate and home price increases and volatility as well as tight housing inventory levels may mask seasonality in revenue. Although the impact of macroeconomic factors in 2022 and the COVID-19 pandemic impact during 2021 and 2022 may have masked seasonality during the last two years, we would generally expect Premier Agent and rentals revenue to peak in the three months ended June 30th or September 30th, consistent with the average number of visits and unique users which have historically peaked during the three months ended June 30th or September 30th, aligning with peak residential real estate activity in the spring and summer months. Because the number of visits and unique users impacts impression inventory, leads and connections to real estate professionals, clicks and other events we monetize, we believe this trend in the average number of visits and unique users has generally resulted in seasonal fluctuations in revenue in corresponding periods. Within the Mortgages segment, we believe that seasonality would result in higher purchase origination volumes in the spring and summer high seasons. Our Connect and Custom Quote mortgage marketing products display similar seasonal fluctuations.

Liquidity and Capital Resources

Our primary sources of liquidity and capital resources are cash flows from operations, debt financing and equity offerings. Our cash requirements consist principally of working capital, general corporate needs and mortgage loan originations. We generally reinvest available cash flows from operations into our business and to service our debt obligations.

Sources of Liquidity

As of December 31, 2022 and 2021, we had cash and cash equivalents, investments and restricted cash of \$3.4 billion and \$2.8 billion, respectively. Cash and cash equivalents balances consist of operating cash on deposit with financial institutions and money market funds. Investments consist of fixed income securities, which include U.S. government treasury securities, U.S. government agency securities, investment grade corporate securities, and commercial paper. Restricted cash primarily consists of amounts held in escrow related to funding customer home purchases in our mortgage origination business. Amounts on deposit with third-party financial institutions exceed the Federal Deposit Insurance Corporation and the Securities Investor Protection Corporation insurance limits, as applicable. As of December 31, 2022, Zillow Group and its subsidiaries were in compliance with all debt covenants specified in the facilities described below.

We believe that cash from operations and cash and cash equivalents and investment balances will be sufficient to meet our ongoing operating activities, working capital, capital expenditures and other capital requirements for at least the next 12 months. We believe we will meet longer-term expected future cash requirements and obligations through a combination of cash flows from operations, debt financing and equity offerings, as applicable.

The cash flows related to discontinued operations have not been separated. Accordingly, the consolidated statements of cash flows and the following discussions include the results of continuing and discontinued operations. See Note 3 in our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for additional information on discontinued operations, including supplemental cash flow information. The following table presents selected cash flow data for the periods presented (in millions):

	Year Ended December 31,		
	2022	2021	2020
Cash Flow Data:			
Net cash provided by (used in) operating activities	\$ 4,504	\$ (3,177)	\$ 423
Net cash provided by (used in) investing activities	(1,533)	1,088	(1,038)
Net cash provided by (used in) financing activities	(4,341)	3,148	1,163

Cash Flows Provided By (Used In) Operating Activities

Our operating cash flows result primarily from cash received from real estate professionals, rental professionals, mortgage professionals, builders and brand advertisers, as well as cash received from sales of mortgages originated by Zillow Home Loans and, prior to September 30, 2022, from customers for sales of homes through Zillow Offers. Our primary uses of cash from operating activities include marketing and advertising activities, mortgages funded through Zillow Home Loans and employee compensation and benefits. Additionally, uses of cash from operating activities include costs associated with operating our mobile applications and websites and other general corporate expenditures. Prior to the wind down of Zillow Offers operations, our primary uses of cash from operating activities also included payments for homes purchased through Zillow Offers.

For the year ended December 31, 2022, net cash provided by operating activities was \$4.5 billion. This was primarily driven by a net loss of \$101 million, adjusted by share-based compensation expense of \$451 million, depreciation and amortization expense of \$157 million, amortization of contract cost assets of \$30 million, amortization of debt discount and debt issuance costs of \$26 million, amortization of right of use assets of \$23 million, a loss on extinguishment of debt of \$21 million and an inventory valuation adjustment of \$9 million. This was partially offset by \$3 million in other adjustments to reconcile net loss to net cash provided by operating activities. Changes in operating assets and liabilities increased cash provided by operating activities by \$3.9 billion. The changes in operating assets and liabilities are primarily related to a \$3.9 billion decrease in inventory and an \$82 million decrease in accounts receivable as we wound down Zillow Offers operations, a \$66 million decrease in mortgage loans held for sale driven by increased interest rates which decreased demand for mortgages, a \$6 million decrease in prepaid expenses and other current assets due to the timing of payments and a \$7 million increase in other long-term liabilities primarily due to our outstanding warrant agreement. These changes were partially offset by a \$71 million decrease in accrued expenses and other liabilities and a \$60 million decrease in accrued compensation and benefits driven primarily by the wind down of Zillow Offers operations, a \$21 million decrease in lease liabilities primarily due to lease payments, an \$18 million increase in contract cost assets and a \$7 million decrease in deferred revenue.

For the year ended December 31, 2021, net cash used in operating activities was \$3.2 billion. This was primarily driven by a net loss of \$528 million, adjusted by an inventory valuation adjustment of \$408 million, share-based compensation expense of \$312 million, depreciation and amortization expense of \$130 million, amortization of debt discount and debt issuance costs of \$104 million, impairment and restructuring costs of \$57 million, amortization of contract cost assets of \$42 million, amortization of right of use assets of \$23 million, a loss on extinguishment of debt of \$17 million and \$12 million in other adjustments to reconcile net loss to cash used in operating activities, including deferred income taxes. Changes in operating assets and liabilities offset these adjustments by \$3.8 billion. The changes in operating assets and liabilities are primarily related to a \$3.8 billion increase in inventory due to home purchases outpacing the sale of homes through Zillow Offers for the year ended December 31, 2021, an \$82 million increase in accounts receivable due primarily to an increase in revenue from products and services billed in arrears, an \$82 million increase in prepaid expenses and other current assets due to the timing of payments, a \$29 million decrease in lease liabilities, a \$26 million increase in contract cost assets due primarily to capitalized sales commissions and an \$12 million decrease in other long-term liabilities. These changes were partially offset by a \$224 million decrease in mortgage loans held for sale, a \$61 million increase in accrued expenses and other liabilities driven by the timing of payments, \$13 million in accrued compensation and benefits and a \$5 million change in accounts payable.

For the year ended December 31, 2020, net cash provided by operating activities was \$423 million. This was primarily driven by a net loss of \$162 million, adjusted by share-based compensation expense of \$197 million, depreciation and amortization expense of \$111 million, amortization of debt discount and debt issuance costs of \$102 million, non-cash impairment costs of \$77 million, amortization of contract cost assets of \$37 million, amortization of right of use assets of \$24 million and \$3 million in other adjustments to reconcile net loss to cash provided by operating activities. This was partially offset by a gain on extinguishment of debt of \$1 million. Changes in operating assets and liabilities increased cash provided by operating activities by \$41 million. The changes in operating assets and liabilities are primarily related to a \$345 million decrease in inventory due to the sale of homes and a decrease in home purchases through Zillow Offers during the year ended December 31, 2020 associated with our temporary pause in Zillow Offers home buying activity to preserve liquidity in response to COVID-19, a \$15 million increase in accrued expenses and other liabilities driven by the timing of payments, a \$13 million increase in accounts payable, a \$10 million increase in other long-term liabilities, a \$10 million increase in accrued compensation and benefits and a \$9 million increase in deferred revenue. These changes were partially offset by a \$294 million increase in mortgage loans held for sale, a \$42 million increase in contract cost assets due primarily to the capitalization of sales commissions, a \$16 million increase in prepaid expenses and other current assets due primarily to timing of payments and growth in our contract assets, a \$7 million increase in accounts receivable due to an increase in revenue from products and services billed in arrears and a \$2 million decrease in lease liabilities due to scheduled lease payments.

Cash Flows Provided By (Used In) Investing Activities

Our primary investing activities include the purchase and sale or maturity of investments, the purchase of property and equipment and intangible assets and cash paid in connection with acquisitions.

For the year ended December 31, 2022, net cash used in investing activities was \$1.5 billion. This was primarily the result of \$1.4 billion of net purchases of investments and \$140 million of purchases of property and equipment and intangible assets.

For the year ended December 31, 2021, net cash provided by investing activities was \$1.1 billion. This was the result of \$1.7 billion of net proceeds from the maturity of investments, partially offset by \$497 million of net cash paid for our September 2021 acquisition of ShowingTime, and \$105 million of purchases of property and equipment and intangible assets.

For the year ended December 31, 2020, net cash used in investing activities was \$1.0 billion. This was the result of \$939 million of net purchases of investments in connection with investment of a portion of the net proceeds from our May 2020 issuance of the 2025 Notes and offering of our Class C capital stock, and \$109 million of purchases for property and equipment and intangible assets, partially offset by \$10 million in proceeds from the sale of an equity investment.

Cash Flows Provided By (Used In) Financing Activities

Net cash provided by (used in) financing activities has primarily resulted from repurchases of Class A common stock and Class C capital stock, settlement of long term debt including our securitization term loans, net proceeds from equity offerings, the exercise of employee option awards, proceeds from our securitization transaction, proceeds from and repayments of borrowings on our credit facilities related to Zillow Offers and repayments of borrowings on the warehouse lines of credit and master repurchase agreements related to Zillow Home Loans.

For the year ended December 31, 2022, cash used in financing activities was \$4.3 billion, which was primarily related to \$2.2 billion of repayments on borrowings of our credit facilities and 1.2 billion for the repayment of the term loans associated with the wind down of Zillow Offers operations, \$947 million of cash paid for share repurchases and \$76 million of net repayments on our warehouse line of credit and master repurchase agreements related to Zillow Home Loans. These cash outflows were partially offset by \$46 million of proceeds from the exercise of option awards.

For the year ended December 31, 2021, cash provided by financing activities was \$3.1 billion, which was primarily related to \$1.8 billion of net borrowings on our credit facilities related to Zillow Offers, \$1.1 billion in proceeds from the issuance of the 2021-1 and 2021-2 term loans, net of issuance costs, \$545 million in proceeds from the sale of 3 million shares of Class C capital stock under our equity distribution agreement and \$127 million of proceeds from the exercise of option awards. These cash inflows were partially offset by \$302 million of cash paid for share repurchases pursuant to our stock buyback program and \$197 million of net repayments on our warehouse line of credit and master repurchase agreements related to Zillow Home Loans.

For the year ended December 31, 2020, cash provided by financing activities was \$1.2 billion, which was primarily related to net proceeds from the issuance of the 2025 Notes of \$553 million, \$444 million of proceeds from the exercise of option awards, net proceeds from the public offering of our Class C capital stock of \$412 million, and \$279 million of net borrowings on our warehouse line of credit and master repurchase agreements related to Zillow Home Loans. These cash inflows were partially offset by \$330 million of net repayments of borrowings on our credit facilities related to Zillow Offers and \$195 million of cash paid for the extinguishment of our 2021 Notes.

Capital Resources

We continue to invest in the development and expansion of our continuing operations. Ongoing investments include, but are not limited to, improvements in our technology platforms, infrastructure and continued investments in sales and marketing. To finance these investments and ongoing operations, and in the event that we require additional funding to support strategic business opportunities, we have issued convertible senior notes. As of December 31, 2022, we have a total of \$1.7 billion aggregate principal of convertible senior notes outstanding. The convertible notes are senior unsecured obligations, and interest on the convertible notes is paid semi-annually. The following table summarizes our convertible senior notes as of the periods presented (in millions, except interest rates):

Maturity Date	Aggregate Principal Amount	Stated Interest Rate	December 31, 2022	December 31, 2021
			Carrying Value	Carrying Value
September 1, 2026	\$ 499	1.375 %	\$ 495	\$ 369
May 15, 2025	565	2.75 %	560	443
September 1, 2024	608	0.75 %	605	507
Total	\$ 1,672		\$ 1,660	\$ 1,319

Refer to Note 13 of our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for additional information regarding our convertible senior notes, including conversion rates, conversion and redemption dates and the related capped call transactions.

On February 17, 2021, we entered into an equity distribution agreement with certain sales agents and/or principals (the “Managers”), pursuant to which we may offer and sell from time to time, through the Managers, shares of our Class C capital stock, having an aggregate gross sales price of up to \$1 billion, in such share amounts as we may specify by notice to the Managers, in accordance with the terms and conditions set forth in the equity distribution agreement. During the year ended December 31, 2022, we did not sell any shares under the equity distribution agreement. During the year ended December 31, 2021, we issued and sold 3 million shares of our Class C capital stock for total proceeds of \$551 million and net proceeds of \$545 million, after deducting \$6 million of commissions and other offering expenses incurred. For additional information regarding the equity distribution agreement, see Note 15 in our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

On December 2, 2021, Zillow Group's Board of Directors authorized the repurchase of up to \$750 million of our Class A common stock, Class C capital stock or a combination thereof. On May 4, 2022, the Board of Directors authorized the repurchase of up to an additional \$1 billion (together the "Repurchase Authorizations") of our Class A common stock, Class C capital stock or a combination thereof. During the year ended December 31, 2022, we repurchased 4.1 million shares of Class A common stock and 18.2 million shares of Class C capital stock at an average price of \$44.14 and \$42.30 per share, respectively, for an aggregate purchase price of \$179 million and \$768 million, respectively. During the year ended December 31, 2021, we repurchased 4.9 million shares of Class C capital stock at an average price of \$61.12 per share for an aggregate purchase price of \$302 million. As of December 31, 2022, \$500 million remained available for future repurchases pursuant to the Repurchase Authorizations, which repurchases decrease our liquidity and capital resources when effected. On November 1, 2022, the Board of Directors further expanded the Repurchase Authorizations to allow for the repurchase of a portion of our outstanding convertible senior notes. There were no repurchases of convertible senior notes during the year ended December 31, 2022. For additional information on our Repurchase Authorizations, see Note 15 in our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

IMT

Our principal sources of liquidity for the IMT segment are cash flows from operations within the segment.

Mortgages

Zillow Home Loans impacts our liquidity and capital resources as a cash intensive business that funds mortgage loans originated for resale in the secondary market. We primarily use debt financing to fund mortgage loan originations. The following table summarizes our warehouse line of credit and master repurchase agreements as of the periods presented (in millions, except interest rates):

Lender	Maturity Date	Maximum Borrowing Capacity	Outstanding Borrowings at December 31, 2022	Outstanding Borrowings at December 31, 2021	Weighted Average Interest Rate
Credit Suisse AG, Cayman Islands	March 17, 2023	\$ 100	\$ 23	\$ 77	6.16 %
Citibank, N.A.	June 9, 2023	100	3	17	6.18 %
Comerica Bank	June 24, 2023	50	11	19	6.22 %
Total		\$ 250	\$ 37	\$ 113	

Refer to Note 13 of our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for additional information on Zillow Group's warehouse line of credit and master repurchase agreements.

Homes

Prior to its wind down, Zillow Group's purchase of homes through the Zillow Offers program had a significant impact on our liquidity and capital resources as a cash and inventory intensive business. We previously used credit facilities, and beginning in the third quarter of 2021, asset-backed securitizations, to fund a portion of the purchase price of homes and certain related costs. On November 2, 2021, the Board of Directors of Zillow Group made the determination to wind down Zillow Offers operations and as of September 30, 2022, the wind down was complete. As a result of the wind down, during the first half of 2022, certain wholly owned subsidiaries of Zillow Group repaid all amounts drawn on the Zillow Offers credit facilities and all principal on the securitization term loans. We incurred prepayment penalties of \$6 million associated with the pay-down of our credit facilities and \$8 million in connection with the pay-down of the securitizations. Refer to Note 3 of our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for additional information on the Zillow Offers wind down.

Contractual Obligations and Other Commitments

Convertible Senior Notes - Includes the aggregate principal amounts of the 2024 Notes, 2025 Notes and 2026 Notes due on their contractual maturity dates, as well as the associated coupon interest. As of December 31, 2022, we have an outstanding aggregate principal amount of \$1.7 billion, none of which is payable within 12 months. Future interest payments associated with the convertible senior notes total \$75 million, with \$27 million payable within 12 months. Refer to Note 13 of our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K for maturity dates, stated interest rates and additional information on our convertible senior notes.

Mortgages Segment Credit Facilities - Includes principal amounts due for amounts borrowed under the warehouse line of credit and master repurchase agreements to finance mortgages originated through Zillow Home Loans. As of December 31, 2022, we have outstanding principal amounts of \$37 million. Amounts exclude an immaterial amount of estimated interest payments.

Operating Lease Obligations - Our lease portfolio primarily comprises operating leases for our office space. As of December 31, 2022, we have operating lease obligations totaling \$229 million, with \$42 million payable within 12 months. For additional information regarding our operating leases, see Note 12 to our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K. Additionally, as of December 31, 2022 and 2021, we had outstanding letters of credit of approximately \$16 million, which secure our lease obligations in connection with certain of the operating leases of our office spaces.

Purchase Obligations - We have non-cancellable purchase obligations for content related to our mobile applications and websites and certain cloud computing costs. As of December 31, 2022, we have purchase obligations totaling \$111 million, with \$79 million payable within 12 months. For additional information regarding our purchase obligations, see Note 18 to our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with GAAP. The preparation of these consolidated financial statements requires us to make estimates, judgments and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses and related disclosures. We evaluate our estimates, judgments and assumptions on an ongoing basis. Our estimates are based on historical experience and various other assumptions that we believe to be reasonable under the circumstances. Our actual results could differ from these estimates, and the health of the real estate market, the broader economy and the COVID-19 pandemic (including variants) have introduced significant additional uncertainty with respect to estimates, judgments and assumptions, which may materially impact our estimates.

We believe that the estimates, judgments and assumptions associated with accounting for certain revenue offerings, amortization period and recoverability of contract cost assets, website and software development costs, recoverability of intangible assets with definite lives and other long-lived assets, recoverability of goodwill, and share-based compensation have the greatest potential impact on our consolidated financial statements. Therefore, we consider these to be our critical accounting policies and estimates.

Accounting for Certain Revenue

Accrued Revenue. We accrue revenue for certain of our products, primarily our Premier Agent Flex, rentals pay per lease (“Zillow Lease Connect”) and StreetEasy Experts offerings. With Premier Agent Flex, Premier Agents are provided validated leads at no initial cost and pay a performance advertising fee only when a real estate transaction is closed with one of the leads within two years. With this pricing model, the transaction price represents variable consideration, as the amount to which we expect to be entitled varies based on the number of validated leads that convert into real estate transactions and the value of those transactions. The transaction prices for leases generated through Zillow Lease Connect and real estate transactions executed through our StreetEasy Experts product also represent variable consideration. We estimate the amount of variable consideration for Zillow Lease Connect based on the expected number of qualified leases to be secured and the expected price per closed lease. We estimate the amount of variable consideration for StreetEasy Experts based on the number of validated leads that convert to real estate transactions and the value of those transactions. As of December 31, 2022, we had accrued \$71 million in revenue associated with these products.

Although we do not believe that a significant reversal in the amount of cumulative revenue recognized will occur once the uncertainty related to the number of real estate transactions to be closed and qualified leases to be secured is resolved, judgment is required to determine the quantity and value of transactions and leases that are expected to be realized in a future period based on the number of leads delivered during the current period. Our estimated revenue is based on a number of assumptions, which include estimating the conversion rate of a lead to a real estate transaction or qualified lease, estimating the velocity of conversions and estimating the fee amounts likely to be received. Estimates are primarily developed based on historical data and our future expectations based on current market trends.

Mortgage Origination Revenue. Mortgage origination revenue generated by Zillow Home Loans reflects origination fees on purchase or refinance mortgages and the corresponding sale, or expected future sale, of a loan. When an interest rate lock commitment is made to a customer, we record the expected gain on sale of the mortgage, plus the estimated earnings from the expected sale of the associated servicing rights, adjusted for a pull-through percentage (which represents the probability that an interest rate lock commitment will ultimately result in a closed loan), as revenue. Judgment is required to determine the appropriate pull-through rate, which is estimated based on expected changes in market conditions, loan stage and historical borrower behavior. Revenue from loan origination fees is recognized at the time the related purchase or refinance transactions are completed, usually upon the close of escrow and when we fund the purchase or refinance mortgage loans.

Contract Cost Assets

We capitalize certain incremental costs of obtaining contracts with customers which we expect to recover. These costs relate to commissions paid to sales personnel, primarily for our Premier Agent program. Contract cost assets are amortized on a straight-line basis over a period that is consistent with the transfer to the customer of the products or services to which the asset relates, generally the estimated life of the customer relationship. Our determination of the estimated life of the customer relationship involves significant judgment. In determining the estimated life of our customer relationships, we consider quantitative and qualitative data, including, but not limited to, historical customer data, recent changes or expected changes in product or service offerings, and changes in how we monetize our products and services. The amortization period for capitalized contract costs related to our Premier Agent program are approximately three years.

We monitor our contract cost assets for impairment and recognize an impairment loss in the statement of operations to the extent the carrying amount of the asset recognized exceeds the amount of consideration we expect to receive in the future and that we have received but have not recognized in revenue less the costs that relate directly to providing those goods or services that have not yet been recognized as expenses.

Website and Software Development Costs

The costs incurred in the preliminary stages of website and software development are expensed as incurred. Once an application has reached the development stage, internal and external costs, if direct and incremental and deemed by management to be significant, are capitalized in property and equipment and amortized on a straight-line basis over their estimated useful lives. Maintenance and enhancement costs, including those costs in the post-implementation stages, are typically expensed as incurred, unless such costs relate to substantial upgrades and enhancements to the website or software that result in added functionality, in which case the costs are capitalized and amortized on a straight-line basis over the estimated useful lives.

Capitalized development activities placed in service are amortized over the expected useful lives of those releases, currently estimated at one to five years. The estimated useful lives of website and software development activities are reviewed frequently and adjusted as appropriate to reflect upcoming development activities that may include significant upgrades and/or enhancements to the existing functionality.

We exercise judgment in determining the point at which various projects may be capitalized, in assessing the ongoing value of the capitalized costs and in determining the estimated useful lives over which the costs are amortized. To the extent that we change the manner in which we develop and test new features and functionalities related to our mobile applications and websites, assess the ongoing value of capitalized assets, or determine the estimated useful lives over which the costs are amortized, the amount of website and software development costs we capitalize and amortize could change in future periods.

Recoverability of Intangible Assets with Definite Lives and Other Long-Lived Assets

We evaluate intangible assets and other long-lived assets for impairment whenever events or circumstances indicate that they may not be recoverable. Recoverability is measured by comparing the carrying amount of an asset group to future undiscounted net cash flows expected to be generated. We group assets for purposes of such review at the lowest level for which identifiable cash flows of the asset group are largely independent of the cash flows of the other groups of assets and liabilities.

Unforeseen events, changes in circumstances and market conditions and material differences in estimates of future cash flows could adversely affect the fair value of our assets and could result in an impairment charge. Fair value can be estimated utilizing a number of techniques including quoted market prices, prices for comparable assets, or other valuation processes involving estimates of cash flows, multiples of earnings or revenues, and we may make various assumptions and estimates when performing our impairment assessments, particularly as it relates to cash flow projections. Cash flow estimates are by their nature subjective and include assumptions regarding factors such as recent and forecasted operating performance, revenue

trends and operating margins. These estimates could also be adversely impacted by changes in federal, state, or local regulations, economic downturns or developments, pandemics such as COVID-19, or other market conditions affecting our industry.

Recoverability of Goodwill

Goodwill is measured as the excess of consideration transferred for an acquired business over the net of the acquisition date fair value of the assets acquired and liabilities assumed, and is not amortized. We assess the impairment of goodwill at the reporting unit level on an annual basis, in our fourth quarter, or whenever events or changes in circumstances indicate that goodwill may be impaired. In our evaluation of goodwill, we first perform a qualitative assessment to determine whether the carrying value of each reporting unit is greater than its fair value. If it is more likely than not that the carrying value of a reporting unit is greater than its fair value, we perform a quantitative assessment and an impairment charge is recorded in our statements of operations for the excess of carrying value of the reporting unit over its fair value.

We exercise judgment in determining whether it is more likely than not that the carrying value of each reporting unit is greater than its fair value. The following events and circumstances are considered when performing the qualitative assessment:

- Macroeconomic conditions, industry and market considerations, and entity-specific conditions, such as changes in cost factors and financial performance;
- The amount by which the fair values of each reporting unit exceeded their carrying values as of the date of the most recent quantitative assessment;
- Changes in interest rates since the most recent quantitative assessment;
- Changes in our business or strategy since our most recent quantitative assessment;
- The current reporting unit forecasts as compared to the forecasts included in the most recent quantitative assessment;
- Changes in our market capitalization and overall enterprise value.

The examples noted above are not all-inclusive, and we consider other relevant events and circumstances that affect the fair value of a reporting unit in determining whether to perform a quantitative assessment.

Commencing in the first quarter of 2023, our operating structure will be realigned into one reportable segment. This change may result in the identification of new reporting units, which may require us to perform a goodwill impairment test for each reporting unit immediately before and after the segment change. While we believe the assumptions used in our 2022 impairment analysis are reasonable and representative of expected results for our 2022 reporting unit structure, we may recognize a goodwill impairment charge immediately after the segment change as the reassigned carrying values of the reporting units may exceed their respective estimated fair values. At December 31, 2022, our total goodwill balance was \$2.4 billion.

Share-Based Compensation

We measure compensation expense for all share-based awards at fair value on the date of grant and recognize compensation expense over the service period for awards expected to vest. We use the Black-Scholes-Merton option-pricing model to determine the fair value for option awards and recognize compensation expense on a straight-line basis over the option awards' vesting period.

Determining the fair value of option awards at the grant date requires judgment. If any of the assumptions used in the Black-Scholes-Merton model changes significantly, share-based compensation expense for future option awards may differ materially compared with the awards granted previously. In valuing our option awards, we make assumptions about risk-free interest rates, dividend yields, volatility, and weighted-average expected lives. When determining the grant date fair value of share-based awards, management considers whether an adjustment is required to the observable market price or volatility of our Class C capital stock used in the valuation as a result of material non-public information.

Risk-free interest rate. Risk-free interest rates are derived from U.S. Treasury securities as of the option award's grant date.

Expected dividend yields. Expected dividend yields are based on our historical dividend payments, which have been zero to date.

Volatility. The expected volatility for our Class A common stock and Class C capital stock is estimated using our historical volatility.

Expected term. The weighted-average expected life of the option awards is estimated based on our historical exercise data.

We will continue to use judgment in evaluating the expected volatility expected terms utilized for our share-based compensation expense calculations on a prospective basis. We will also continue to use judgment when determining whether an adjustment is required to the observable market price or volatility as a result of material non-public information. Actual results, and future changes in estimates, may differ substantially from management's current estimates. As we continue to accumulate additional data related to our Class C capital stock, we may have refinements to the estimates of our expected volatility and expected terms, which could materially impact our future share-based compensation expense. In future periods, we expect our share-based compensation expense to increase as a result of our existing, unrecognized share-based compensation that will be recognized as the awards vest, and as we grant additional share-based awards to attract and retain employees.

Recently Adopted Accounting Standards and Recently Issued Accounting Standards Not Yet Adopted

For information about our recently adopted accounting standards and recently issued accounting standards not yet adopted, see Note 2 of the accompanying Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

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

We are exposed to market risks in the ordinary course of our business. These risks primarily consist of fluctuations in interest rates.

Interest Rate Risk

Under our current investment policy, we invest our excess cash in money market funds, U.S. government treasury securities, U.S. government agency securities, investment grade corporate securities and commercial paper. Our current investment policy seeks first to preserve capital, second to provide sufficient liquidity for our operating and capital needs and third to maximize yield without putting our principal at risk.

Our short-term investments are exposed to market risk due to the fluctuation of prevailing interest rates that may reduce the yield on our investments or their fair value. For our investment portfolio, we do not believe an immediate 10% increase in interest rates would have a material effect on the fair market value of our portfolio.

As of December 31, 2022, we had approximately \$1.7 billion aggregate principal amount of convertible senior notes outstanding with maturities ranging from September 2024 through September 2026. All outstanding convertible senior notes bear fixed rates of interest and, therefore, do not expose us to financial statement risk associated with changes in interest rates. The fair values of the convertible senior notes change primarily when the market price of our stock fluctuates or interest rates change.

We are also subject to market risk which may impact our mortgage loan origination volume and associated revenue and the net interest margin derived from borrowings under our warehouse line of credit and master repurchase agreements that provide capital for Zillow Home Loans. Market risk occurs in periods where changes in short-term interest rates result in mortgage loans being originated with terms that provide a smaller interest rate spread above the financing terms of our warehouse line of credit and master repurchase agreements, which can negatively impact our net income (loss). This risk is primarily mitigated through expedited sale of our loans. As of December 31, 2022 and December 31, 2021, we had \$37 million and \$113 million, respectively, of outstanding borrowings on our warehouse line of credit and master repurchase agreements which bear interest either at a floating rate based on Secured Overnight Financing Rate ("SOFR") plus an applicable margin, as defined by the governing agreements, or Bloomberg Short-Term Bank Yield Index Rate ("BSBY") plus an applicable margin, as defined by the governing agreements. We manage the interest rate risk associated with our mortgage loan origination services through the use of forward sales of mortgage-backed securities. Assuming no change in the outstanding borrowings on the warehouse line of credit and master repurchase agreements, we estimate that a one percentage point increase in SOFR or BSBY, as applicable, would not have a material effect on our annual interest expense associated with the warehouse line of credit and master repurchase agreements as of December 31, 2022 and December 31, 2021.

For additional details related to our credit facilities and convertible senior notes, see Note 13 to our Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

Inflation Risk

The macroeconomic environment in the United States has experienced, and continues to experience, significant inflationary pressures, including the highest levels of inflation in nearly four decades. While it is difficult to accurately measure the impact of these inflationary pressures on our business, we believe these effects have been pervasive throughout our business during the year ended December 31, 2022. In response to ongoing inflationary pressures in the United States, the Federal Reserve has implemented a number of increases to the federal funds rate during 2022. These increases have impacted other market rates derived from this benchmark rate, including mortgage interest rates. The increase in mortgage interest rates across the industry has decreased demand for mortgages overall and, in turn, had an adverse impact on the results of operations for our Mortgages segment during 2022.

If the inflation rate continues to increase, our costs, in particular labor, marketing and hosting costs, will continue to be subject to significant inflationary pressures and we may not be able to fully offset such higher costs through price increases. In addition, uncertain or changing economic and market conditions, including inflation or deflation, may continue to affect demand for our products and services and the housing markets in which we operate. Our inability or failure to quickly respond to inflation could harm our business, results of operations and financial condition. We cannot predict the duration or magnitude of these inflationary pressures, or how they may change over time, but we expect to see continued impacts on the residential real estate industry, our customers and our company. Despite these near-term effects, we do not expect these inflationary pressures to have a material impact on our ability to execute our long-term business strategy.

Foreign Currency Exchange Risk

We do not believe that foreign currency exchange risk has had a material effect on our business, results of operations or financial condition. As we do not maintain a significant balance of foreign currency, we do not believe an immediate 10% increase or decrease in foreign currency exchange rates relative to the U.S. dollar would have a material effect on our business, results of operations or financial condition.

Item 8. Financial Statements and Supplementary Data.

Index to Consolidated Financial Statements

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The supplementary financial information required by this Item 8 is included in Item 7 under the caption "Quarterly Results of Operations" in this Annual Report on Form 10-K.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Zillow Group, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Zillow Group, Inc. (the “Company”) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive loss, shareholders’ equity, and cash flows, for each of the three years in the period ended December 31, 2022, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

We have also 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, 2022, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 15, 2023 expressed an unqualified opinion on the Company’s internal control over financial reporting.

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 Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates 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 financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Revenue – Highly Automated Revenue Systems in the Internet, Media and Technology Segment — Refer to Note 2 and Note 20 to the Financial Statements

Critical Audit Matter Description

The Company’s Internet, Media & Technology (IMT) segment, which includes the financial results for the Premier Agent and rentals marketplaces, as well as Other IMT, which includes the new construction marketplace and revenue from the sale of other advertising and business technology solutions for real estate professionals, including display, StreetEasy for-sale product offerings and ShowingTime+, which houses ShowingTime, Bridge Interactive, dotloop and interactive floor plans, derives substantially all of its revenue from the sale of advertising services and a suite of marketing software and technology solutions to businesses and professionals primarily associated with the residential real estate, rental and residential construction industries. Total revenue for the IMT segment for the year ended December 31, 2022 was approximately \$1.8 billion. The Company operates multiple mobile applications and websites to deliver each of its products to end users, and the revenue for each product consists of a significant volume of transactions utilizing multiple systems.

The process to calculate, aggregate, and record revenue across the IMT segment product offerings is highly automated, relies on multiple internally developed tools and systems, and involves interfacing significant volumes of data across the systems. Given

the complexity of the information technology (IT) environment, the required involvement of professionals with expertise in IT to identify, test, and evaluate the revenue data flows, systems, and automated controls, we considered the audit of the Company's revenue-generating transactions within the IMT segment to be a critical audit matter.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the Company's relevant revenue transactions within the IMT segment included the following, among others:

- With the assistance of our IT specialists, we:
 - Identified the relevant systems used to calculate and record revenue transactions.
 - Tested the general IT controls over the relevant systems, including testing of user access controls, change management controls, and IT operations controls.
 - Performed testing of system interface controls and automated controls within the relevant revenue streams.
- We tested controls within the relevant business processes, including those in place to reconcile the various systems to the Company's general ledgers and to reconcile transactional data to relevant revenue systems.
- For a sample of revenue transactions, we performed detail testing of transactions by agreeing the amounts recognized to source documents and testing the mathematical accuracy of the recorded revenue.

/s/ DELOITTE & TOUCHE LLP

Seattle, Washington

February 15, 2023

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

ZILLOW GROUP, INC.
CONSOLIDATED BALANCE SHEETS
(in millions, except share data)

	December 31,	
	2022	2021
Assets		
Current assets:		
Cash and cash equivalents	\$ 1,466	\$ 2,315
Short-term investments	1,896	514
Accounts receivable, net of allowance for doubtful accounts	72	77
Mortgage loans held for sale	41	107
Prepaid expenses and other current assets	126	140
Restricted cash	2	1
Current assets of discontinued operations	—	4,526
Total current assets	3,603	7,680
Contract cost assets	23	35
Property and equipment, net	271	215
Right of use assets	126	130
Goodwill	2,374	2,374
Intangible assets, net	154	176
Other assets	12	3
Noncurrent assets of discontinued operations	—	82
Total assets	\$ 6,563	\$ 10,695
Liabilities and shareholders' equity		
Current liabilities:		
Accounts payable	\$ 20	\$ 11
Accrued expenses and other current liabilities	90	89
Accrued compensation and benefits	48	61
Borrowings under credit facilities	37	113
Deferred revenue	44	51
Lease liabilities, current portion	31	24
Current liabilities of discontinued operations	—	3,533
Total current liabilities	270	3,882
Lease liabilities, net of current portion	139	148
Convertible senior notes	1,660	1,319
Other long-term liabilities	12	5
Total liabilities	2,081	5,354
Commitments and contingencies (Note 18)		
Shareholders' equity:		
Preferred stock, \$0.0001 par value; authorized — 30,000,000 shares; no shares issued and outstanding	—	—
Class A common stock, \$0.0001 par value; authorized — 1,245,000,000 shares; issued and outstanding — 57,494,698 and 61,513,634 shares, respectively	—	—
Class B common stock, \$0.0001 par value; authorized — 15,000,000 shares; issued and outstanding — 6,217,447 shares	—	—
Class C capital stock, \$0.0001 par value; authorized — 600,000,000 shares; issued and outstanding — 170,555,565 and 182,898,987 shares, respectively	—	—
Additional paid-in capital	6,109	7,001
Accumulated other comprehensive income (loss)	(15)	7
Accumulated deficit	(1,612)	(1,667)
Total shareholders' equity	4,482	5,341
Total liabilities and shareholders' equity	\$ 6,563	\$ 10,695

See accompanying notes to consolidated financial statements.

ZILLOW GROUP, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in millions, except share data, which are presented in thousands, and per share data)

	Year Ended December 31,		
	2022	2021	2020
Revenue	\$ 1,958	\$ 2,132	\$ 1,624
Cost of revenue	367	323	255
Gross profit	1,591	1,809	1,369
Operating expenses:			
Sales and marketing	664	715	535
Technology and development	498	421	324
General and administrative	498	414	324
Impairment and restructuring costs	24	10	77
Acquisition-related costs	—	9	—
Integration costs	—	1	—
Total operating expenses	1,684	1,570	1,260
Income (loss) from continuing operations	(93)	239	109
Gain (loss) on extinguishment of debt	—	(17)	1
Other income, net	43	7	25
Interest expense	(35)	(128)	(138)
Income (loss) from continuing operations before income taxes	(85)	101	(3)
Income tax benefit (expense)	(3)	1	8
Net income (loss) from continuing operations	(88)	102	5
Net loss from discontinued operations, net of income taxes	(13)	(630)	(167)
Net loss	\$ (101)	\$ (528)	\$ (162)
Net income (loss) from continuing operations per share:			
Basic	\$ (0.36)	\$ 0.41	\$ 0.02
Diluted	\$ (0.36)	\$ 0.39	\$ 0.02
Net loss per share:			
Basic	\$ (0.42)	\$ (2.11)	\$ (0.72)
Diluted	\$ (0.42)	\$ (2.02)	\$ (0.70)
Weighted-average shares outstanding:			
Basic	242,163	249,937	223,848
Diluted	242,163	261,826	231,435

See accompanying notes to consolidated financial statements.

ZILLOW GROUP, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in millions)

	Year Ended December 31,		
	2022	2021	2020
Net loss	\$ (101)	\$ (528)	\$ (162)
Other comprehensive income (loss):			
Unrealized gains (losses) on investments	(22)	7	—
Total other comprehensive income (loss)	(22)	7	—
Comprehensive loss	<u>\$ (123)</u>	<u>\$ (521)</u>	<u>\$ (162)</u>

See accompanying notes to consolidated financial statements.

ZILLOW GROUP, INC.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(in millions, except share data, which are presented in thousands)

	Class A Common Stock, Class B Common Stock and Class C Capital Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
	Shares	Amount				
Balance at January 1, 2020	209,067	\$ —	\$ 4,412	\$ (977)	\$ —	\$ 3,435
Issuance of common and capital stock upon exercise of stock options	13,745	—	444	—	—	444
Vesting of restricted stock units	3,013	—	—	—	—	—
Share-based compensation expense	—	—	214	—	—	214
Issuance of Class C capital stock in connection with equity offering, net of issuance costs	8,800	—	412	—	—	412
Equity component of issuance of convertible senior notes maturing in 2025, net of issuance costs	—	—	155	—	—	155
Settlement of convertible senior notes	6,219	—	244	—	—	244
Unwind of capped call transactions	(318)	—	—	—	—	—
Net loss	—	—	—	(162)	—	(162)
Balance at December 31, 2020	240,526	—	5,881	(1,139)	—	4,742
Issuance of common and capital stock upon exercise of stock options	3,304	—	127	—	—	127
Vesting of restricted stock units	2,982	—	—	—	—	—
Restricted stock units withheld for tax liability	(1)	—	—	—	—	—
Share-based compensation expense	—	—	347	—	—	347
Issuance of Class C capital stock in connection with equity offering, net of issuance costs	3,164	—	545	—	—	545
Settlement of convertible senior notes	6,265	—	403	—	—	403
Unwind of capped call transactions	(666)	—	—	—	—	—
Repurchases of Class C capital stock	(4,944)	—	(302)	—	—	(302)
Net loss	—	—	—	(528)	—	(528)
Other comprehensive income	—	—	—	—	7	7
Balance at December 31, 2021	250,630	—	7,001	(1,667)	7	5,341
Cumulative-effect adjustment from adoption of guidance on accounting for convertible instruments and contracts in an entity's own equity	—	—	(492)	156	—	(336)
Issuance of common and capital stock upon exercise of stock options	1,129	—	45	—	—	45
Vesting of restricted stock units	4,722	—	—	—	—	—
Share-based compensation expense	—	—	502	—	—	502
Repurchases of Class A common stock and Class C capital stock	(22,213)	—	(947)	—	—	(947)
Net loss	—	—	—	(101)	—	(101)
Other comprehensive loss	—	—	—	—	(22)	(22)
Balance at December 31, 2022	234,268	\$ —	\$ 6,109	\$ (1,612)	\$ (15)	\$ 4,482

See accompanying notes to consolidated financial statements.

ZILLOW GROUP, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	Year Ended December 31,		
	2022	2021	2020
Operating activities			
Net loss	\$ (101)	\$ (528)	\$ (162)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation and amortization	157	130	111
Share-based compensation	451	312	197
Amortization of right of use assets	23	23	24
Amortization of contract cost assets	30	42	37
Amortization of debt discount and debt issuance costs	26	104	102
Loss (gain) on extinguishment of debt	21	17	(1)
Impairment and restructuring costs	—	57	77
Inventory valuation adjustment	9	408	—
Other adjustments to reconcile net loss to net cash provided by (used in) operating activities	(3)	12	(3)
Changes in operating assets and liabilities:			
Accounts receivable	82	(82)	(7)
Mortgage loans held for sale	66	224	(294)
Inventory	3,904	(3,827)	345
Prepaid expenses and other assets	6	(82)	(16)
Contract cost assets	(18)	(26)	(42)
Lease liabilities	(21)	(29)	(2)
Accounts payable	3	5	13
Accrued expenses and other current liabilities	(71)	61	15
Accrued compensation and benefits	(60)	13	10
Deferred revenue	(7)	1	9
Other long-term liabilities	7	(12)	10
Net cash provided by (used in) operating activities	4,504	(3,177)	423
Investing activities			
Proceeds from maturities of investments	802	2,206	2,232
Proceeds from sales of investments	—	—	116
Purchases of investments	(2,191)	(516)	(3,287)
Purchases of property and equipment	(115)	(74)	(85)
Purchases of intangible assets	(25)	(31)	(24)
Proceeds from sale of equity investment	—	—	10
Cash paid for acquisitions, net	(4)	(497)	—
Net cash provided by (used in) investing activities	(1,533)	1,088	(1,038)
Financing activities			
Proceeds from issuance of convertible senior notes, net of issuance costs	—	—	553
Proceeds from issuance of Class C capital stock, net of issuance costs	—	545	412
Proceeds from issuance of term loan, net of issuance costs	—	1,138	—
Proceeds from borrowings on credit facilities	—	3,618	349
Repayments of borrowings on credit facilities	(2,206)	(1,780)	(679)
Net borrowings (repayments) on warehouse line of credit and repurchase agreements	(76)	(197)	279
Repurchases of Class A common stock and Class C capital stock	(947)	(302)	—
Settlement of long-term debt	(1,158)	(1)	(195)
Proceeds from exercise of stock options	46	127	444
Net cash provided by (used in) financing activities	(4,341)	3,148	1,163
Net increase (decrease) in cash, cash equivalents and restricted cash during period	(1,370)	1,059	548
Cash, cash equivalents and restricted cash at beginning of period	2,838	1,779	1,231
Cash, cash equivalents and restricted cash at end of period	\$ 1,468	\$ 2,838	\$ 1,779
Supplemental disclosures of cash flow information			
Cash paid for interest	\$ 50	\$ 109	\$ 51
Cash paid for taxes	6	—	—
Noncash transactions:			
Write-off of fully amortized intangible assets	\$ 203	\$ 58	\$ 63
Write-off of fully depreciated property and equipment	53	49	115
Capitalized share-based compensation	51	30	17
Issuance (settlement) of beneficial interests in securitizations	(79)	63	—

See accompanying notes to consolidated financial statements.

ZILLOW GROUP, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Organization and Description of Business

Zillow Group is reimagining real estate to make it easier to unlock life's next chapter. As the most visited real estate website in the United States, Zillow and its affiliates offer customers an on-demand experience for selling, buying, renting or financing with transparency and ease.

Our portfolio of consumer brands includes Zillow Premier Agent, Zillow Home Loans, our affiliate lender, Zillow Closing Services, Zillow Rentals, Trulia, StreetEasy, HotPads and Out East. In addition, Zillow Group provides a comprehensive suite of marketing software and technology solutions for the real estate industry which include Mortech, New Home Feed and ShowingTime+, which houses ShowingTime, Bridge Interactive, dotloop and interactive floor plans.

In the fourth quarter of 2021, we began to wind down the operations of Zillow Offers, our iBuying business which purchased and sold homes directly in markets across the country. The wind down was completed in the third quarter of 2022, and we have presented the financial results of Zillow Offers as discontinued operations in our consolidated financial statements for all periods presented. See Note 3 for additional information.

Certain Significant Risks and Uncertainties

We operate in a dynamic industry and, accordingly, can be affected by a variety of factors. For example, we believe that changes in any of the following areas could have a significant negative effect on us in terms of our future financial position, results of operations or cash flows: current and future health and stability of the economy, financial conditions, and residential housing market; changes in general economic and financial conditions (including federal monetary policy, interest rates, inflation, home price fluctuations, housing inventory, labor shortages and supply chain issues); our investment of resources to pursue strategies and develop new products and services that may not prove effective or that are not attractive for customers and real estate partners or that do not allow us to compete successfully; our compliance with multiple listing service rules and requirements to access and use listing data, and to maintain or establish relationships with listings and data providers; our ability to obtain or maintain licenses and permits to support our current and future businesses; our ability to operate and grow our mortgage origination business, including the ability to obtain sufficient financing and resell originated mortgages on the secondary market; the duration and impact of natural disasters and other catastrophic events (including public health crises) on our ability to operate, demand for our products or services or general economic conditions; our ability to realize the benefits of our past or future strategic partnerships, acquisitions, joint ventures, capital-raising activities, investments or other corporate transactions or commitments; our ability to manage advertising inventory or pricing; effectivity of our technology and information security systems, or those of third parties on which we rely; changes in laws or government regulation affecting our business; outcomes of legal proceedings; our ability to attract and retain qualified employees and key personnel; protection of customers' information and other privacy concerns; protection of our brand and intellectual property; and intellectual property infringement and other claims, among other things.

Note 2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements include Zillow Group, Inc. and its wholly-owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation. These consolidated financial statements have been prepared in conformity with United States generally accepted accounting principles ("GAAP"). We have presented the financial results of Zillow Offers as discontinued operations in our consolidated financial statements for all periods presented. See Note 3 for additional information.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make certain estimates, judgments and assumptions that affect the reported amounts of assets and liabilities and the related disclosures at the date of the financial statements, as well as the reported amounts of revenue and expenses during the periods presented. On an ongoing basis, we evaluate our estimates, including those related to the accounting for certain revenue offerings, restructuring costs, amortization period and recoverability of contract cost assets, website and software development costs, recoverability of long-lived assets and intangible assets, share-based compensation, income taxes, the presentation of discontinued and continuing operations, business combinations and the recoverability of goodwill, among others. To the extent there are material differences between these estimates, judgments or assumptions and actual results, our financial statements will be affected. The health of the residential housing market, interest rate environment and the COVID-19 pandemic (including variants) have introduced significant additional uncertainty with respect to estimates, judgments and assumptions, which may materially impact the estimates previously listed, among others.

Concentrations of Credit Risk

Financial instruments, which potentially subject us to concentrations of credit risk, consist primarily of cash and cash equivalents, investments, accounts receivable and mortgage loans held for sale. We place cash and cash equivalents and investments with major financial institutions, which management assesses to be of high credit quality, in order to limit exposure of our investments.

Credit risk with respect to accounts receivable is dispersed due to the large number of customers. There were no customers that comprised 10% or more of our total accounts receivable as of December 31, 2022 and 2021. Further, our credit risk on accounts receivable is mitigated by the relatively short payment terms that we offer. Collateral is not required for accounts receivable. We maintain an allowance for doubtful accounts such that receivables are stated at net realizable value.

Similarly, our credit risk on mortgage loans held for sale is dispersed due to a large number of customers and is mitigated by the fact that we typically sell mortgages on the secondary market within a relatively short period of time after the loan is originated.

Cash and Cash Equivalents

Cash includes demand deposits with banks or financial institutions. Cash equivalents include short-term, highly liquid investments that are both readily convertible to known amounts of cash, and so near their maturity that they present minimal risk of changes in value because of changes in interest rates. Our cash equivalents include only investments with original maturities of three months or less. We regularly maintain cash in excess of federally insured limits at financial institutions.

Short-term Investments

Our investments consist of fixed income securities, which include U.S. government treasury securities, U.S. government agency securities, investment grade corporate securities, and commercial paper. The investments are available to support current operations and are classified as short-term investments measured at fair value. Our investment policy only allows for purchases of investment-grade securities and provides guidelines on concentrations to ensure minimum risk of loss. We evaluate whether unrealized losses on available-for-sale debt securities are the result of credit worthiness of the securities held or other non-credit related factors. If an unrealized loss is the result of credit quality factors, we recognize an allowance reflective of our current estimate of credit losses expected to be incurred over the life of the financial instrument on a specific identification basis upon initial recognition and at each reporting period. If a reduction in value is a result of other factors, we continue to classify the losses as a reduction of comprehensive loss unless either we intend to sell the security or it is more likely than not we will be required to sell the security. We did not identify any unrealized loss positions in our available-for-sale securities that were the result of credit losses as of December 31, 2022 or 2021. Additionally, we have the ability to hold to maturity and more likely than not will not be required to sell the securities before a recovery of the amortized cost basis has occurred.

Restricted Cash

Restricted cash primarily consists of amounts held in escrow related to funding customer home purchases in our mortgage origination business.

Mortgage Loans Held for Sale

Mortgage loans held for sale include residential mortgages originated for sale in the secondary market in connection with Zillow Home Loans. We have elected the fair value option for all mortgage loans held for sale as election of this option allows for a better offset of the changes in fair values of the loans and the derivative instruments used to economically hedge them without having to apply complex hedge accounting provisions. Mortgage loans held for sale are initially recorded at fair value based on either sale commitments or current market quotes and are adjusted for subsequent changes in fair value until the loans are sold. Net origination costs and fees associated with mortgage loans are recognized as incurred. We sell substantially all of the mortgages we originate and the related servicing rights to third-party purchasers. Interest income is earned from the date a mortgage loan is originated until the loan is sold and is classified within other income, net in the consolidated statements of operations.

Substantially all of the mortgage loans originated are sold within a short period of time in the secondary mortgage market on a servicing released, nonrecourse basis, which limits exposure to nonperformance by loan buyer counterparties. However, we remain liable for certain limited representations and warranties related to loan sales, such as non-compliance with defined loan origination or documentation standards, including misstatement in the loan documents, early payoff or default on early payments. Mortgage investors could seek to have us buy back loans or compensate them for losses incurred on mortgages we have sold based on claims that we breached our limited representations and warranties. We record a reserve for probable losses in connection with the sale of mortgage loans within other long-term liabilities in the consolidated balance sheet.

Loan Commitments and Related Derivatives

We are party to interest rate lock commitments (“IRLCs”), which are extended to borrowers who have applied for loan funding and meet defined credit and underwriting criteria in connection with our Zillow Home Loans mortgage origination business. IRLCs are accounted for as derivative instruments recorded at fair value with gains and losses recognized in revenue in the consolidated statements of operations. We manage our interest rate risk related to IRLCs and mortgage loans held for sale through the use of derivative instruments, generally forward contracts on mortgage-backed securities (“MBSs”), which are commitments to either purchase or sell a specified financial instrument at a specified future date for a specified price, and mandatory loan commitments, which are an obligation by an investor to buy loans at a specified price within a specified time period. We do not enter into or hold derivatives for trading or speculative purposes, and our derivatives are not designated as hedging instruments. Changes in the fair value of our derivative financial instruments are recognized in revenue in our consolidated statements of operations, and the fair values are reflected in other current assets or other current liabilities, as applicable. Refer to Note 4 to our consolidated financial statements for additional information regarding IRLCs and related derivatives.

There are no credit-risk-related contingent features within our derivative agreements, and counterparty risk is considered minimal. Gains and losses on IRLCs are substantially offset by corresponding gains or losses on forward contracts on MBSs and mandatory loan commitments. We are generally not exposed to variability in cash flows of derivative instruments for more than approximately 90 days.

Contract Balances

Accounts receivable represent our unconditional right to consideration. Accounts receivable are generally due within 30 days and are recorded net of the allowance for doubtful accounts. We have an allowance for doubtful accounts for our accounts receivable balances, which represents our estimate of expected credit losses over the contractual life of the accounts receivable. To evaluate the adequacy of our allowance for doubtful accounts each reporting period, we analyze the accounts receivable balances with similar risk characteristics on a collective basis, considering factors such as the aging of receivable balances, payment terms, historical loss experience, current information and future expectations. Changes to the allowance for doubtful accounts are adjusted through credit loss expense, which is included in general and administrative expenses in the consolidated statements of operations.

Contract assets represent our right to consideration in exchange for goods and services that we have transferred to the customer when that right is conditional on something other than the passage of time. Contract assets are primarily related to our Premier Agent Flex, Zillow Lease Connect and StreetEasy Experts offerings, whereby we estimate variable consideration based on the expected number of real estate transactions to be closed for Premier Agent Flex and StreetEasy Experts, and qualified leases to be secured for Zillow Lease Connect. We recognize revenue when we satisfy our performance obligations under the corresponding contracts. The current portion of contract assets are recorded within prepaid expenses and other current assets and the long-term portion of contract assets are recorded within other assets in our consolidated balance sheets.

Contract liabilities consist of deferred revenue, which relates to payments received in advance of performance under a revenue contract. Deferred revenue is primarily related to prepaid advertising fees received or billed in advance of satisfying our performance obligations and prepaid but unrecognized subscription revenue. Deferred revenue is recognized when or as we satisfy our obligations under contracts with customers.

Contract Cost Assets

We capitalize certain incremental costs of obtaining contracts with customers which we expect to recover. These costs relate to commissions paid to sales personnel, primarily for our Premier Agent program. As a practical expedient, we recognize the incremental costs of obtaining a contract as an expense when incurred if the amortization period of the asset that we otherwise would have recognized is one year or less. Capitalized commission costs are recorded as contract cost assets in our consolidated balance sheets. Contract cost assets are amortized to expense on a straight-line basis over a period that is consistent with the transfer to the customer of the products or services to which the asset relates, generally the estimated life of the customer relationship. Amortization expense related to contract cost assets is included in sales and marketing expenses in our consolidated statements of operations. In determining the estimated life of our customer relationships, we consider quantitative and qualitative data, including, but not limited to, historical customer data, recent changes or expected changes in product or service offerings and changes in how we monetize our products and services. The amortization period for capitalized contract costs related to our Premier Agent program is approximately three years.

We monitor our contract cost assets for impairment and recognize an impairment loss in the consolidated statements of operations to the extent the carrying amount of the asset recognized exceeds the amount of consideration that we expect to receive in the future and that we have received but have not recognized in revenue less the costs that relate directly to providing those goods or services that have not yet been recognized as expenses. Refer to Note 7 of our consolidated financial statements for more information regarding contract cost assets.

Property and Equipment

Property and equipment is recorded at cost and depreciated using the straight-line method over the estimated useful lives of the related assets. The useful lives are as follows:

Computer equipment	2 to 3 years
Office equipment, furniture and fixtures	5 to 7 years
Leasehold improvements	Shorter of expected useful life or lease term

Maintenance and repair costs are charged to expense as incurred. Major improvements, which extend the useful life of the related asset, are capitalized. Upon disposal of a fixed asset, we record a gain or loss based on the difference between the proceeds received and the net book value of the disposed asset. We remove fully depreciated property and equipment from the cost and accumulated depreciation amounts disclosed.

Website and Software Development Costs

The costs incurred in the preliminary stages of website and software development are expensed as incurred. Once an application has reached the development stage, internal and external costs, if direct and incremental and deemed by management to be significant, are capitalized in property and equipment and amortized on a straight-line basis over their estimated useful lives. Maintenance and enhancement costs, including those costs in the post-implementation stages, are typically expensed as incurred, unless such costs relate to substantial upgrades and enhancements to the website or software that result in added functionality, in which case the costs are capitalized and amortized on a straight-line basis over the estimated useful lives. Amortization expense related to capitalized website and software development costs is included in cost of revenue in our consolidated statements of operations.

Capitalized development activities placed in service are amortized over the expected useful lives of those releases, currently estimated at one to five years. The estimated useful lives of website and software development activities are reviewed frequently and adjusted as appropriate to reflect upcoming development activities that may include significant upgrades and/or enhancements to the existing functionality. We remove fully amortized website and software development costs from the cost and accumulated amortization amounts disclosed.

Construction-in-progress primarily consists of website development costs that are capitalizable, but for which the associated applications have not been placed in service.

Leases

Our lease portfolio is primarily composed of operating leases for our office space. We determine whether a contract is or contains a lease at inception of the contract. Our operating leases are included in right of use assets and lease liabilities on our consolidated balance sheets. We do not have any material financing leases.

We have lease agreements that include both lease components (e.g., fixed rent) and non-lease components (e.g., common area maintenance). For such leases, we account for the lease and non-lease components as a single component. For leases with an initial term of 12 months or less, we recognize the associated lease payments in the consolidated statements of operations on a straight-line basis over the lease term.

Right of use assets represent our right to use an underlying asset during the lease term and lease liabilities represent our obligation to make lease payments. Right of use assets and lease liabilities are recognized at the lease commencement date based on the present value of the total lease payments not yet paid, including lease incentives not yet received, with the right of use assets further adjusted for any prepaid or accrued lease payments, lease incentives received and/or initial direct costs incurred. Certain lease arrangements also include variable payments for costs such as common-area maintenance, utilities, taxes or other operating costs, which are based on a percentage of actual expenses incurred or a fluctuating rate which is unknown at the inception of the contract. These variable lease payments are excluded from the measurement of the right of use assets and lease liabilities.

Our leases have remaining lease terms ranging from less than one year to ten years, most of which include one or more options to extend the lease term. The renewal options can generally extend the lease term for up to an additional five to ten years. When determining if a renewal option is reasonably certain of being exercised at lease commencement, we consider several factors, including but not limited to, contract-based, asset-based and entity-based factors. We reassess the term of existing leases if there is a significant event or change in circumstances within our control that affects whether we are reasonably certain to exercise an option to extend a lease. Examples of such events or changes include construction of significant leasehold improvements or other modifications or customizations to the underlying asset, relevant business decisions or subleases. As of December 31, 2022, we have concluded that our renewal options are not reasonably certain of being exercised, therefore, renewals are not included in the right of use assets and lease liabilities.

As our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at the lease commencement date in determining the present value of the lease payments. We apply a portfolio approach for determining the incremental borrowing rate based on the applicable lease terms and the current economic environment.

We recognize lease expense for operating leases on a straight-line basis over the lease term. Variable lease payments are generally recognized when incurred. These expenses are included in general and administrative expenses in the consolidated statements of operations.

From time to time, we may enter into sublease agreements with third parties. Our subleases generally do not relieve us of our primary obligations under the corresponding head lease. As a result, we account for the head lease based on the original assessment at lease inception. We determine if the sublease arrangement is either a sales-type, direct financing, or operating lease at inception of the sublease. If the total remaining lease cost on the head lease for the term of the sublease is greater than the anticipated sublease income, the right of use asset is assessed for impairment. Our subleases are generally operating leases and we recognize sublease income on a straight-line basis over the sublease term.

Recoverability of Goodwill

Goodwill is measured as the excess of consideration transferred for an acquired business over the net of the acquisition date fair values of the assets acquired and the liabilities assumed, and is not amortized. We assess the impairment of goodwill at the reporting unit level on an annual basis, in our fourth quarter, or whenever events or changes in circumstances indicate that goodwill may be impaired. In our evaluation of goodwill, we initially perform a qualitative assessment to determine whether the existence of events or circumstances indicates that it is more likely than not that the carrying value of each reporting unit is greater than its fair value. If it is more likely than not that the carrying value of a reporting unit is greater than its fair value, we perform a quantitative assessment and an impairment charge is recorded in our statements of operations for the excess of carrying value of the reporting unit over its fair value. During the years ended December 31, 2022, 2021 and 2020, we did not record any impairments related to goodwill. Refer to Note 10 for additional information related to goodwill.

Intangible Assets

We purchase and license data content from multiple data providers. This data content consists of United States county data about home details and other information relating to the purchase price of homes, both current and historical, as well as imagery, mapping and parcel data that is displayed on our mobile applications and websites. In some instances, we retain perpetual rights to this information after our contract with a vendor ends; in other instances, the information and data are licensed only during the fixed term of the agreement. Additionally, certain data license agreements provide for uneven payment amounts throughout the contract term.

We capitalize payments made to third parties for data licenses that we expect to recover through generation of revenue and margins. For data license contracts that include uneven payment amounts, we capitalize the payments as they are made as an intangible asset and the total contract value is typically amortized on a straight-line basis over the term of the contract, which is equivalent to the estimated useful life of the asset. The amortization period for the capitalized purchased content is based on our best estimate of the useful life of the asset, which ranges from three to seven years.

Under certain other data agreements, the underlying data is obtained on a subscription basis with consistent monthly or quarterly recurring payment terms over the contractual period. Upon the expiration of such arrangements, we no longer have the right to access the related data, and therefore, the costs incurred under such contracts are not capitalized and are expensed as payments are made.

We also capitalize costs related to the license of certain internal-use software from third parties, including certain licenses of software in cloud computing arrangements. Additionally, we capitalize costs incurred during the application development stage related to the development of internal-use software and enterprise cloud computing services. We expense costs as incurred related to the planning and post-implementation phases of development. Capitalized internal-use software costs are amortized on a straight-line basis over the estimated useful life of the asset, which is currently one to five years.

Intangibles-in-progress consist of purchased content and software that are capitalizable but have not been placed in service.

We also have intangible assets for developed technology, customer relationships, and trade names and trademarks which we recorded in connection with acquisitions. Purchased intangible assets with a determinable economic life are carried at cost less accumulated amortization. These intangible assets are amortized over the estimated useful life of the asset on a straight-line basis.

For each of the intangible assets described above, we have removed fully amortized assets from the cost and accumulated amortization amounts disclosed.

Recoverability of Intangible Assets with Definite Lives and Other Long-Lived Assets

We evaluate intangible assets and other long-lived assets for impairment whenever events or circumstances indicate that they may not be recoverable. Recoverability is measured by comparing the carrying amount of an asset group to future undiscounted net cash flows expected to be generated. We group assets for purposes of such review at the lowest level for which identifiable cash flows of the asset group are largely independent of the cash flows of the other groups of assets and liabilities. If this comparison indicates impairment, the amount of impairment to be recognized is calculated as the difference between the carrying value and the fair value of the asset group.

Business Combinations

We recognize identifiable assets acquired and liabilities assumed at their acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of consideration transferred over the net of the acquisition date fair values of the assets acquired and the liabilities assumed. While we use our best estimates and assumptions for the purchase price allocation process to value assets acquired and liabilities assumed at the acquisition date, our estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill to the extent that we identify adjustments to the preliminary purchase price allocation. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to our consolidated statements of operations. We recognize adjustments to provisional amounts that are identified during the measurement period in the reporting period in which the adjustment amounts are determined.

Revenue Recognition

We recognize revenue when or as we satisfy our performance obligations by transferring control of the promised products or services to our customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those products or services.

As a practical expedient, we do not adjust the promised amount of consideration for the effects of a significant financing component as the period between our transfer of a promised product or service to a customer and when the customer pays for that product or service is generally one year or less.

We do not disclose the transaction price related to remaining performance obligations for (i) contracts with an original expected duration of one year or less or (ii) contracts for which we recognize revenue at the amount to which we have the right to invoice for performance completed to date. The remaining duration over which we satisfy our performance obligations is generally less than one year.

IMT Segment

Premier Agent Revenue. Premier Agent revenue is derived from our Premier Agent program. Our Premier Agent program offers a suite of marketing and business technology products and services to help real estate agents and brokers achieve their advertising goals while growing and managing their businesses and brands. All Premier Agents receive access to a dashboard portal on our mobile application and website that provides individualized program performance analytics, our customer relationship management, or CRM, tool that captures detailed information about each contact made with a Premier Agent through our mobile and web platforms and our account management tools. The marketing and business technology products and services promised to Premier Agents are delivered over time, as the customer simultaneously receives and consumes the benefit of the performance obligations.

Premier Agent advertising products, which include the delivery of validated consumer connections, or leads, are primarily offered on a share of voice basis. Payment is received prior to the delivery of connections. Connections are delivered when consumer contact information is provided to Premier Agents. We do not promise any minimum or maximum number of connections to customers, but instead control when and how many connections to deliver based on a customer's share of voice. We determine the number of connections to deliver to Premier Agents in each zip code using a market-based pricing method in consideration of the total amount spent by Premier Agents to purchase connections in the zip code during the month. This results in the delivery of connections over time in proportion to each Premier Agent's share of voice. A Premier Agent's share of voice in a zip code is determined by their proportional monthly prepaid spend in that zip code as a percentage of the total monthly prepaid spend of all Premier Agents in that zip code, and determines the proportion of consumer connections a Premier Agent receives. The number of connections delivered for a given spend level is dynamic - as demand for advertising in a zip code increases or decreases, the number of connections delivered to a Premier Agent in that zip code decreases or increases accordingly.

We primarily recognize revenue related to the Premier Agent products and services based on the monthly prepaid spend recognized on a straight-line basis during the monthly billing period over which the products and services are provided. This methodology best depicts how we satisfy our performance obligations to customers, as we continuously transfer control of the performance obligations to the customer over time. Given a Premier Agent typically prepays their monthly spend and the monthly spend is refunded on a pro-rata basis upon cancellation of the contract by a customer, we have determined that Premier Agent contracts are effectively daily contracts, and each performance obligation is satisfied over time as each day lapses. We have not allocated the transaction price to each performance obligation within our Premier Agent arrangements, as the amounts recognized would be the same irrespective of any allocation.

We also offer a pay for performance pricing model called "Flex" for Premier Agent advertising services in certain markets. Flex is available to select partners alongside our legacy market-based pricing model. With the Flex model, Premier Agents are provided with validated leads at no initial cost and pay a performance advertising fee only when a real estate transaction is closed with one of the leads within two years. With this pricing model, the transaction price represents variable consideration, as the amount to which we expect to be entitled varies based on the number of validated leads that convert into real estate transactions and the value of those transactions. We estimate variable consideration and record revenue as performance obligations, or validated leads, are transferred. We do not believe that a significant reversal in the amount of cumulative revenue recognized will occur once the uncertainty related to the number of transactions closed is subsequently resolved. We record a corresponding contract asset for the estimate of variable consideration for Flex when the right to the consideration is conditional. When the right to consideration becomes unconditional, we reclassify amounts to accounts receivable.

Rentals Revenue. Rentals revenue includes the sale of advertising and a suite of tools to rental professionals, landlords and other market participants under the Zillow and StreetEasy brands. Rentals revenue includes revenue generated by advertising sold to property managers, landlords and other rental professionals on a cost per lead, click, lease, listing or impression basis or for a fixed fee for certain advertising packages. Rentals revenue also includes revenue generated from our rental applications product, through which potential renters can submit applications to multiple properties for a flat service fee. We recognize revenue as leads, clicks and impressions are provided to rental professionals, or as rental listings are published on our mobile applications and websites, which is the amount for which we have the right to invoice. We recognize revenue related to our fixed fee rentals product on a straight-line basis over the contract term as the performance obligations, rental listings on our mobile applications and websites, are satisfied over time based on time elapsed. The number of leases generated through our rentals pay per lease product, Zillow Lease Connect, during the period is accounted for as variable consideration, and we estimate the amount of variable consideration based on the expected number of qualified leases secured during the period. We do not believe that a significant reversal in the amount of cumulative revenue recognized will occur once the uncertainty related to the number of leases secured is subsequently resolved. We record a corresponding contract asset for the estimate of variable consideration for Zillow Lease Connect when the right to the consideration is conditional. When the right to consideration becomes unconditional, we reclassify amounts to accounts receivable.

Rentals revenue also includes revenue generated from our rental applications product through which potential renters can submit applications to multiple rental properties over a 30-day period for a flat service fee. We recognize revenue for the rental applications product on a straight-line basis during the contractual period over which the customer has the right to access and submit the rental application.

Other Revenue. Other IMT revenue primarily includes revenue generated by our new construction marketplace and revenue from the sale of other advertising and business technology solutions for real estate professionals, including display, StreetEasy for-sale product offerings and ShowingTime+, which houses ShowingTime, Bridge Interactive, dotloop and interactive floor plans.

Our new construction marketing solutions allow home builders to showcase their available inventory to home shoppers. New construction revenue primarily includes revenue generated by advertising sold to builders on a cost per residential community basis whereby we recognize revenue on a straight-line basis during the contractual period over which the communities are advertised on our mobile applications and websites. New construction revenue also includes revenue generated on a cost per impression basis whereby we recognize revenue as impressions are delivered to users interacting with our mobile applications and websites, which is the amount for which we have the right to invoice. Consideration for new construction products is billed in arrears.

ShowingTime revenue is primarily generated by Appointment Center, a software-as-a-service and call center solution allowing real estate agents, brokerages and multiple listing services to efficiently schedule real estate viewing appointments on behalf of their customers. Appointment Center revenue is primarily billed in advance on a monthly basis and recognized ratably over the contract period which aligns to our satisfaction of performance obligations.

StreetEasy for-sale revenue primarily consists of our pay for performance pricing model available in the New York City market for which agents and brokers are provided with leads at no initial cost and pay a performance referral fee only when a real estate purchase transaction is closed with one of the leads. Under the StreetEasy pricing model, the transaction price represents variable consideration, as the amount to which we expect to be entitled varies based on the number of leads that convert into real estate transactions and the value of those transactions. We estimate variable consideration based on the expected number of closed transactions during the period. We do not believe that a significant reversal in the amount of cumulative revenue recognized will occur once the uncertainty related to the number of transactions closed is subsequently resolved. We record a corresponding contract asset for the estimate of variable consideration for StreetEasy Experts when the right to the consideration is conditional. When the right to consideration becomes unconditional, we reclassify amounts to accounts receivable.

Our dotloop real estate transaction management software-as-a-service solution is primarily billed in advance on a monthly basis and revenue is recognized ratably over the contract period which aligns to our satisfaction of performance obligations.

Display revenue primarily consists of graphical mobile and web advertising sold on a cost per thousand impressions or cost per click basis to advertisers promoting their brands on our mobile applications and websites. We recognize display revenue as clicks occur or as impressions are delivered to users interacting with our mobile applications or websites, which is the amount for which we have the right to invoice.

Mortgages Segment

Mortgages Revenue. Mortgages revenue primarily includes revenue generated by Zillow Home Loans, our affiliated mortgage lender, and marketing products sold to mortgage professionals on a cost per lead basis, including our Custom Quote and Connect services.

Mortgage origination revenue recorded within our Mortgages segment reflects origination fees on purchase or refinance mortgages and the corresponding sale, or expected future sale, of a loan. When an IRLC is made to a customer, we record the expected gain on sale of the mortgage, plus the estimated earnings from the expected sale of the associated servicing rights, adjusted for a pull-through percentage (which is defined as the likelihood that an interest rate lock commitment will be originated), as revenue. Revenue from loan origination fees is recognized at the time the related purchase or refinance transactions are completed, usually upon the close of escrow and when we fund the purchase or refinance mortgage loans. Once funded, mortgage loans held for sale are recorded at fair value based on either sale commitments or current market quotes and are adjusted for subsequent changes in fair value until the loan is sold. Origination costs associated with originating mortgage loans are recognized as incurred. We sell substantially all of the mortgages we originate and the related servicing rights to third-party purchasers.

Mortgage loans are sold with limited recourse provisions, which can result in repurchases of loans previously sold to investors or payments to reimburse investors for loan losses. Based on historical experience, discussions with our mortgage purchasers, analysis of the volume of mortgages we originated and current housing and credit market conditions, we estimate and record a loss reserve for mortgage loans held in our portfolio and mortgage loans held for sale, as well as known and projected mortgage loan repurchase requests. These have historically not been significant to our financial statements.

Zillow Group operates Custom Quote and Connect through its wholly owned subsidiary, Zillow Group Marketplace, Inc., a licensed mortgage broker. For our Connect and Custom Quote cost per lead marketing products, participating qualified mortgage professionals typically make a prepayment to gain access to consumers interested in connecting with mortgage professionals. Mortgage professionals who exhaust their initial prepayment prepay additional funds to continue to participate in the marketplace. In Zillow Group's Connect platform, consumers answer a series of questions to find a local lender, and mortgage professionals receive consumer contact information, or leads, when the consumer chooses to share their information with a lender. Consumers who request rates for mortgage loans in Custom Quotes are presented with customized quotes from participating mortgage professionals. For our cost per lead mortgages products, we recognize revenue when a user contacts a mortgage professional through our mortgages platform, which is the amount for which we have the right to invoice.

Homes Segment

Zillow Closing Services. Zillow Closing Services offers title and escrow services to home buyers and sellers, including title search procedures for title insurance policies, escrow and other closing services. Title insurance, which is recorded net of amounts remitted to third-party underwriters, and title and escrow closing fees, are recognized as revenue upon closing of the underlying real estate transaction.

There were no customers that generated 10% or more of our total revenue in the years ended December 31, 2022, 2021 or 2020.

Cost of Revenue. Cost of revenue consists of expenses related to operating our mobile applications and websites, including associated headcount-related expenses, such as salaries, benefits, bonuses and share-based compensation expense, as well as revenue-sharing costs related to our commercial business relationships, depreciation expense, and costs associated with hosting our mobile applications and websites. Cost of revenue also includes amortization costs related to capitalized website and development activities, amortization of software, amortization of certain intangible assets and other costs to obtain data used to populate our mobile applications and websites, and amortization of certain intangible assets recorded in connection with acquisitions, including developed technology. For our IMT and Mortgages segments, cost of revenue also includes credit card fees and ad serving costs paid to third parties. For our Mortgages segment, cost of revenue also consists of direct costs to originate loans, including underwriting and processing costs.

Sales and Marketing. Sales and marketing expenses consist of advertising costs and other sales expenses related to promotional and marketing activities, headcount-related expenses, including salaries, commissions, benefits, bonuses and share-based compensation expense for sales, sales support, customer support, including the customer connections team, marketing and public relations employees, depreciation expense and amortization of certain intangible assets recorded in connection with acquisitions, including trade names and trademarks and customer relationships. For our Mortgages segment, sales and marketing expenses include headcount-related expenses for loan officers and specialists supporting Zillow Home Loans.

Advertising costs are expensed as incurred. For the years ended December 31, 2022, 2021 and 2020, expenses attributable to advertising totaled \$144 million, \$206 million and \$112 million, respectively.

Technology and Development. Technology and development expenses consist of headcount-related expenses, including salaries, benefits, bonuses and share-based compensation expense for individuals engaged in the design, development and testing of our products, mobile applications and websites and the tools and applications that support our products. Technology and development expenses also include equipment and maintenance costs and depreciation expense.

Research and development costs are expensed as incurred and are recorded in technology and development expenses. For the years ended December 31, 2022, 2021 and 2020, expenses attributable to research and development for our business totaled \$495 million, \$358 million and \$283 million, respectively.

Share-Based Compensation. We measure compensation expense for all share-based awards at fair value on the date of grant and recognize compensation expense over the service period on a straight-line basis for awards expected to vest.

We use the Black-Scholes-Merton option-pricing model to determine the fair value for option awards. In valuing our option awards, we make assumptions about risk-free interest rates, dividend yields, volatility and weighted-average expected lives. We account for forfeitures as they occur. Risk-free interest rates are derived from U.S. Treasury securities as of the option award grant date. Expected dividend yield is based on our historical cash dividend payments, which have been zero to date. The expected volatility for our Class A common stock and Class C capital stock is estimated using our historical volatility. The weighted-average expected life of the option awards is estimated based on our historical exercise data.

When determining the grant date fair value of share-based awards, management considers whether an adjustment is required to the observable market price or volatility of the Company's Class C capital stock used in the valuation as a result of material non-public information.

For issuances of restricted stock units, we determine the fair value of the award based on the market value of our Class C capital stock, as applicable, at the date of grant.

Restructuring Costs. The main components of our restructuring costs recorded within impairment and restructuring costs in our consolidated statement of operations relate to employee termination costs, contract termination costs, and charges attributable to the wind down of Zillow Offers operations and additional cost actions to streamline our operations and prioritize investments. One-time employee termination benefits are recognized when the plan of termination has been communicated to employees and certain other criteria are met. Other severance and employee costs, primarily pertaining to ongoing employee benefit arrangements, are recognized when it is probable that the employees are entitled to the severance benefits and the amounts can be reasonably estimated. Contract termination costs are recognized when a contract is terminated in accordance with its terms or at the cease-use date. Asset write-offs are recognized upon their cease-use date. The cumulative effect of a change resulting from a revision to either the timing or the amount of estimated cash flows for restructuring is recognized as an adjustment to the liability in the period of the change.

Income Taxes

We use the asset and liability approach for accounting and reporting income taxes, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the financial statement and tax bases of assets and liabilities at the applicable enacted tax rates. A valuation allowance against deferred tax assets would be established if, based on the weight of available evidence, it is more likely than not (a likelihood of more than 50%) that some or all of the deferred tax assets are not expected to be realized.

We establish reserves for tax-related uncertainties based on estimates of whether, and the extent to which, additional taxes will be due. We adjust these reserves in light of changing facts and circumstances, such as the closing of a tax audit, new tax legislation or the change of an estimate. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences will affect the provision for income taxes in the period in which such determination is made. Interest and penalties related to unrecognized tax benefits are recorded as income tax expense.

Recently Adopted Accounting Standards

In August 2020, the Financial Accounting Standards Board (“FASB”) issued guidance which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts in an entity’s own equity. Among other changes, the guidance removes the liability and equity separation models for convertible instruments. Instead, entities must account for convertible debt instruments wholly as debt unless convertible instruments contain features that require bifurcation as a derivative or that result in substantial premiums accounted for as paid-in capital. The guidance also requires the application of the if-converted method to calculate the impact of convertible instruments on diluted earnings per share. The guidance was effective for fiscal years beginning after December 15, 2021, with early adoption permitted for fiscal years beginning after December 15, 2020, and could be adopted on either a retrospective or modified retrospective basis. We adopted this guidance on January 1, 2022 using the modified retrospective approach whereby amounts previously reported have not been revised. Upon adoption we recognized a decrease to additional paid-in capital of \$492 million, an increase to long-term debt of \$336 million and a cumulative-effect adjustment to accumulated deficit of \$156 million.

In October 2021, the FASB issued guidance requiring contract assets and contract liabilities acquired in a business combination to be recognized and measured in accordance with guidance governing revenue from contracts with customers. Prior to the adoption of this guidance, we recognized contract assets and contract liabilities at the acquisition date based on fair value estimates, which resulted in a reduction to unearned revenue on the balance sheet, and therefore, a reduction to revenue that would have otherwise been recorded as an independent entity. The guidance was effective for interim and annual periods beginning after December 15, 2022 on a prospective basis, with early adoption permitted. We adopted this guidance effective April 1, 2022, and it will be applied to all business combinations after that date. We did not enter into any material business combinations during the year ended December 31, 2022.

Recently Issued Accounting Standards Not Yet Adopted

In June 2022, the FASB issued guidance to improve existing measurement and disclosure requirements for equity securities that are subject to a contractual sale restriction. This guidance is effective for interim and annual periods beginning after December 15, 2023 on a prospective basis, with early adoption permitted. We expect to adopt this guidance on January 1, 2024. We have not yet determined the impact the adoption of this guidance will have on our financial position, results of operations and cash flows.

Note 3. Discontinued Operations

Zillow Offers Wind Down

In November 2021, the Board of Directors of Zillow Group made the determination to wind down Zillow Offers operations. This decision was made in light of home pricing unpredictability, capacity constraints and other operational challenges faced by Zillow Offers that were exacerbated by an unprecedented housing market, a global pandemic and a difficult labor and supply chain environment, all of which led us to conclude that, despite its initial promise in earlier quarters, Zillow Offers was unlikely to be a sufficiently stable line of business to meet our goals going forward.

Historically Zillow Offers has been reported within our Homes segment. The wind down of Zillow Offers was completed in the third quarter of 2022, at which time Zillow Offers met the criteria for discontinued operations. Accordingly, we have presented the assets and liabilities and results of operations, excluding allocation of any general corporate expenses, of Zillow Offers for all periods presented as discontinued operations in our consolidated financial statements. No assets or liabilities were classified as discontinued operations as of December 31, 2022.

The following table presents the major classes of assets and liabilities of discontinued operations as of December 31, 2021 (in millions):

Assets	
Current assets:	
Cash and cash equivalents	\$ 296
Accounts receivable, net	78
Inventory	3,913
Prepaid expenses and other current assets	13
Restricted cash	226
Total current assets of discontinued operations	4,526
Intangible assets, net	4
Other assets	78
Total assets of discontinued operations	\$ 4,608
Liabilities	
Current liabilities:	
Accounts payable	\$ 6
Accrued expenses and other current liabilities	72
Accrued compensation and benefits	47
Borrowings under credit facilities	2,199
Securitization term loans	1,209
Total current liabilities of discontinued operations	\$ 3,533

The following table presents the major classes of line items of the discontinued operations included in the consolidated statements of operations for the periods presented (in millions):

	Year Ended December 31,		
	2022	2021	2020
Revenue	\$ 4,249	\$ 6,015	\$ 1,716
Cost of revenue	4,023	6,071	1,611
Gross profit (loss)	226	(56)	105
Operating expenses:			
Sales and marketing	153	361	156
Technology and development	6	53	66
General and administrative	10	35	33
Impairment and restructuring costs	25	62	—
Total operating expenses	194	511	255
Income (loss) from discontinued operations	32	(567)	(150)
Loss on extinguishment of debt	(21)	—	—
Other income, net	13	3	—
Interest expense	(36)	(64)	(17)
Loss from discontinued operations before income taxes	(12)	(628)	(167)
Income tax benefit (expense)	(1)	(2)	—
Net loss from discontinued operations	\$ (13)	\$ (630)	\$ (167)
Net loss from discontinued operations per share:			
Basic	\$ (0.05)	\$ (2.52)	\$ (0.75)
Diluted	\$ (0.05)	\$ (2.41)	\$ (0.72)

The following table presents significant non-cash items and capital expenditures of the discontinued operations for the periods presented (in millions):

	Year Ended December 31,		
	2022	2021	2020
Amortization of debt discount and debt issuance costs	\$ 21	\$ 11	\$ —
Loss on debt extinguishment	21	—	—
Share-based compensation	16	40	27
Inventory valuation adjustment	9	408	—
Depreciation and amortization	7	10	6
Capital expenditures	1	6	8
Issuance (settlement) of beneficial interests in securitizations	(79)	63	—

Restructuring

The following table presents a summary of restructuring charges attributable to discontinued operations for the periods presented (in millions):

	Line Item of Discontinued Operations	Year Ended December 31,		Cumulative Amount Recognized
		2022	2021	
Inventory write-down	Cost of revenue	\$ 9	\$ 408	N/A
Other charges:				
Employee termination costs	Impairment and restructuring costs	\$ 20	\$ 52	\$ 72
Financing-related charges	Interest expense and Loss on debt extinguishment	37	6	43
Contract termination costs	Impairment and restructuring costs	4	10	14
Accelerated depreciation and amortization	Cost of revenue	14	5	19
Asset write-offs	Impairment and restructuring costs	—	1	1
Other charges	Impairment and restructuring costs	1	—	1
Total other charges		76	74	150
Total		\$ 85	\$ 482	\$ 567

Restructuring charges attributable to continued operations relate to employee termination costs within our IMT and Mortgages segments and certain indirect costs of the Homes segment that do not qualify as discontinued operations. These costs totaled \$12 million, \$4 million and \$8 million, respectively, for the year ended December 31, 2022. Cumulative restructuring charges attributable to continued operations as of December 31, 2022 totaled \$33 million, \$10 million of which pertained to employee cost actions that occurred during the fourth quarter of 2022 that did not relate to the Zillow Offers wind down. The remaining liability balance associated with such restructuring charges as of December 31, 2022 is not material.

Note 4. Fair Value Measurements

We apply fair value measurements on a recurring and, as otherwise required, on a nonrecurring basis. Accounting standards define fair value as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market in an orderly transaction between market participants on the measurement date. The standards also establish a fair value hierarchy, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. There are three levels of inputs that may be used to measure fair value:

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- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Assets and liabilities valued based on observable market data for similar instruments, such as quoted prices for similar assets or liabilities.
- Level 3 — Unobservable inputs that are supported by little or no market activity; instruments valued based on the best available data, some of which is internally developed, and considers risk premiums that a market participant would require.

We apply the following methods and assumptions in estimating our fair value measurements on a recurring basis:

Cash equivalents — The fair value measurement of money market funds is based on quoted market prices in active markets (Level 1). The fair value measurement of other cash equivalents is based on observable market-based inputs principally derived from or corroborated by observable market data (Level 2).

Short-term investments — The fair value measurement of our short-term investments is based on observable market-based inputs or inputs that are derived principally from or corroborated by observable market data by correlation or other means (Level 2).

Restricted cash — The carrying value of restricted cash approximates fair value due to the short period of time amounts are held in escrow (Level 1).

Mortgage loans held for sale — The fair value of mortgage loans held for sale is generally calculated by reference to quoted prices in secondary markets for commitments to sell mortgage loans with similar characteristics (Level 2).

Forward contracts — The fair value of mandatory loan sales commitments and derivative instruments such as forward sales of mortgage-backed securities that are utilized as economic hedging instruments is calculated by reference to quoted prices for similar assets (Level 2).

Interest rate lock commitments — The fair value of IRLCs is calculated by reference to quoted prices in secondary markets for commitments to sell mortgage loans with similar characteristics. Expired commitments are excluded from the fair value measurement. Since not all IRLCs will become closed loans, we adjust our fair value measurements for the estimated amount of IRLCs that will not close. This adjustment is effected through the pull-through rate, which represents the probability that an IRLC will ultimately result in a closed loan. For IRLCs that are cancelled or expire, any recorded gain or loss is reversed at the end of the commitment period (Level 3).

The pull-through rate is based on estimated changes in market conditions, loan stage and historical borrower behavior. Pull-through rates are directly related to the fair value of IRLCs as an increase in the pull-through rate, in isolation, would result in an increase in the fair value measurement. Conversely, a decrease in the pull-through rate, in isolation, would result in a decrease in the fair value measurement. Changes in the fair value of IRLCs are included within Mortgages revenue in our consolidated statements of operations.

The following table presents the range and weighted average pull-through rates used in determining the fair value of IRLCs as of the dates presented:

	December 31, 2022	December 31, 2021
Range	47% - 100%	42% - 100%
Weighted average	87%	85%

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The following tables present the balances of assets and liabilities measured at fair value on a recurring basis, by level within the fair value hierarchy, as of the dates presented (in millions):

December 31, 2022				
	Total	Level 1	Level 2	Level 3
Cash equivalents:				
Money market funds	\$ 1,338	\$ 1,338	\$ —	\$ —
Short-term investments:				
U.S. government treasury securities	1,716	—	1,716	—
Corporate bonds	161	—	161	—
Commercial paper	10	—	10	—
U.S. government agency securities	9	—	9	—
Mortgage origination-related:				
Mortgage loans held for sale	41	—	41	—
Forward contracts - other current assets	1	—	1	—
Total	<u>\$ 3,276</u>	<u>\$ 1,338</u>	<u>\$ 1,938</u>	<u>\$ —</u>

December 31, 2021				
	Total	Level 1	Level 2	Level 3
Cash equivalents:				
Money market funds	\$ 2,132	\$ 2,132	\$ —	\$ —
Short-term investments:				
U.S. government treasury securities	471	—	471	—
Corporate bonds	33	—	33	—
Commercial paper	10	—	10	—
Mortgage origination-related:				
Mortgage loans held for sale	107	—	107	—
IRLCs - other assets	5	—	—	5
Total	<u>\$ 2,758</u>	<u>\$ 2,132</u>	<u>\$ 621</u>	<u>\$ 5</u>

The following table presents the changes in our IRLCs for the periods presented (in millions):

	Year Ended December 31, 2022	Year Ended December 31, 2021
Balance, beginning of the period	\$ 5	\$ 12
Issuances	15	70
Transfers	(17)	(78)
Fair value changes recognized in earnings	(3)	1
Balance, end of period	<u>\$ —</u>	<u>\$ 5</u>

At December 31, 2022, the notional amounts of the hedging instruments related to our mortgage loans held for sale were \$62 million and \$90 million for our IRLCs and forward contracts, respectively. At December 31, 2021, the notional amounts of the hedging instruments related to our mortgage loans held for sale were \$305 million and \$388 million for our IRLCs and forward contracts, respectively. We do not have the right to offset our forward contract derivative positions.

See Note 13 for the carrying amount and estimated fair value of our convertible senior notes.

Note 5. Cash and Cash Equivalents, Investments and Restricted Cash

The following table presents the amortized cost and estimated fair market value of our cash and cash equivalents, investments, and restricted cash as of the dates presented (in millions):

	December 31, 2022		December 31, 2021	
	Amortized Cost	Estimated Fair Market Value	Amortized Cost	Estimated Fair Market Value
Cash	\$ 128	\$ 128	\$ 183	\$ 183
Cash equivalents:				
Money market funds	1,338	1,338	2,132	2,132
Short-term investments:				
U.S. government treasury securities (1)	1,731	1,716	473	471
Corporate bonds (2)	162	161	33	33
Commercial paper	10	10	10	10
U.S. government agency securities	9	9	—	—
Restricted cash	2	2	1	1
Total	<u>\$ 3,380</u>	<u>\$ 3,364</u>	<u>\$ 2,832</u>	<u>\$ 2,830</u>

(1) The estimated fair market value includes \$15 million and \$2 million of gross unrealized losses as of December 31, 2022 and December 31, 2021, respectively.

(2) The estimated fair market value includes \$1 million of gross unrealized losses as of December 31, 2022.

The following table presents available-for-sale investments by contractual maturity date as of December 31, 2022 (in millions):

	Amortized Cost	Estimated Fair Market Value
Due in one year or less	\$ 1,159	\$ 1,150
Due after one year	753	746
Total	<u>\$ 1,912</u>	<u>\$ 1,896</u>

Note 6. Contract Balances

Contract assets were \$71 million and \$78 million as of December 31, 2022 and December 31, 2021, respectively.

For the years ended December 31, 2022 and 2021, we recognized revenue of \$51 million and \$48 million, respectively, that was included in the deferred revenue balance at the beginning of the related period.

Note 7. Contract Cost Assets

As of December 31, 2022 and 2021, we had \$23 million and \$35 million, respectively, of contract cost assets. For the years ended December 31, 2022 and 2021, we did not record any material impairment losses to our contract cost assets.

We recorded amortization expense related to contract cost assets of \$30 million, \$42 million and \$37 million during the years ended December 31, 2022, 2021 and 2020, respectively.

Note 8. Property and Equipment, net

The following table presents the detail of property and equipment as of the dates presented (in millions):

	December 31,	
	2022	2021
Website development costs	\$ 291	\$ 175
Leasehold improvements	90	107
Office equipment, furniture and fixtures	24	26
Computer equipment	18	19
Construction-in-progress	7	7
Property and equipment	430	334
Less: accumulated amortization and depreciation	(159)	(119)
Property and equipment, net	\$ 271	\$ 215

We recorded depreciation expense related to property and equipment (other than website development costs) of \$25 million, \$26 million and \$31 million during the years ended December 31, 2022, 2021 and 2020, respectively.

We capitalized \$143 million, \$82 million and \$53 million in website development costs during the years ended December 31, 2022, 2021 and 2020, respectively. Amortization expense for website development costs included in cost of revenue was \$67 million, \$36 million and \$25 million for the years ended December 31, 2022, 2021 and 2020, respectively.

Note 9. Acquisition
Acquisition of ShowingTime.com, Inc.

On September 30, 2021, Zillow Group acquired ShowingTime.com, Inc. (“ShowingTime”) in exchange for approximately \$512 million in cash. Our acquisition of ShowingTime has been accounted for as a business combination, and assets acquired and liabilities assumed were recorded at their estimated fair values as of September 30, 2021. Goodwill, which represents the expected synergies from combining the acquired assets and the operations of the acquirer, as well as intangible assets that do not qualify for separate recognition, is measured as of the acquisition date as the excess of consideration transferred, which is also measured at fair value, and the net of the fair values of the assets acquired and the liabilities assumed as of the acquisition date.

The total purchase price has been allocated to the assets acquired and liabilities assumed, including identifiable intangible assets, based on their respective fair values at the acquisition date. The purchase price was allocated as follows (in millions):

Cash and cash equivalents	\$ 15
Identifiable intangible assets	111
Goodwill	389
Other acquired assets	6
Deferred tax liability	(4)
Other assumed liabilities	(5)
Total purchase price	\$ 512

The fair value of identifiable intangible assets acquired and associated useful lives consisted of the following (in millions):

	Estimated Fair Value	Estimated Weighted-Average Useful Life (in years)
Customer relationships	\$ 55	8
Developed technology	47	4
Trade names and trademarks	9	10
Total	<u>\$ 111</u>	

We used an income approach to measure the fair value of the customer relationships based on the excess earnings method, whereby the fair value is estimated based upon the present value of cash flows that the applicable asset is expected to generate. We used an income approach to measure the fair value of the developed technology and the trade names and trademarks based on the relief-from-royalty method. These fair value measurements were based on Level 3 inputs under the fair value hierarchy.

Acquisition-related costs incurred, which primarily included legal, accounting and other external costs directly related to the acquisition, are included within acquisition-related costs in our consolidated statements of operations and were expensed as incurred.

Unaudited pro forma earnings information has not been presented as the effects were not material to our consolidated financial statements.

Note 10. Goodwill and Intangible Assets, net

The following table presents goodwill by reportable segment as of December 31, 2022 and 2021 (in millions):

IMT	\$ 2,175
Mortgages	199
Total	<u>\$ 2,374</u>

The goodwill recorded in connection with the acquisition of ShowingTime, which includes intangible assets that do not qualify for separate recognition, is not deductible for tax purposes and is included within the IMT segment.

The following tables present the detail of intangible assets as of the dates presented (in millions):

	December 31, 2022		
	Cost	Accumulated Amortization	Net
Customer relationships	\$ 59	\$ (10)	\$ 49
Software	54	(15)	39
Developed technology	49	(15)	34
Trade names and trademarks	45	(15)	30
Purchased content	8	(6)	2
Total	<u>\$ 215</u>	<u>\$ (61)</u>	<u>\$ 154</u>

	December 31, 2021		
	Cost	Accumulated Amortization	Net
Customer relationships	\$ 139	\$ (84)	\$ 55
Developed technology	133	(86)	47
Trade names and trademarks	45	(9)	36
Software	53	(18)	35
Intangibles-in-progress	2	—	2
Purchased content	4	(3)	1
Total	<u>\$ 376</u>	<u>\$ (200)</u>	<u>\$ 176</u>

Amortization expense recorded for intangible assets for the years ended December 31, 2022, 2021 and 2020 was \$58 million, \$56 million and \$49 million, respectively. Amortization expense for trade names and trademarks and customer relationships intangible assets is included in sales and marketing expenses. Amortization expense for all other intangible assets is included in cost of revenue.

Estimated future amortization expense for intangible assets, including amortization related to future commitments (see Note 18), as of December 31, 2022 is as follows (in millions):

2023	\$ 45
2024	41
2025	30
2026	16
2027	14
Thereafter	24
Total future amortization expense	<u>\$ 170</u>

We did not record any impairment costs related to our intangible assets for the years ended December 31, 2022 and 2021. During the year ended December 31, 2020, we recognized a non-cash impairment charge of \$72 million related to our Trulia trade names and trademarks intangible asset. The impairment charge is included in impairment costs in our consolidated statement of operations within our IMT and Mortgages segments for the year ended December 31, 2020 for \$69 million and \$3 million, respectively. In March 2020, we identified factors, including shortfalls in projected revenue related to the Trulia brand, directly related to the COVID-19 pandemic that led us to conclude it was more likely than not that the carrying value of the asset exceeded its fair value. Accordingly, with the assistance of a third-party specialist, we performed a quantitative analysis to determine the fair value of the intangible asset. The valuation was prepared using an income approach based on the relief-from-royalty method and relied on inputs with unobservable market prices including projected revenue, royalty rate, discount rate, and estimated tax rate, and therefore is considered a Level 3 measurement under the fair value hierarchy.

Note 11. Accrued Expenses and Other Current Liabilities

The following table presents the detail of accrued expenses and other current liabilities as of the dates presented (in millions):

	December 31,	
	2022	2021
Accrued estimated legal liabilities and legal fees	\$ 21	\$ 7
Accrued marketing and advertising	9	27
Other accrued expenses and other current liabilities	60	55
Total accrued expenses and other current liabilities	<u>\$ 90</u>	<u>\$ 89</u>

Note 12. Leases

The components of our operating lease expense were as follows for the periods presented (in millions):

	Year Ended December 31,		
	2022	2021	2020
Operating lease cost	\$ 36	\$ 38	\$ 40
Variable lease cost	18	13	10
Total lease cost	<u>\$ 54</u>	<u>\$ 51</u>	<u>\$ 50</u>

We have subleases related to certain of our operating leases. We recognize sublease income on a straight-line basis over the sublease term, which is recorded as a reduction to our operating lease cost. For the years ended December 31, 2022 and 2021, we recognized \$10 million and \$7 million, respectively, of sublease income. Sublease income was not material for the year ended December 31, 2020.

Total lease costs associated with short-term leases were not material for the years ended December 31, 2022, 2021 and 2020.

Other information related to operating leases was as follows for the periods presented (in millions, except for years and percentages):

	Year Ended December 31,		
	2022	2021 (1)	2020
Cash paid for amounts included in the measurement of operating lease liabilities, net of lease incentives of \$9, \$— and \$19 for the years ended December 31, 2022, 2021 and 2020, respectively	\$ 34	\$ 43	\$ 18
Right of use assets obtained in exchange for new operating lease obligations	\$ 19	\$ (36)	\$ —
Weighted average remaining lease term for operating leases	7 years	7 years	8 years
Weighted average discount rate for operating leases	8.2 %	7.2 %	6.5 %

(1) During the year ended December 31, 2021, we modified our existing office space lease for our corporate headquarters in Seattle, Washington, whereby the renewal options for certain existing office space which we had previously included in the measurement of the lease liability and right of use asset were removed and we partially terminated our lease early for certain existing office space, resulting in a reduction of the lease liability and right of use asset of approximately \$44 million and \$42 million, respectively. The lease term for certain other existing leased office space in Seattle was extended such that it now expires in 2032 and retains the two five-year renewal options, partially offsetting the reduction of the lease liability and right of use asset described above.

The following table presents the scheduled maturities of our operating lease liabilities by year as of December 31, 2022 (in millions):

2023	\$ 42
2024	37
2025	23
2026	24
2027	23
Thereafter	80
Total lease payments	<u>229</u>
Less: Imputed interest	(59)
Present value of lease liabilities	<u>\$ 170</u>

Operating lease liabilities included in the table above do not include sublease income. As of December 31, 2022, we expect to receive sublease income of approximately \$34 million from 2023 through 2030.

Note 13. Debt

The following table presents the carrying values of Zillow Group's debt as of the dates presented (in millions):

	December 31,	
	2022	2021
Mortgages segment		
Repurchase agreements:		
Credit Suisse AG, Cayman Islands	\$ 23	\$ 77
Citibank, N.A.	3	17
Warehouse line of credit:		
Comerica Bank	11	19
Total Mortgages segment debt	37	113
Convertible senior notes		
1.375% convertible senior notes due 2026	495	369
2.75% convertible senior notes due 2025	560	443
0.75% convertible senior notes due 2024	605	507
Total convertible senior notes	1,660	1,319
Total debt	\$ 1,697	\$ 1,432

Mortgages Segment

To provide capital for Zillow Home Loans, we utilize master repurchase agreements and a warehouse line of credit which are classified as current liabilities in our consolidated balance sheets. The repurchase agreements and warehouse line of credit provide short-term financing between the issuance of a mortgage loan and when Zillow Home Loans sells the loan to an investor or directly to an agency. The following table summarizes certain details related to our repurchase agreements and warehouse line of credit (in millions, except interest rates):

Lender	Maturity Date	Maximum Borrowing Capacity	Weighted Average Interest Rate
Credit Suisse AG, Cayman Islands	March 17, 2023	\$ 100	6.16 %
Citibank, N.A.	June 9, 2023	100	6.18 %
Comerica Bank	June 24, 2023	50	6.22 %
Total		\$ 250	

Master Repurchase Agreements

On March 18, 2022, Zillow Home Loans amended its Credit Suisse AG, Cayman Islands ("Credit Suisse") master repurchase agreement to decrease the uncommitted total maximum borrowing capacity to \$100 million with a maturity date of March 17, 2023 and to update the reference rate from one-month LIBOR to Adjusted Daily Simple Secured Overnight Financing Rate.

On June 10, 2022, Zillow Home Loans amended its Citibank, N.A. ("Citibank") master repurchase agreement to update the reference rate from one-month LIBOR to Secured Overnight Financing Rate ("SOFR"), as defined by the governing agreements. Additionally, the amendment extended the maturity date of the Citibank master repurchase agreement from June 10, 2022 to June 9, 2023.

In accordance with the master repurchase agreements, Credit Suisse and Citibank (together the "Lenders") have agreed to pay Zillow Home Loans a negotiated purchase price for eligible loans, and Zillow Home Loans has simultaneously agreed to repurchase such loans from the Lenders under a specified timeframe at an agreed upon price that includes interest. The master repurchase agreements contain margin call provisions that provide the Lenders with certain rights in the event of a decline in the market value of the assets purchased under the master repurchase agreements. As of December 31, 2022 and 2021, \$28 million and \$87 million, respectively, in mortgage loans held for sale were pledged as collateral under the master repurchase agreements.

Warehouse Line of Credit

On June 25, 2022, Zillow Home Loans amended its Comerica Bank warehouse line of credit to decrease the total maximum borrowing capacity from \$60 million to \$50 million and update the reference rate from one-month LIBOR to Bloomberg Short-Term Bank Yield Index Rate (“BSBY”), as defined by the governing agreements. Additionally, the amendment extended the maturity date of the Comerica Bank warehouse line of credit from June 25, 2022 to June 24, 2023.

Borrowings on the repurchase agreements and warehouse line of credit bear interest either at a floating rate based on SOFR plus an applicable margin, as defined by the governing agreements, or BSBY plus an applicable margin, as defined by the governing agreements. The repurchase agreements and warehouse line of credit include customary representations and warranties, covenants and provisions regarding events of default. As of December 31, 2022, Zillow Home Loans was in compliance with all financial covenants and no event of default had occurred. The repurchase agreements and warehouse line of credit are recourse to Zillow Home Loans, and have no recourse to Zillow Group or any of its other subsidiaries.

Convertible Senior Notes

Effective January 1, 2022, we adopted guidance which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts in an entity’s own equity. For additional information regarding the adoption of this guidance, see Note 2 of our consolidated financial statements.

The following tables summarize certain details related to our outstanding convertible senior notes as of the dates presented or for the periods ended (in millions, except interest rates):

Maturity Date	Aggregate Principal Amount	Stated Interest Rate	Effective Interest Rate	First Interest Payment Date	Semi-Annual Interest Payment Dates	December 31, 2022		December 31, 2021	
						Unamortized Debt Issuance Costs	Fair Value	Unamortized Debt Discount and Debt Issuance Costs	Fair Value
September 1, 2026	\$ 499	1.375 %	1.57 %	March 1, 2020	March 1; September 1	\$ 4	\$ 504	\$ 130	\$ 781
May 15, 2025	565	2.75 %	3.20 %	November 15, 2020	May 15; November 15	5	531	122	725
September 1, 2024	608	0.75 %	1.02 %	March 1, 2020	March 1; September 1	3	629	101	945
Total	<u>\$ 1,672</u>					<u>\$ 12</u>	<u>\$ 1,664</u>	<u>\$ 353</u>	<u>\$ 2,451</u>

Maturity Date	Year Ended December 31, 2022			Year Ended December 31, 2021				Year Ended December 31, 2020			
	Contractual Coupon Interest	Amortization of Debt Issuance Costs	Interest Expense	Contractual Coupon Interest	Amortization of Debt Discount	Amortization of Debt Issuance Costs	Interest Expense	Contractual Coupon Interest	Amortization of Debt Discount	Amortization of Debt Issuance Costs	Interest Expense
September 1, 2026	\$ 7	\$ —	\$ 7	\$ 7	\$ 22	\$ 1	\$ 30	\$ 7	\$ 20	\$ —	\$ 27
May 15, 2025	16	3	19	16	27	1	44	10	15	1	26
September 1, 2024	4	2	6	4	32	1	37	5	33	1	39
July 1, 2023	—	—	—	3	8	1	12	6	15	1	22
December 1, 2021	—	—	—	—	—	—	—	6	14	2	22
Total	<u>\$ 27</u>	<u>\$ 5</u>	<u>\$ 32</u>	<u>\$ 30</u>	<u>\$ 89</u>	<u>\$ 4</u>	<u>\$ 123</u>	<u>\$ 34</u>	<u>\$ 97</u>	<u>\$ 5</u>	<u>\$ 136</u>

The convertible senior notes are senior unsecured obligations and are classified as long-term debt in our consolidated balance sheets based on their contractual maturity dates. Interest on the convertible notes is paid semi-annually in arrears. The estimated fair value of the convertible senior notes is classified as Level 2 and was determined through consideration of quoted market prices in markets that are not active.

Convertible Senior Notes due in 2025

On May 15, 2020, we issued \$500 million aggregate principal amount of 2.75% Convertible Senior Notes due 2025 (the “Initial 2025 Notes”) and on May 19, 2020, we issued \$65 million aggregate principal amount of 2.75% Convertible Senior Notes due 2025 (the “Additional Notes” and, together with the Initial 2025 Notes, the “2025 Notes”). The Additional Notes were sold pursuant to the underwriters’ option to purchase additional 2025 Notes granted in connection with the offering of the Initial 2025 Notes. The net proceeds from the issuance of the 2025 Notes were approximately \$553 million, after deducting underwriting discounts and commissions and offering expenses paid by Zillow Group.

Convertible Senior Notes due in 2024 and 2026

On September 9, 2019, we issued \$600 million aggregate principal amount of Convertible Senior Notes due 2024 (the “Initial 2024 Notes”) and \$500 million aggregate principal amount of Convertible Senior Notes due 2026 (the “2026 Notes”) in a private offering to qualified institutional buyers. The net proceeds from the issuance of the Initial 2024 Notes were approximately \$592 million and the net proceeds from the issuance of the 2026 Notes were approximately \$494 million, in each case after deducting fees and expenses paid by Zillow Group. We used approximately \$75 million of the net proceeds from the issuance of the Initial 2024 Notes and approximately \$75 million of the net proceeds from the issuance of the 2026 Notes to pay the cost of the capped call transactions entered into in connection with the issuances, described below.

On October 9, 2019, we issued \$73 million aggregate principal amount of 0.75% Convertible Senior Notes due 2024 (the “Additional Notes” and, together with the Initial 2024 Notes, the “2024 Notes”). The Additional Notes were sold pursuant to the initial purchasers’ partial exercise of their option to purchase such notes, granted in connection with the offering of the Initial 2024 Notes. The Additional Notes have the same terms, and were issued under the same indenture, as the Initial 2024 Notes. The net proceeds from the offering of the Additional Notes were approximately \$72 million, after deducting fees and expenses paid by Zillow Group. We used approximately \$9 million of the net proceeds from the issuance of the Additional Notes to pay the cost of the capped call transactions entered into in connection with the issuance of the Additional Notes, described below.

Convertible Senior Notes due in 2023

On July 3, 2018, we issued \$374 million aggregate principal amount of Convertible Senior Notes due 2023 (the “2023 Notes”), which includes \$49 million principal amount of 2023 Notes sold pursuant to the underwriters’ option to purchase additional 2023 Notes. The net proceeds from the issuance of the 2023 Notes were approximately \$364 million, after deducting fees and expenses paid by Zillow Group. We used approximately \$29 million of the net proceeds from the issuance of the 2023 Notes to pay the cost of capped call transactions entered into in connection with the issuances, described below.

Convertible Senior Notes due in 2021

On December 12, 2016, we issued \$460 million aggregate principal amount of 2.00% Convertible Senior Notes due 2021 (the “2021 Notes”), which includes the exercise of the \$60 million over-allotment option, to the initial purchaser of the 2021 Notes in a private offering to qualified institutional buyers. The net proceeds from the issuance of the 2021 Notes were approximately \$448 million, after deducting fees and expenses paid by Zillow Group. In addition, we used approximately \$37 million of the net proceeds from the issuance of the 2021 Notes to pay the cost of the capped call transactions with the initial purchaser of the 2021 Notes and two additional financial institutions, described below.

The outstanding 2024 Notes, 2025 Notes and 2026 Notes (collectively “the Notes”) are convertible into cash, shares of Class C capital stock or a combination thereof, at our election, and may be settled as described below. They will mature on their respective maturity date, unless earlier repurchased, redeemed or converted in accordance with their terms.

The following table summarizes the conversion and redemption options with respect to the Notes:

Maturity Date	Early Conversion Date	Conversion Rate	Conversion Price	Optional Redemption Date
September 1, 2026	March 1, 2026	22.9830	\$ 43.51	September 5, 2023
May 15, 2025	November 15, 2024	14.8810	67.20	May 22, 2023
September 1, 2024	March 1, 2024	22.9830	43.51	September 5, 2022

Prior to the close of business on the business day immediately preceding the applicable Early Conversion Date, the Notes will be convertible at the option of the holders only under certain conditions. On or after the applicable Early Conversion Date, until the close of business on the second scheduled trading day immediately preceding the applicable Maturity Date, holders may convert the Notes at their option at the applicable Conversion Rate then in effect, irrespective of these conditions. The Company will settle conversions of the Notes by paying or delivering, as the case may be, cash, shares of its Class C capital stock, or a combination of cash and shares of its Class C capital stock, at its election. The applicable Conversion Rate for each series of Notes will initially be the conversion rate of shares of Class C capital stock per \$1,000 principal amount of the Notes (equivalent to an initial Conversion Price per share of Class C capital stock). The applicable Conversion Rate and the corresponding initial Conversion Price will be subject to adjustment in some events but will not be adjusted for any accrued and unpaid interest. The Company may redeem for cash all or part of the respective series of Notes, at its option, on or after the applicable Optional Redemption Date, under certain circumstances, at a redemption price equal to 100% of the principal amount of the Notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date (as defined in the indentures governing the Notes). We may not redeem a series of Notes prior to the applicable Optional Redemption Date. We may redeem for cash all or any portion of a series of Notes, at our option, in whole or in part on or after the applicable Optional Redemption Date if the last reported sale price per share of our Class C capital stock has been at least 130% of the Conversion Price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period. The conversion option does not meet the criteria for separate accounting as a derivative as it is indexed to our own stock.

The last reported sale price of our Class C capital stock did not exceed 130% of the conversion price of each series of the Notes for more than 20 trading days during the 30 consecutive trading days ended December 31, 2022. Accordingly, each series of the Notes is not redeemable or convertible at the option of the holders from January 1, 2023 through March 31, 2023.

If the Company undergoes a fundamental change (as defined in the indentures governing the Notes), holders may require the Company to repurchase for cash all or part of a series of Notes, as applicable, at a repurchase price equal to 100% of the principal amount of the notes to be purchased, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date (as defined in the indentures governing the Notes). In addition, if certain fundamental changes occur, the Company may be required, in certain circumstances, to increase the conversion rate for any of the Notes converted in connection with such fundamental changes by a specified number of shares of its Class C capital stock. Certain events are also considered “Events of Default,” which may result in the acceleration of the maturity of the Notes, as described in the indentures governing the Notes. There are no financial covenants associated with the Notes.

In accounting for the issuance of the convertible senior notes, prior to the adoption of new accounting guidance on January 1, 2022, the Company separated the convertible senior notes into liability and equity components. The carrying amount of the liability component for each of the Notes was calculated by measuring the fair value of a similar liability that does not have an associated convertible feature. The carrying amount of the equity component, representing the conversion option, was determined by deducting the fair value of the liability component from the par value of the convertible senior notes. The difference between the principal amounts and the liability components represented the respective debt discounts, which were recorded as a direct deduction from the related debt liability in the consolidated balance sheets and amortized to interest expense using the effective interest method over the term of the convertible senior notes. The equity components of the convertible senior notes, net of issuance costs, were included in additional paid-in capital in the consolidated balance sheets and were not remeasured as long as they continued to meet the conditions for equity classification. Upon adoption of the new accounting guidance, we de-recognized the equity components of the convertible senior notes and the respective debt discounts through a decrease to additional paid-in capital, an increase to long-term debt and a cumulative-effect adjustment to accumulated deficit of \$156 million. For additional information regarding the adoption of this guidance, see Note 2 of our consolidated financial statements.

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There were no conversions or repurchases of convertible senior notes during the year ended December 31, 2022. The following table summarizes the activity for our convertible senior notes for the periods presented (in millions, except for share amounts):

	Year Ended December 31, 2021				Year Ended December 31, 2020
	2023 Notes	2024 Notes	2026 Notes	Total	2021 Notes
Aggregate principal amount settled	\$ 374	\$ 65	\$ 1	\$ 440	\$ 460
Cash paid	1	—	—	1	195
Shares of Class C capital stock issued	4,752	1,485	28	6,265	5,820
Total fair value of consideration transferred (1)	\$ 572	\$ 200	\$ 4	\$ 776	\$ 783
(Gain) loss on extinguishment of debt:					
Consideration allocated to the liability component (2)	\$ 349	\$ 53	\$ 1	\$ 403	\$ 430
Carrying value of the liability component, net of unamortized debt discount and debt issuance costs	334	51	1	386	431
(Gain) loss on extinguishment of debt	\$ 15	\$ 2	\$ —	\$ 17	\$ (1)
Consideration allocated to the equity component	\$ 223	\$ 147	\$ 3	\$ 373	\$ 353

(1) For convertible senior notes converted by note holders, the total fair value of consideration transferred includes the value of shares transferred to note holders using the daily volume weighted-average price of our Class C capital stock on the conversion date and an immaterial amount of cash paid in lieu of fractional shares. For convertible senior notes redeemed, the total fair value of consideration transferred comprises cash transferred to note holders to settle the related notes. For convertible senior notes repurchased in the year ended December 31, 2020, the total value of consideration transferred includes the value of shares transferred to note holders using the daily volume weighted-average price of our Class C capital stock on the date of transfer as well as cash transferred to note holders to settle the related notes.

(2) Consideration allocated to the liability component is based on the fair value of the liability component immediately prior to settlement, which was calculated using a discounted cash flow analysis with a market interest rate of a similar liability that does not have an associated convertible feature.

The following table summarizes certain details related to the capped call confirmations with respect to certain of the convertible senior notes:

Maturity Date	Initial Cap Price	Cap Price Premium
September 1, 2026	\$ 80.5750	150 %
September 1, 2024	72.5175	125 %
July 1, 2023	105.45	85 %

The capped call confirmations are expected generally to reduce the potential dilution of our Class C capital stock in connection with any conversion of the Notes and/or offset the cash payments the Company is required to make in excess of the principal amount of such notes in the event that the market price of the Class C capital stock is greater than the strike price of the capped call confirmations (which initially corresponds to the initial Conversion Price of such notes and is subject to certain adjustments under the terms of the capped call confirmations), with such reduction and/or offset subject to a cap based on the cap price of the capped call confirmations. The capped call confirmations with respect to the 2026 Notes, the 2024 Notes and the 2023 Notes have an Initial Cap Price per share, which represents a premium (“Cap Price Premium”) over the relevant historical closing price of the Company’s Class C capital stock on the Nasdaq Global Select Market, and is subject to certain adjustments under the terms of the capped call confirmations. The capped call confirmations will cover, subject to anti-dilution adjustments substantially similar to those applicable to the convertible senior notes, the number of shares of Class C capital stock that will underlie such notes. The capped call confirmations do not meet the criteria for separate accounting as a derivative as they are indexed to our own stock. The capped call premiums paid have been included as a net reduction to additional paid-in capital within shareholders’ equity.

In connection with the repurchase of a portion of the 2021 Notes during the year ended December 31, 2020, we partially terminated the capped call transactions entered into in connection with the issuance of the 2021 Notes for an amount corresponding to the aggregate principal amount of the 2021 Notes that were repurchased. As a result of the partial settlement of the capped call transactions, we received 0.3 million shares of our Class C capital stock equal to a value of approximately \$15 million based on the trading price of our Class C capital stock at the time of the unwind. On December 1, 2021, the remaining capped call transactions entered into in connection with the issuance of the 2021 Notes were settled on their contractual maturity date. As a result, we received 0.7 million shares of our Class C capital stock equal to a value of approximately \$43 million based on the trading price of our Class C capital stock at the time of the unwind. Under applicable Washington State law, the acquisition of a corporation's own shares is not disclosed separately as treasury stock in the financial statements and such shares are treated as authorized but unissued shares. We record acquisitions of our shares of capital stock as a reduction to capital stock at the par value of the shares reacquired, then to additional paid-in capital until it is depleted to a nominal amount, with any further excess recorded to retained earnings. We recorded an offsetting increase to additional paid-in capital for the partial unwind of the capped call transactions.

Convertible Senior Notes Repurchase Authorization

On December 2, 2021, Zillow Group's Board of Directors (the "Board") authorized the repurchase of up to \$750 million of our Class A common stock, Class C capital stock or a combination thereof. On May 4, 2022, the Board authorized the repurchase of up to an additional \$1.0 billion (together the "Repurchase Authorizations") of our Class A common stock, Class C capital stock or a combination thereof. On November 1, 2022, the Board further expanded the Repurchase Authorizations to allow for the repurchase of a portion of our outstanding Notes. Repurchases of outstanding Notes may be made in open-market transactions or privately negotiated transactions, or in such other manner as deemed appropriate by management, and may be made from time to time as determined by management depending on market conditions, market price of the Notes, trading volume, cash needs and other business factors, in each case as permitted by securities laws and other legal requirements. There were no repurchases of convertible senior notes during the year ended December 31, 2022. As of December 31, 2022, \$500 million remained available for future repurchases pursuant to the Repurchase Authorizations. For additional details related to the Repurchase Authorizations, see Note 15 under the subsection titled "Stock Repurchase Authorizations".

Note 14. Income Taxes

We are subject to income taxes in the United States (federal and state), Canada, and Serbia. We recorded income tax expense of \$3 million for the year ended December 31, 2022, primarily driven by state taxes. We recorded an income tax benefit of \$1 million for the year ended December 31, 2021, comprised of a \$3 million income tax benefit from a decrease in the valuation allowance associated with our September 2021 acquisition of ShowingTime, partially offset by \$2 million of tax expense related to state and foreign income taxes. We recorded an income tax benefit of \$8 million for the year ended December 31, 2020, primarily driven by a \$10 million income tax benefit associated with the \$72 million non-cash impairment we recorded during the year ended December 31, 2020. For additional information about the non-cash impairment, see Note 10 of our Notes to Consolidated Financial Statements.

The following table presents the components of our income tax expense (benefit) for the periods presented (in millions):

	Year Ended December 31,		
	2022	2021	2020
Current income tax expense			
State	\$ 2	\$ 2	\$ —
Foreign	1	—	—
Total current income tax expense	3	2	—
Deferred income tax benefit:			
Federal	—	(3)	(7)
State	—	—	(1)
Total deferred income tax benefit	—	(3)	(8)
Total income tax expense (benefit)	\$ 3	\$ (1)	\$ (8)

The following table presents a reconciliation of the federal statutory rate and our effective tax rate for the periods presented:

	Year Ended December 31,		
	2022	2021	2020
Tax expense at federal statutory rate	(21.0)%	(21.0)%	(21.0)%
State income taxes, net of federal tax benefit	6.2	8.7	(364.0)
Share-based compensation	13.2	84.1	(2,329.4)
Non-deductible executive compensation	14.3	(7.7)	86.9
Research and development credits	(25.7)	40.8	(393.0)
Other	8.2	(4.9)	(23.2)
Valuation allowance	7.4	(99.3)	2,827.6
Effective tax rate	2.6 %	0.7 %	(216.1)%

Deferred federal, state and foreign income taxes reflect the net tax impact of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and such amounts for tax purposes. The following table presents the significant components of our deferred tax assets and liabilities as of the dates presented (in millions):

	December 31,	
	2022	2021
Deferred tax assets:		
Federal and state net operating loss carryforwards	\$ 433	\$ 524
Research and development credits	164	133
Share-based compensation	102	66
Capitalized research and development	100	—
Lease liability	43	41
Interest expense limitation	28	58
Debt discount on convertible notes	18	—
Accruals and reserves	3	13
Depreciation and amortization	—	1
Inventory	—	69
Other deferred tax assets	5	1
Total deferred tax assets	896	906
Deferred tax liabilities:		
Right of use assets	(31)	(32)
Intangible assets	(15)	(22)
Goodwill	(5)	(5)
Depreciation and amortization	(3)	—
Debt discount on convertible notes	—	(60)
Website and software development costs	—	(43)
Total deferred tax liabilities	(54)	(162)
Net deferred tax assets before valuation allowance	842	744
Less: valuation allowance	(843)	(746)
Net deferred tax liabilities	\$ (1)	\$ (2)

Realization of deferred tax assets is dependent upon the generation of future taxable income, if any, the timing and amount of which are uncertain. We have provided a full valuation allowance against the net deferred tax assets as of December 31, 2022 and 2021 because, based on the weight of available evidence, it is more likely than not (a likelihood of more than 50%) that some or all of the deferred tax assets will not be realized. The valuation allowance increased by \$97 million and \$274 million, respectively, during the years ended December 31, 2022 and 2021.

We have accumulated federal net operating losses of approximately \$1.8 billion and \$2.1 billion, as of December 31, 2022 and 2021, respectively, which are available to reduce future taxable income. We have accumulated state net operating losses of approximately \$63 million and \$73 million (tax effected) as of December 31, 2022 and 2021, respectively. Federal net operating losses generated in taxable periods on or before December 31, 2017 have a twenty year carryforward period and begin to expire in 2023. Federal net operating loss carryforwards generated in taxable years beginning after December 31, 2017 may be carried forward indefinitely, but the deductibility of such net operating loss carryforwards in taxable years beginning after December 31, 2020 is limited to 80% of taxable income. State net operating loss carryforward periods for the various state jurisdictions generally range from three years to indefinite-lived and begin to expire in 2025. Additionally, we have net research and development credit carryforwards of \$164 million and \$133 million as of December 31, 2022 and 2021, respectively, which are available to reduce future tax liabilities. The research and development credit carryforwards begin to expire in 2025. Under Sections 382 and 383 of the Internal Revenue Code, if a corporation undergoes an “ownership change”, the corporation’s ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes, such as research and development credits, to offset its post-change taxable income or income tax liability may be limited. In connection with our August 2013 public offering of our Class A common stock, we experienced an ownership change that triggered Sections 382 and 383, which may limit our ability to utilize our net operating loss and research and development credit carryforwards. In connection with our February 2015 acquisition of Trulia, Trulia experienced an ownership change that triggered Section 382 and 383, which may limit Zillow Group’s ability to utilize Trulia’s net operating loss and research and development credit carryforwards.

Our primary income tax jurisdiction is the United States (federal). With limited exceptions for state taxing authorities, which are not material to the financial statements, all tax years for which the Company has filed a tax return remain subject to examination due to the existence of net operating loss carryforwards.

Changes for unrecognized tax benefits for the periods presented are as follows (in millions):

Balance at January 1, 2020	\$	40
Gross increases—current period tax positions		9
Balance at December 31, 2020	\$	49
Gross increases—current period tax positions		17
Gross increases—prior period tax positions		9
Balance at December 31, 2021	\$	75
Gross increases—current period tax positions		17
Gross increases—prior period tax positions		4
Gross decreases—prior period tax positions		(6)
Balance at December 31, 2022	\$	90

At December 31, 2022, the total amount of unrecognized tax benefits of \$90 million is recorded as a reduction to our deferred tax asset when available. We do not anticipate that the amount of existing unrecognized tax benefits will significantly increase or decrease within the next 12 months. Accrued interest and penalties related to unrecognized tax benefits are recorded as income tax expense and are not material.

Note 15. Shareholders' Equity

Preferred Stock

The Board has the authority to fix and determine and to amend the number of shares of any series of preferred stock that is wholly unissued or to be established and to fix and determine and to amend the designation, preferences, voting powers and limitations and the relative, participating, optional or other rights, of any series of shares of preferred stock that is wholly unissued or to be established, subject in each case to certain approval rights of holders of our outstanding Class B common stock. There was no preferred stock issued and outstanding as of December 31, 2022 or December 31, 2021.

Common and Capital Stock

Our Class A common stock has no preferences or privileges and is not redeemable. Holders of Class A common stock are entitled to one vote for each share.

Our Class B common stock has no preferences or privileges and is not redeemable. At any time after the date of issuance, each share of Class B common stock, at the option of the holder, may be converted into one share of Class A common stock, or automatically converted into Class A common stock upon the affirmative vote by or written consent of holders of a majority of the shares of the Class B common stock. During the years ended December 31, 2022, 2021 and 2020, no shares of Class B common stock were converted into Class A common stock at the option of the holders. Holders of Class B common stock are entitled to 10 votes for each share.

Our Class C capital stock has no preferences or privileges, is not redeemable and, except in limited circumstances, is non-voting.

Equity Distribution Agreement

On February 17, 2021, we entered into an equity distribution agreement with certain sales agents and/or principals (the "Managers"), pursuant to which we may offer and sell from time to time, through the Managers, shares of our Class C capital stock, having an aggregate gross sales price of up to \$1.0 billion, in such share amounts as we may specify by notice to the Managers, in accordance with the terms and conditions set forth in the equity distribution agreement.

There were no shares issued under the equity distribution agreement during the year ended December 31, 2022.

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The following table summarizes the activity pursuant to the equity distribution agreement for the year ended December 31, 2021 (in millions, except share data which are presented in thousands, and per share amounts):

Shares of Class C capital stock issued		3,164
Weighted-average issuance price per share	\$	174.05
Gross proceeds (1)	\$	551

(1) Net proceeds were \$545 million after deducting \$6 million of commissions and other offering expenses incurred.

Stock Repurchase Authorizations

Repurchases of stock under the Repurchase Authorizations may be made in open-market transactions or privately negotiated transactions, or in such other manner as deemed appropriate by management, and may be made from time to time as determined by management depending on market conditions, share price, trading volume, cash needs and other business factors, in each case as permitted by securities laws and other legal requirements. As of December 31, 2022, \$500 million remained available for future repurchases pursuant to the Repurchase Authorizations.

The following table summarizes, on a settlement date basis, our Class A common stock and Class C capital stock repurchase activity under the Repurchase Authorizations for the period presented (in millions, except share data which are presented in thousands, and per share amounts):

	Year Ended December 31,			
	2022		2021	
	Class A common stock	Class C capital stock	Class C capital stock	
Shares repurchased	4,052	18,161	4,944	
Weighted-average price per share	\$ 44.14	\$ 42.30	\$ 61.12	
Total purchase price	\$ 179	\$ 768	\$ 302	

Note 16. Share-Based Awards

Zillow Group, Inc. 2020 Incentive Plan

On June 9, 2020, the Zillow Group, Inc. 2020 Incentive Plan (the “2020 Plan”) became effective, which replaces the Zillow Group, Inc. Amended and Restated 2011 Incentive Plan (the “2011 Plan”), which became effective July 19, 2011. Subject to adjustment from time to time as provided in the 2020 Plan, a total of 12 million shares of Class C capital stock are authorized for issuance under the 2020 Plan. In addition, shares previously available for new grants under the 2011 Plan as of June 9, 2020 and shares subject to outstanding awards under the 2011 Plan as of June 9, 2020 that on or after that date cease to be subject to such awards (other than by reason of exercise or settlement of the awards in vested or nonforfeitable shares) are also available for issuance under the 2020 Plan. The number of shares authorized under the 2020 Plan will be increased on the first day of each calendar year, beginning January 1, 2021 and ending on and including January 1, 2030, by an amount equal to the lesser of (a) 5% of our outstanding Class A common stock, Class B common stock and Class C capital stock on a fully diluted basis as of the end of the immediately preceding calendar year and (b) a number of shares determined by our Board. Shares issued under the 2020 plan may be issued from authorized and unissued shares of Class C capital stock. The 2020 Plan is administered by the Compensation Committee of the Board (the “Compensation Committee”). Under the terms of the 2020 Plan, the Compensation Committee may grant equity awards, including incentive or nonqualified stock options, restricted stock, restricted stock units, restricted units, stock appreciation rights, performance shares or performance units to employees, directors and consultants of Zillow Group and its subsidiaries. The Board has also authorized certain senior executive officers to grant equity awards under the 2020 Plan, within limits prescribed by our Board.

Options under the 2020 Plan are granted with an exercise price per share not less than 100% of the fair market value of our Class C capital stock on the grant date, with the exception of substituted option awards granted in connection with acquisitions, and are exercisable at such times and under such conditions as determined by the Compensation Committee. Any portion of an option that is not vested and exercisable on the date of a participant’s termination of service expires on such date. Employees generally forfeit their rights to exercise vested options three months following their termination of employment or 12 months following termination by reason of death, disability or retirement. Options granted under the 2020 Plan expire no later than ten years from the grant date and typically vest over a period of four years.

Restricted stock units granted under the 2020 Plan typically vest over a period of four years. Generally, any portion of a restricted stock unit that is not vested on the date of a participant’s termination of service expires on such date.

Zillow Group, Inc. Amended and Restated 2011 Incentive Plan

Options and restricted stock units that remain outstanding under the 2011 Plan have vesting and exercisability terms consistent with those described above for awards granted under the 2020 Plan.

Zillow Group, Inc. 2019 Equity Inducement Plan

On August 8, 2019, the 2019 Equity Inducement Plan (“Inducement Plan”) became effective. Subject to adjustment from time to time as provided in the Inducement Plan, 10 million shares of Class C capital stock are available for issuance under the Inducement Plan. Shares issued under the Inducement Plan shall be drawn from authorized and unissued shares of Class C capital stock. The purpose of the Inducement Plan is to attract, retain and motivate certain new employees of the Company and its subsidiaries by providing them the opportunity to acquire a proprietary interest in the Company and to align their interests and efforts to the long-term interests of the Company’s shareholders. Each award under the Inducement Plan is intended to qualify as an employment inducement award pursuant to Listing Rule 5635(c) of the corporate governance rules of the NASDAQ Stock Market. The Inducement Plan is administered by the Compensation Committee. Under the terms of the Inducement Plan, the Compensation Committee may grant equity awards, including nonqualified stock options, restricted stock or restricted stock units or restricted units to new employees of the Company and its subsidiaries.

Options under the Inducement Plan are granted with an exercise price per share not less than 100% of the fair market value of our Class C capital stock on the date of grant, with the exception of substituted option awards granted in connection with acquisitions, and are exercisable at such times and under such conditions as determined by the Compensation Committee. Any portion of an option that is not vested and exercisable on the date of a participant’s termination of service generally expires on such date. Employees generally forfeit their rights to exercise vested options three months following their termination of employment or 12 months following termination by reason of death, disability or retirement. Options granted under the Inducement Plan expire ten years from the grant date and vest 25% after 12 months and quarterly thereafter over the next three years.

Restricted stock units granted under the Inducement Plan vest 25% after 12 months and quarterly thereafter over the next three years. In general, any portion of a restricted stock unit that is not vested on the date of a participant's termination of service expires on such date.

Option Award Repricing

On August 3, 2022, upon recommendation of the Compensation Committee, the Board approved adjustments to the exercise price of certain outstanding vested and unvested option awards for eligible employees. The exercise price of eligible option awards was reduced to \$38.78, which was the closing market price of our Class C capital stock on August 8, 2022. No other changes were made to the terms and conditions of the eligible option awards.

We have accounted for the reprice of the eligible option awards as an equity modification whereby the incremental fair value attributable to the repriced option awards, as measured on the date of reprice, will be recognized as additional share-based compensation expense. The weighted-average total fair value of options repriced was \$67.58. The reprice impacted 7 million stock option awards, affected 3,348 employees and is expected to result in incremental share-based compensation expense of \$66 million in total, of which \$33 million was recognized during the year ended December 31, 2022, including amounts associated with vested awards. The remaining expense will be recognized over the remaining requisite service period of the original awards.

Option Awards

The following table summarizes all option award activity for the year ended December 31, 2022:

	Number of Shares Subject to Existing Options (in thousands)	Weighted- Average Exercise Price Per Share	Weighted- Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value (in millions)
Outstanding at January 1, 2022	25,746	\$ 72.86	7.48	\$ 354
Granted	7,527	45.22		
Exercised	(1,129)	39.97		
Forfeited or cancelled	(3,546)	83.46		
Outstanding at December 31, 2022	28,598	44.90	7.08	15
Vested and exercisable at December 31, 2022	16,813	44.67	5.98	14

The following assumptions were used to determine the fair value of all option awards granted for the periods presented:

	Year Ended December 31,		
	2022	2021	2020
Expected volatility	55% – 61%	52% – 58%	45% – 52%
Risk-free interest rate	1.94% – 3.95%	0.57% – 1.15%	0.22% – 0.93%
Weighted-average expected life	4.50 – 6.00 years	4.50 – 5.75 years	4.50 – 5.50 years
Weighted-average fair value of options granted	\$23.25	\$54.55	\$22.50

As of December 31, 2022, there was a total of \$409 million in unrecognized compensation cost related to unvested option awards, which is expected to be recognized over a weighted-average period of 2.5 years.

The total intrinsic value of options exercised during the years ended December 31, 2022, 2021 and 2020 was \$13 million, \$310 million and \$564 million, respectively. The fair value of options vested for the years ended December 31, 2022, 2021 and 2020 was \$226 million, \$173 million and \$85 million, respectively.

Restricted Stock Units

The following table summarizes activity for all restricted stock units for the year ended December 31, 2022:

	Restricted Stock Units (in thousands)	Weighted- Average Grant- Date Fair Value
Unvested outstanding at January 1, 2022	6,074	\$ 66.51
Granted	12,066	41.72
Vested	(4,722)	52.39
Forfeited	(2,488)	59.48
Unvested outstanding at December 31, 2022	10,930	46.85

The total fair value of restricted stock units that vested during the years ended December 31, 2022, 2021 and 2020 was \$247 million, \$152 million and \$125 million, respectively.

As of December 31, 2022, there was \$470 million of total unrecognized compensation cost related to restricted stock units, which is expected to be recognized over a weighted-average period of 2.5 years.

Share-Based Compensation Expense

The following table presents the effects of share-based compensation expense in our consolidated statements of operations during the periods presented (in millions):

	Year Ended December 31,		
	2022	2021	2020
Cost of revenue	\$ 16	\$ 9	\$ 6
Sales and marketing	63	42	28
Technology and development	165	103	67
General and administrative	189	122	69
Impairment and restructuring costs	2	1	—
Share-based compensation - continuing operations	435	277	170
Share-based compensation - discontinued operations	16	40	27
Total share-based compensation	\$ 451	\$ 317	\$ 197

Note 17. Net Loss Per Share

Basic net loss per share and basic income (loss) from continuing operations per share are computed by dividing net loss or income (loss) from continuing operations, as applicable, by the weighted-average number of shares (including Class A common stock, Class B common stock and Class C capital stock) outstanding during the period. In the calculation of basic net loss per share and basic income (loss) from continuing operations per share, undistributed earnings are allocated assuming all earnings during the period were distributed.

Diluted net loss per share and diluted net income (loss) from continuing operations per share is computed by dividing net loss or net income (loss) from continuing operations, as applicable, by the weighted-average number of shares (including Class A common stock, Class B common stock and Class C capital stock) outstanding during the period, which is calculated based on net income (loss) from continuing operations, and potentially dilutive Class A common stock and Class C capital stock equivalents, except in cases where the effect of the Class A common stock or Class C capital stock equivalent would be antidilutive. Potential Class A common stock and Class C capital stock equivalents consist of Class A common stock and Class C capital stock issuable upon exercise of stock options and Class A common stock and Class C capital stock underlying unvested restricted stock units using the treasury stock method. Potential Class A common stock equivalents also include Class A common stock issuable upon conversion of the convertible senior notes due in 2020 using the if-converted method through the date of their last conversion in December 2020.

Prior to the second half of 2020, we used the treasury stock method to calculate any potential dilutive effect of the conversion spread of our outstanding convertible senior notes on diluted net income per share, if applicable. Effective July 1, 2020, on a prospective basis we have applied the if-converted method for calculating any potential dilutive effect of the conversion of the outstanding convertible notes on diluted net income per share, if applicable.

The following table presents the maximum number of shares and conversion price per share of Class C capital stock for each of the Notes based on the aggregate principal amount outstanding as of December 31, 2022 (in thousands, except per share amounts):

Maturity Date	Shares	Conversion Price per Share
September 1, 2026	11,464	\$ 43.51
May 15, 2025	8,408	67.20
September 1, 2024	13,983	43.51

For the periods presented, the following table reconciles the denominators used in the basic and diluted net loss and net income (loss) from continuing operations per share calculations (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Denominator for basic calculation	242,163	249,937	223,848
Effect of dilutive securities:			
Option awards	—	9,304	5,062
Unvested restricted stock units	—	2,585	2,187
Convertible senior notes maturing 2020	—	—	338
Denominator for dilutive calculation	<u>242,163</u>	<u>261,826</u>	<u>231,435</u>

For the periods presented, the following Class A common stock and Class C capital stock equivalents were excluded from the calculations of diluted net loss per share and diluted net income (loss) from continuing operations per share because their effect would have been antidilutive (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Weighted-average Class A common stock and Class C capital stock option awards outstanding	15,759	2,455	12,338
Weighted-average Class A common stock and Class C capital stock restricted stock units outstanding	9,015	1,173	4,192
Class C capital stock issuable upon conversion of the convertible notes maturing in 2021, 2023, 2024, 2025 and 2026	33,855	36,540	24,182
Total Class A common stock and Class C capital stock equivalents	<u>58,629</u>	<u>40,168</u>	<u>40,712</u>

In the event of liquidation, dissolution, distribution of assets or winding-up of the Company, the holders of all classes of common and capital stock have equal rights to receive all the assets of the Company after the rights of the holders of preferred stock have been satisfied. We have not presented net loss per share under the two-class method for our Class A common stock, Class B common stock and Class C capital stock because it would be the same for each class due to equal dividend and liquidation rights for each class.

Note 18. Commitments and Contingencies***Interest Rate Lock Commitments***

We have entered into IRLCs with prospective borrowers under our mortgage origination business whereby we commit to lend a certain loan amount under specific terms and at a specific interest rate to the borrower. These commitments are treated as derivatives and are carried at fair value. For additional information regarding our IRLCs, see Note 4 to our consolidated financial statements.

Lease Commitments

We have entered into various non-cancelable operating lease agreements for certain of our office space and equipment with original lease periods expiring between 2023 and 2032. For additional information regarding our lease agreements, see Note 12 to our consolidated financial statements.

Purchase Commitments

Purchase commitments primarily include various non-cancelable agreements to purchase content related to our mobile applications and websites and certain cloud computing services. The amounts due for non-cancelable purchase commitments as of December 31, 2022 are as follows (in millions):

	Purchase Obligations	
2023	\$	79
2024		21
2025		9
2026		2
Total future purchase commitments	\$	111

Escrow Balances

In conducting our title and escrow operations through Zillow Closing Services, we routinely hold customers' assets in escrow, pending completion of real estate transactions, and are responsible for the proper disposition of these balances for our customers. Certain of these amounts are maintained in segregated bank accounts and have not been included in the accompanying consolidated balance sheets. These balances were not material as of December 31, 2022 and \$55 million as of December 31, 2021, and pertain to discontinued operations.

Letters of Credit

As of December 31, 2022 and 2021, we have outstanding letters of credit of approximately \$16 million and \$17 million, respectively, which secure our lease obligations in connection with certain of our office space operating leases.

Surety Bonds

In the course of business, we are required to provide financial commitments in the form of surety bonds to third parties as a guarantee of our performance on and our compliance with certain obligations. If we were to fail to perform or comply with these obligations, any draws upon surety bonds issued on our behalf would then trigger our payment obligation to the surety bond issuer. We have outstanding surety bonds issued for our benefit of approximately \$13 million and \$12 million as of December 31, 2022 and 2021, respectively.

Legal Proceedings

We are involved in a number of legal proceedings concerning matters arising in connection with the conduct of our business activities, some of which are at preliminary stages and some of which seek an indeterminate amount of damages. We regularly evaluate the status of legal proceedings in which we are involved to assess whether a loss is probable or there is a reasonable possibility that a loss or additional loss may have been incurred to determine if accruals are appropriate. We further evaluate each legal proceeding to assess whether an estimate of possible loss or range of loss can be made if accruals are not appropriate. For certain cases described below, management is unable to provide a meaningful estimate of the possible loss or range of possible loss because, among other reasons, (i) the proceedings are in preliminary stages; (ii) specific damages have not been sought; (iii) damages sought are, in our view, unsupported and/or exaggerated; (iv) there is uncertainty as to the outcome of pending appeals or motions; (v) there are significant factual issues to be resolved; and/or (vi) there are novel legal issues or unsettled legal theories presented. For these cases, however, management does not believe, based on currently available information, that the outcomes of these proceedings will have a material effect on our financial position, results of operations or cash flow. For the matters discussed below, we have not recorded any material accruals as of December 31, 2022 or 2021.

In August and September 2017, two purported class action lawsuits were filed against us and certain of our executive officers, alleging, among other things, violations of federal securities laws on behalf of a class of those who purchased our common stock between February 12, 2016 and August 8, 2017. One of those purported class actions, captioned *Vargosko v. Zillow Group, Inc. et al*, was brought in the U.S. District Court for the Central District of California. The other purported class action lawsuit, captioned *Shotwell v. Zillow Group, Inc. et al*, was brought in the U.S. District Court for the Western District of Washington. The complaints allege, among other things, that during the period between February 12, 2016 and August 8, 2017, we issued materially false and misleading statements regarding our business practices. The complaints seek to recover, among other things, alleged damages sustained by the purported class members as a result of the alleged misconduct. In November 2017, an amended complaint was filed against us and certain of our executive officers in the *Shotwell v. Zillow Group* purported class action lawsuit, extending the beginning of the class period to November 17, 2014. In January 2018, the *Vargosko v. Zillow Group* purported class action lawsuit was transferred to the U.S. District Court for the Western District of Washington and consolidated with the *Shotwell v. Zillow Group* purported class action lawsuit. In February 2018, the plaintiffs filed a consolidated amended complaint, and in April 2018, we filed our motion to dismiss the consolidated amended complaint. In October 2018, our motion to dismiss was granted without prejudice, and in November 2018, the plaintiffs filed a second consolidated amended complaint, which we moved to dismiss in December 2018. On April 19, 2019, our motion to dismiss the second consolidated amended complaint was denied. On October 11, 2019, plaintiffs filed a motion for class certification which was granted by the court on October 28, 2020. On February 17, 2021, the Ninth Circuit Court of Appeals denied our petition for review of that decision. On October 21, 2022, the parties jointly filed a notice of settlement with the U.S. District Court for the Western District of Washington to inform the court that the parties have reached an agreement in principle to settle this action. The proposed settlement is subject to the negotiation and execution of a settlement agreement and court approval thereof. The full amount of the settlement payment is expected to be paid by the Company's insurance carriers under its insurance policy.

In October and November 2017 and January and February 2018, four shareholder derivative lawsuits were filed in the U.S. District Court for the Western District of Washington and the Superior Court of the State of Washington, King County, against certain of our executive officers and directors seeking unspecified damages on behalf of the Company and certain other relief, such as reform to corporate governance practices. The plaintiffs in the derivative suits (in which the Company is a nominal defendant) allege, among other things, that the defendants breached their fiduciary duties in connection with oversight of the Company's public statements and legal compliance, and as a result of the breach of such fiduciary duties, the Company was damaged, and defendants were unjustly enriched. Certain of the plaintiffs also allege, among other things, violations of Section 14(a) of the Securities Exchange Act of 1934 and waste of corporate assets. On February 5, 2018, the U.S. District Court for the Western District of Washington consolidated the two federal shareholder derivative lawsuits pending in that court (the "Federal Suit"). On February 16, 2018, the Superior Court of the State of Washington, King County, consolidated the two shareholder derivative lawsuits pending in that court (the "State Suit"). The Federal Suit and State Suit were stayed until our motion to dismiss the second consolidated amended complaint in the securities class action lawsuit discussed above was denied in April 2019. On July 8, 2019, the plaintiffs in the Federal Suit filed a consolidated shareholder derivative complaint, which we moved to dismiss on August 22, 2019. On February 28, 2020, our motion to dismiss the Federal Suit was denied. On February 16, 2021, the court in the State Suit matter stayed the action. On March 5, 2021, a new shareholder derivative lawsuit was filed in the U.S. District Court for the Western District of Washington against certain of our executive officers and directors seeking unspecified damages on behalf of the Company and certain other relief, such as reform to corporate governance practices, alleging, among other things, violations of federal securities laws. The U.S. District Court for the Western District of Washington formally consolidated the new lawsuit with the other consolidated Federal Suit pending in that court on June 15, 2021. On November 14, 2022, the parties jointly filed a stipulation with the U.S. District Court for the Western District of Washington informing the court that, among other things, they have agreed in principle to all material terms of a settlement.

The proposed settlement is subject to the execution of a settlement agreement and court approval thereof. The full amount of plaintiffs' attorneys' fees and costs associated with the settlement is expected to be paid by the Company's insurance carriers under its insurance policy.

On September 17, 2019, International Business Machines Corporation ("IBM") filed a complaint against us in the U.S. District Court for the Central District of California, alleging, among other things, that the Company has infringed and continues to willfully infringe seven patents held by IBM and seeks unspecified damages, including a request that the amount of compensatory damages be trebled, injunctive relief and costs and reasonable attorneys' fees. On November 8, 2019, we filed a motion to transfer venue and/or to dismiss the complaint. On December 2, 2019, IBM filed an amended complaint, and on December 16, 2019 we filed a renewed motion to transfer venue and/or to dismiss the complaint. The Company's motion to transfer venue to the U.S. District Court for the Western District of Washington was granted on May 28, 2020. On August 12, 2020, IBM filed its answer to our counterclaims. On September 18, 2020, we filed four Inter Partes Review ("IPR") petitions before the U.S. Patent and Trial Appeal Board ("PTAB") seeking the Board's review of the patentability with respect to three of the patents asserted by IBM in the lawsuit. On March 15, 2021, the PTAB instituted IPR proceedings with respect to two of the three patents for which we filed petitions. On March 22, 2021, the PTAB denied institution with respect to the last of the three patents. On January 22, 2021, the court partially stayed the action with respect to all patents for which we filed an IPR and set forth a motion schedule. On March 8, 2021, IBM filed its second amended complaint. On March 25, 2021, we filed an amended motion for judgment on the pleadings. On July 15, 2021, the court rendered an order in connection with the motion for judgment on the pleadings finding in our favor on two of the four patents on which we filed our motion. On August 31, 2021, the Court ruled that the parties will proceed with respect to the two patents for which it previously denied judgment, and vacated the stay with respect to one of the three patents for which Zillow filed an IPR, which stay was later reinstated by stipulation of the parties on May 18, 2022. On September 23, 2021, IBM filed a notice of appeal with the United States Court of Appeals for the Federal Circuit with respect to the August 31, 2021 judgment entered, which judgment was affirmed by the Federal Circuit on October 17, 2022. On March 3, 2022, the PTAB ruled on Zillow's two remaining IPRs finding that Zillow was able to prove certain claims unpatentable, and others it was not. On October 28, 2022, the court found one of the two patents upon which the parties were proceeding in this action as invalid, and dismissed IBM's claim relating to that patent. Following the court's ruling, on October 28, 2022, the parties filed a joint stipulation with the court seeking a stay of this action, which was granted by the court on November 1, 2022. On November 25, 2022, Zillow filed a motion to join an IPR petition within *Ebates Performance Mktg., Inc. d/b/a Rakuten Rewards v. Int'l Bus. Machs. Corp.*, IPR2022-00646 concerning the final remaining patent in this action. We deny the allegations of any wrongdoing and intend to vigorously defend the claims in the lawsuit. There is a reasonable possibility that a loss may be incurred related to this matter; however, the possible loss or range of loss is not estimable.

On July 21, 2020, IBM filed a second action against us in the U.S. District Court for the Western District of Washington, alleging, among other things, that the Company has infringed and continues to willfully infringe five patents held by IBM and seeks unspecified damages. On September 14, 2020, we filed a motion to dismiss the complaint filed in the action, to which IBM responded by the filing of an amended complaint on November 5, 2020. On December 18, 2020, we filed a motion to dismiss IBM's first amended complaint. On December 23, 2020, the Court issued a written order staying this case in full. On July 23, 2021, we filed an IPR with the PTAB with respect to one patent included in the second lawsuit. On October 6, 2021, the stay of this action was lifted, except for proceedings relating to the one patent for which we filed an IPR. On December 1, 2021, the Court dismissed the fourth claim asserted by IBM in its amended complaint. On December 16, 2021 Zillow filed a motion to dismiss the remaining claims alleged in IBM's amended complaint. On March 9, 2022, the Court granted Zillow's motion to dismiss in full, dismissing IBM's claims related to all the patents asserted by IBM in this action, except for the one patent for which an IPR was still pending. On March 10, 2022, the PTAB rendered its decision denying Zillow's IPR on the one remaining patent, for which this case continues to remain stayed. On August 1, 2022, IBM filed an appeal of the Court's ruling with respect to two of the dismissed patents. Zillow's responsive brief was filed on September 30, 2022, and IBM's reply brief was filed on November 4, 2022. We deny the allegations of any wrongdoing and intend to vigorously defend the claims in the lawsuit. There is a reasonable possibility that a loss may be incurred related to this matter; however, the possible loss or range of loss is not estimable.

On November 16, 2021, November 19, 2021 and January 6, 2022, three purported class action lawsuits were filed against us and certain of our executive officers, alleging, among other things, violations of federal securities laws on behalf of a class of those who purchased our stock between August 7, 2020 and November 2, 2021. The three purported class action lawsuits, captioned *Barua v. Zillow Group, Inc. et al.*, *Silverberg v. Zillow Group, et al.* and *Hillier v. Zillow Group, Inc. et al.* were brought in the U.S. District Court for the Western District of Washington and were consolidated on February 16, 2022. On May 12, 2022, the plaintiffs filed their amended consolidated complaint which alleges, among other things, that we issued materially false and misleading statements regarding our Zillow Offers business. The complaints seek to recover, among other things, alleged damages sustained by the purported class members as a result of the alleged misconduct. We moved to dismiss the amended consolidated complaint on July 11, 2022, plaintiffs filed their opposition to the motion to dismiss on September 2, 2022, and we filed a reply in support of the motion to dismiss on October 11, 2022. On December 7, 2022, the court rendered its decision granting defendants' motion to dismiss, in part, and denying the motion, in part. On January 23, 2023, the defendants filed their answer to the consolidated complaint. We intend to deny the allegations of wrongdoing and intend to vigorously defend the claims in this consolidated lawsuit. We do not believe that a loss related to this consolidated lawsuit is probable.

On March 10, 2022, May 5, 2022 and July 20, 2022 shareholder derivative suits were filed in the U.S. District Court for the Western District of Washington and on July 25, 2022, a shareholder derivative suit was filed in the Superior Court of the State of Washington, King County (the "2022 State Suit"), against us and certain of our executive officers and directors seeking unspecified damages on behalf of the Company and certain other relief, such as reform to corporate governance practices. The plaintiffs (including the Company as a nominal defendant) allege, among other things, that the defendants breached their fiduciary duties by failing to maintain an effective system of internal controls, which purportedly caused the losses the Company incurred when it decided to wind down Zillow Offers operations. Plaintiffs also allege, among other things, violations of Section 14(a) and Section 20(a) of the Securities Exchange Act of 1934, insider trading and waste of corporate assets. On June 1, 2022 and September 14, 2022, the U.S. District Court for the Western District of Washington issued orders consolidating the three federal derivative suits and staying the consolidated action until further order of the court. On September 15, 2022, the Superior Court of the State of Washington entered a temporary stay in the 2022 State Suit. Upon the filing of the defendants' answer in the related securities class action lawsuit on January 23, 2023, the stay in the 2022 State Suit was lifted. The defendants intend to deny the allegations of wrongdoing and vigorously defend the claims in these lawsuits. We do not believe that a loss related to these lawsuits is probable.

In addition to the matters discussed above, from time to time, we are involved in litigation and claims that arise in the ordinary course of business. Although we cannot be certain of the outcome of any such litigation or claims, nor the amount of damages and exposure that we could incur, we currently believe that the final disposition of such matters will not have a material effect on our business, financial position, results of operations or cash flow. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Indemnifications

In the ordinary course of business, we enter into contractual arrangements under which we agree to provide indemnification of varying scope and terms to business partners and other parties with respect to certain matters, including, but not limited to, losses arising out of the breach of such agreements and out of intellectual property infringement claims made by third parties. In addition, we have agreements that indemnify certain issuers of surety bonds against losses that they may incur as a result of executing surety bonds on our behalf. For our indemnification arrangements, payment may be conditional on the other party making a claim pursuant to the procedures specified in the particular contract. Further, our obligations under these agreements may be limited in terms of time and/or amount, and in some instances, we may have recourse against third parties for certain payments. In addition, we have indemnification agreements with certain of our directors and executive officers that require us, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. The terms of such obligations may vary.

Note 19. Employee Benefit Plan

We have a defined contribution 401(k) retirement plan covering Zillow Group employees who have met certain eligibility requirements (the "Zillow Group 401(k) Plan"). Eligible employees may contribute pre-tax compensation up to a maximum amount allowable under the Internal Revenue Service limitations. Employee contributions and earnings thereon vest immediately. We currently match up to 4% of employee contributions under the Zillow Group 401(k) Plan. The total expense related to the Zillow Group 401(k) Plan was \$29 million, \$27 million and \$21 million, respectively, for the years ended December 31, 2022, 2021 and 2020.

Note 20. Segment Information and Revenue

We have three operating and reportable segments, which have been identified based on the way in which our chief operating decision-maker manages our business, makes operating decisions and evaluates operating performance. The chief executive officer acts as the chief operating decision-maker and reviews financial and operational information for the Internet, Media & Technology (“IMT”), Mortgages and Homes segments.

The IMT segment includes the financial results for the Premier Agent and rentals marketplaces, as well as Other IMT, which includes our new construction marketplace and revenue from the sale of other advertising and business technology solutions for real estate professionals, including display, StreetEasy for-sale product offerings and ShowingTime+, which houses ShowingTime, Bridge Interactive, dotloop and interactive floor plans. In the first quarter of 2022, we began reporting rentals revenue as a separate revenue category within the IMT segment and prior period amounts have been recast to conform to this presentation. The Mortgages segment primarily includes the financial results for mortgage originations and the sale of mortgages on the secondary market through Zillow Home Loans and advertising sold to mortgage lenders and other mortgage professionals. The Homes segment includes the financial results from title and escrow services performed by Zillow Closing Services and certain indirect costs of the Homes segment which do not qualify as discontinued operations. As discussed in Note 3, the wind down of Zillow Offers was completed in the third quarter of 2022, and we have presented the financial results of Zillow Offers as discontinued operations in our consolidated financial statements. Prior period amounts have been recast to conform to this presentation.

Revenue and costs are directly attributed to our segments when possible. However, due to the integrated structure of our business, certain costs incurred by one segment may benefit the other segments. These costs primarily include headcount-related expenses, general and administrative expenses including executive, finance, accounting, legal, human resources, recruiting and facilities costs, product development and data acquisition costs, costs related to operating our mobile applications and websites and marketing and advertising costs. These costs are allocated to each segment based on the estimated benefit each segment receives from such expenditures.

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The chief executive officer reviews information about our revenue categories as well as statement of operations data inclusive of income (loss) from continuing operations before income taxes by segment. This information is included in the following tables for the periods presented (in millions):

	Year Ended December 31, 2022			Year Ended December 31, 2021			Year Ended December 31, 2020		
	IMT	Mortgages	Homes	IMT	Mortgages	Homes	IMT	Mortgages	Homes
Revenue:									
Premier Agent	\$ 1,291	\$ —	\$ —	\$ 1,396	\$ —	\$ —	\$ 1,047	\$ —	\$ —
Rentals	274	—	—	264	—	—	222	—	—
Other	274	—	—	226	—	—	181	—	—
Mortgages	—	119	—	—	246	—	—	174	—
Total revenue	1,839	119	—	1,886	246	—	1,450	174	—
Cost of revenue (1)	275	68	24	203	84	36	193	39	23
Gross profit (loss)	1,564	51	(24)	1,683	162	(36)	1,257	135	(23)
Operating expenses (1):									
Sales and marketing	572	79	13	552	109	54	441	60	34
Technology and development	438	50	10	318	32	71	260	23	41
General and administrative	375	85	38	258	72	84	225	44	55
Impairment and restructuring costs	12	4	8	—	1	9	74	3	—
Acquisition-related costs	—	—	—	9	—	—	—	—	—
Integration costs	—	—	—	1	—	—	—	—	—
Total operating expenses	1,397	218	69	1,138	214	218	1,000	130	130
Income (loss) from continuing operations	167	(167)	(93)	545	(52)	(254)	257	5	(153)
Segment other income (expense), net	(7)	3	—	—	5	—	5	2	—
Segment interest expense	—	(3)	—	—	(5)	—	—	(2)	—
Income (loss) from continuing operations before income taxes (2)	\$ 160	\$ (167)	\$ (93)	\$ 545	\$ (52)	\$ (254)	\$ 262	\$ 5	\$ (153)

(1) The following table presents depreciation and amortization expense and share-based compensation expense for each of our segments for the periods presented (in millions):

	Year Ended December 31, 2022			Year Ended December 31, 2021			Year Ended December 31, 2020		
	IMT	Mortgages	Homes	IMT	Mortgages	Homes	IMT	Mortgages	Homes
Depreciation and amortization expense	\$ 137	\$ 11	\$ 2	\$ 99	\$ 8	\$ 13	\$ 90	\$ 7	\$ 8
Share-based compensation expense	\$ 356	\$ 60	\$ 17	\$ 201	\$ 34	\$ 41	\$ 135	\$ 15	\$ 20

(2) The following table presents the reconciliation of total segment income (loss) from continuing operations before income taxes to consolidated income (loss) from continuing operations before income taxes for the periods presented (in millions):

	Year Ended December 31,		
	2022	2021	2020
Total segment income (loss) from continuing operations before income taxes	\$ (100)	\$ 239	\$ 114
Corporate interest expense	(32)	(123)	(136)
Corporate other income, net	47	2	18
Gain (loss) on extinguishment of debt	—	(17)	1
Consolidated income (loss) from continuing operations before income taxes	\$ (85)	\$ 101	\$ (3)

Certain corporate items are not directly attributable to any of our segments, including the gain (loss) on extinguishment of debt, interest income earned on our short-term investments included in other income, net and interest costs on our convertible senior notes included in interest expense.

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

The Company carried out an evaluation, with the participation of our management, and under the supervision of our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as defined under Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) as of the end of the period covered by this report. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of December 31, 2022.

Management’s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined under Rule 13a-15(f) under the Exchange Act. Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on our evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2022.

We intend to regularly review and evaluate the design and effectiveness of our disclosure controls and procedures and internal control over financial reporting on an ongoing basis and to improve these controls and procedures over time and to correct any deficiencies that we may discover in the future. While we believe the present design of our disclosure controls and procedures and internal control over financial reporting are effective, future events affecting our business may cause us to modify our controls and procedures.

The Company’s independent registered public accounting firm has issued an attestation report regarding its assessment of the effectiveness of the Company’s internal control over financial reporting as of December 31, 2022.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the three months ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Zillow Group, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Zillow Group, Inc. (the “Company”) as of December 31, 2022, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements of the Company as of and for the year ended December 31, 2022, and our report dated February 15, 2023 expressed an unqualified opinion on those financial statements.

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 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/ DELOITTE & TOUCHE LLP

Seattle, Washington

February 15, 2023

Item 9B. Other Information.

None.

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

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item is incorporated by reference to the Corporate Governance section of the Company's definitive proxy statement relating to the 2023 annual meeting of shareholders. The definitive proxy statement will be filed with the Securities and Exchange Commission within 120 days after the end of the 2022 fiscal year.

We have adopted a Code of Ethics that applies to our Chief Executive Officer, Chief Financial Officer, Chief Accounting Officer, controller and persons performing similar functions. The Code of Ethics is posted on our website at <https://investors.zillowgroup.com/investors/governance/governance-documents/default.aspx>. We intend to satisfy the disclosure requirements under Item 5.05 of Form 8-K regarding an amendment to, or waiver from, a provision of the Code of Ethics by posting such information on our website at the address specified above.

Item 11. Executive Compensation.

The information required by this item is incorporated by reference to the Company's definitive proxy statement relating to the 2023 annual meeting of shareholders. The definitive proxy statement will be filed with the Securities and Exchange Commission within 120 days after the end of the 2022 fiscal year.

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

The information required by this item is incorporated by reference to the Company's definitive proxy statement relating to the 2023 annual meeting of shareholders. The definitive proxy statement will be filed with the Securities and Exchange Commission within 120 days after the end of the 2022 fiscal year.

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

The information required by this item is incorporated by reference to the Company's definitive proxy statement relating to the 2023 annual meeting of shareholders. The definitive proxy statement will be filed with the Securities and Exchange Commission within 120 days after the end of the 2022 fiscal year.

Item 14. Principal Accountant Fees and Services.

The information required by this item is incorporated by reference to the Company's definitive proxy statement relating to the 2023 annual meeting of shareholders. The definitive proxy statement will be filed with the Securities and Exchange Commission within 120 days after the end of the 2022 fiscal year.

PART IV**Item 15. Exhibits, Financial Statement Schedules.***(a)(1) Financial Statements*

We have filed the financial statements listed in the Index to Consolidated Financial Statements as a part of this Annual Report on Form 10-K.

(a)(2) Financial Statement Schedules

All financial statement schedules have been omitted because they are not applicable, not material or the required information is presented in the financial statements or the notes thereto.

(a)(3) Exhibits

Certain of the following exhibits have heretofore been filed with the Securities and Exchange Commission and are incorporated by reference from the documents described in parentheses. Certain others are filed herewith. The exhibits are numbered in accordance with Item 601 of Regulation S-K. In reviewing the agreements included as exhibits to this Annual Report on Form 10-K, please remember that they are included to provide you with information regarding their terms and are not intended to provide any other factual or disclosure information about the Company or the other parties to the agreement. The agreements may contain representations and warranties by each of the parties to the applicable agreement. These representations and warranties have been made solely for the benefit of the other party or parties to the applicable agreement and (i) should not be treated as categorical statements of fact, but rather as a means of allocating the risk to one of the parties if those statements prove to be inaccurate; (ii) may have been qualified by disclosures that were made to the other party or parties in connection with the negotiation of the applicable agreement, which disclosures are not necessarily reflected in the agreement; (iii) may apply standards of materiality in a manner that is different from what may be viewed as material to you or other investors; and (iv) were made only as of the date of the applicable agreement or other date or dates that may be specified in the agreement and are subject to more recent developments. Accordingly, these representations and warranties may not describe the actual state of affairs as of the date they were made or at any other time. Additional information about the Company may be found elsewhere in this Annual Report on Form 10-K and the Company's other public filings, which are available without charge through the SEC's website at <http://www.sec.gov>.

Exhibit Number	Description
3.1	<u>Amended and Restated Articles of Incorporation of Zillow Group, Inc. (Filed as Exhibit 3.1 to Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on February 17, 2015, and incorporated herein by reference).</u>
3.2	<u>Amended and Restated Bylaws of Zillow Group, Inc. (Filed as Exhibit 3.1 to Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on June 5, 2020, and incorporated herein by reference).</u>
4.1	<u>Specimen of Class A Common Stock Certificate (Filed as Exhibit 4.1 to Registrant's Quarterly Report on Form 10-Q filed on May 12, 2015, and incorporated herein by reference).</u>
4.2	<u>Specimen of Class C Capital Stock Certificate (Filed as Exhibit 4.1 to Registrant's Form 8-A filed with the Securities and Exchange Commission on July 29, 2015, and incorporated herein by reference).</u>
4.3	<u>Transfer Restriction Agreement and Amendment to Noncompetition Agreement, dated July 20, 2015, among Zillow Group, Inc., Zillow, Inc., Richard Barton and the other holders signatory thereto (Filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 21, 2015, and incorporated herein by reference).</u>
4.4	<u>Transfer Restriction Agreement and Amendment to Noncompetition Agreement, dated July 20, 2015, among Zillow Group, Inc., Zillow, Inc., Lloyd Frink and the other holders signatory thereto (Filed as Exhibit 10.2 to Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 21, 2015, and incorporated herein by reference).</u>

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- 4.5 [Indenture dated as of September 9, 2019, by and between Zillow Group, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee \(Filed as Exhibit 4.1 to Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on September 10, 2019, and incorporated herein by reference\).](#)
- 4.6 [Indenture dated as of September 9, 2019 by and between Zillow Group, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee \(Filed as Exhibit 4.2 to Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on September 10, 2019, and incorporated herein by reference\).](#)
- 4.7 [Form of 0.75% Convertible Senior Note due 2024 \(incorporated by reference to Exhibit 4.5 hereto\).](#)
- 4.8 [Form of 1.375% Convertible Senior Note due 2026 \(incorporated by reference to Exhibit 4.6 hereto\).](#)
- 4.9 [Description of Registrant's Securities \(Filed as Exhibit 4.17 to Registrant's Form 10-K filed with the Securities and Exchange Commission on February 19, 2020, and incorporated herein by reference\).](#)
- 4.10 [Indenture dated as of May 15, 2020, by and between Zillow Group, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee \(Filed as Exhibit 4.1 to Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 18, 2020, and incorporated herein by reference\).](#)
- 4.11 [Form of 2.75% Convertible Senior Note due 2025 \(incorporated by reference to Exhibit 4.10 hereto\).](#)
- 10.1* [Zillow, Inc. Amended and Restated 2011 Equity Incentive Plan \(Filed as Appendix A to Zillow, Inc.'s Definitive Proxy Statement filed with the Securities and Exchange Commission on April 17, 2012, and incorporated herein by reference\).](#)
- 10.2* [Amendment No. 1 to the Zillow, Inc. Amended and Restated 2011 Incentive Plan \(Filed as Appendix A to Zillow, Inc.'s Definitive Proxy Statement filed with the Securities and Exchange Commission on April 16, 2013, and incorporated herein by reference\).](#)
- 10.3* [Form of Nonqualified Stock Option Grant Notice and Stock Option Agreement under the Zillow, Inc. 2011 Incentive Plan \(Filed as Exhibit 10.3 to Zillow, Inc.'s Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on June 20, 2011, and incorporated herein by reference\).](#)
- 10.4* [Amended and Restated Stock Option Grant Program for Nonemployee Directors under the Zillow, Inc. Amended and Restated 2011 Incentive Plan \(Filed as Exhibit 10.11 to Registrant's Quarterly Report on Form 10-Q filed on May 12, 2015, and incorporated herein by reference\).](#)
- 10.5* [Amended and Restated Stock Option Grant Program for Nonemployee Directors under the Zillow Group, Inc. Amended and Restated 2011 Incentive Plan \(Filed as Exhibit 10.1 to Registrant's Quarterly Report on Form 10-Q filed on May 4, 2016, and incorporated herein by reference\).](#)
- 10.6* [Amended and Restated Stock Option Grant Program for Nonemployee Directors under the Zillow Group, Inc. Amended and Restated 2011 Incentive Plan \(Filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on February 13, 2017, and incorporated herein by reference\).](#)
- 10.7* [Form of Nonqualified Stock Option Grant Notice and Stock Option Agreement under the Zillow, Inc. Amended and Restated 2011 Incentive Plan \(Assumed by Registrant; Filed as Exhibit 10.12 to Registrant's Quarterly Report on Form 10-Q filed on May 12, 2015, and incorporated herein by reference\).](#)

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- 10.8* [Form of Indemnification Agreement between Zillow Group, Inc. and each of its directors and executive officers \(Filed as Exhibit 10.9 to Registrant's Current Report on Form 8-K12B filed with the Securities and Exchange Commission on February 17, 2015, and incorporated herein by reference\).](#)
- 10.9* [Zillow Group, Inc. Amended and Restated 2011 Incentive Plan \(Filed as Exhibit 10.3 to Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 5, 2016, and incorporated herein by reference\).](#)
- 10.10* [Form of Nonqualified Stock Option Grant Notice and Stock Option Agreement under the Zillow Group, Inc. Amended and Restated 2011 Incentive Plan \(Filed as Exhibit 10.2 to Registrant's Quarterly Report on Form 10-Q filed on August 5, 2015, and incorporated herein by reference\).](#)
- 10.11* [Form of Restricted Stock Unit Award Notice and Restricted Stock Unit Award Agreement under the Zillow Group, Inc. Amended and Restated 2011 Incentive Plan \(Filed as Exhibit 10.3 to Registrant's Quarterly Report on Form 10-Q filed on August 5, 2015, and incorporated herein by reference\).](#)
- 10.12 [Office Lease between The Northwestern Mutual Life Insurance Company and Zillow, Inc. dated March 22, 2011 \(Filed as Exhibit 10.10 to Zillow, Inc.'s Registration Statement on Form S-1 filed on April 18, 2011, and incorporated herein by reference\).](#)
- 10.13 [Amendment to Office Lease by and between FSP-RIC LLC and Zillow, Inc., dated as of June 27, 2012 \(Filed as Exhibit 10.1 to Zillow, Inc.'s Current Report on Form 8-K filed with the Securities and Exchange Commission on June 29, 2012, and incorporated herein by reference\).](#)
- 10.14 [Second Amendment to Lease by and between FSP-RIC, LLC and Zillow, Inc., dated as of April 16, 2013 \(Filed as Exhibit 10.1 to Zillow, Inc.'s Current Report on Form 8-K filed with the Securities and Exchange Commission on April 22, 2013, and incorporated herein by reference\).](#)
- 10.15 [Third Amendment to Lease by and between FSP-RIC, LLC and Zillow, Inc., dated as of January 10, 2014 \(Filed as Exhibit 10.10 to Zillow, Inc.'s Form 10-K filed with the Securities and Exchange Commission on February 18, 2014, and incorporated herein by reference\).](#)
- 10.16 [Fourth Amendment to Lease by and between FSP-RIC, LLC and Zillow, Inc., dated as of May 2, 2014 \(Filed as Exhibit 10.1 to Zillow, Inc.'s Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 6, 2014, and incorporated herein by reference\).](#)
- 10.17 [Fifth Amendment to Lease by and between FSP-RIC, LLC and Zillow, Inc., dated as of November 19, 2014 \(Filed as Exhibit 10.1 to Zillow, Inc.'s Current Report on Form 8-K filed with the Securities and Exchange Commission on November 24, 2014, and incorporated herein by reference\).](#)
- 10.18 [Sixth Amendment to Lease by and between FSP-RIC, LLC and Zillow, Inc., dated as of June 21, 2016 \(Filed as Exhibit 10.1 to Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 5, 2016, and incorporated herein by reference\).](#)
- 10.19 [Seventh Amendment to Lease by and between FSP-RIC, LLC and Zillow, Inc., dated as of October 19, 2021 \(Filed as Exhibit 10.21 to Registrant's Annual Report on Form 10-K filed with the Securities and Exchange Commission on February 10, 2022, and incorporated herein by reference\).](#)
- 10.20* [Amended and Restated Executive Employment Agreement, dated November 13, 2018, between Zillow Group, Inc. and Allen Parker \(Filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on November 14, 2018, and incorporated herein by reference\).](#)
- 10.21* [Executive Departure Agreement and Release, dated February 20, 2019, between Zillow Group, Inc. and Spencer Rascoff \(Filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on February 21, 2019, and incorporated herein by reference\).](#)

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10.22*	<u>Zillow Group, Inc. 2019 Equity Inducement Plan (Filed as Exhibit 99.2 to Registrant's Form S-8, filed with the Securities and Exchange Commission on August 8, 2019, and incorporated herein by reference).</u>
10.23*	<u>Form of Nonqualified Stock Option Grant Notice and Stock Option Agreement under the Zillow Group, Inc. 2019 Equity Inducement Plan (Filed as Exhibit 10.2 to Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 7, 2019, and incorporated herein by reference).</u>
10.24*	<u>Form of Restricted Stock Unit Award Notice and Restricted Stock Unit Award Agreement under the Zillow Group, Inc. 2019 Equity Inducement Plan (Filed as Exhibit 10.3 to Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 7, 2019, and incorporated herein by reference).</u>
10.25*	<u>Amended and Restated Nonqualified Stock Option Program for Non-Employee Director Grants under the Zillow Group, Inc. Amended and Restated 2011 Incentive Plan (Filed as Exhibit 10.1 to Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on May 7, 2020, and incorporated herein by reference).</u>
10.26*	<u>Zillow Group, Inc. 2020 Incentive Plan (Filed as Exhibit 10.1 to Zillow Group, Inc.'s Current Report on Form 8-K filed with the Securities and Exchange Commission on June 10, 2020, and incorporated herein by reference).</u>
10.27*	<u>Form of Nonqualified Stock Option Grant Notice and Nonqualified Stock Option Agreement under the Zillow Group, Inc. 2020 Incentive Plan (Filed as Exhibit 10.2 to Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 6, 2020, and incorporated herein by reference).</u>
10.28*	<u>Form of Restricted Stock Unit Award Notice and Restricted Stock Unit Award Agreement under the Zillow Group, Inc. 2020 Incentive Plan (Filed as Exhibit 10.3 to Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 6, 2020, and incorporated herein by reference).</u>
10.29*	<u>Zillow Group, Inc. Executive Severance Plan (Filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on September 17, 2020, and incorporated herein by reference).</u>
10.30*	<u>Amended and Restated Executive Severance Plan (Filed as Exhibit 10.1 to Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 5, 2021, and incorporated herein for reference).</u>
10.31*	<u>Stock Option Grant Program for Nonemployee Directors under the Zillow Group, Inc. 2020 Incentive Plan (Filed as Exhibit 10.1 to Zillow Group, Inc.'s Current Report on Form 8-K filed with the Securities and Exchange Commission on October 15, 2020, and incorporated herein by reference).</u>
21.1	<u>Subsidiaries of Zillow Group, Inc.</u>
23.1	<u>Consent of independent registered public accounting firm.</u>
31.1	<u>Certification of Chief Executive Officer pursuant to Rule 13-14(a) of the Securities Exchange Act of 1934 as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
31.2	<u>Certification of Chief Financial Officer pursuant to Rule 13-14(a) of the Securities Exchange Act of 1934 as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
32.1^	<u>Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
32.2^	<u>Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
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).
101.SCH	Inline XBRL Taxonomy Extension Schema Document.

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101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).
*	Indicates a management contract or compensatory plan or arrangement.
^	The certifications attached as Exhibits 32.1 and 32.2 that accompany this Annual Report on Form 10-K, are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of this Annual Report on Form 10-K), irrespective of any general incorporation language contained in such filing.

Item 16. Form 10-K Summary.

None.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: February 15, 2023

ZILLOW GROUP, INC.

By: /s/ JENNIFER ROCK
Name: Jennifer Rock
Title: Chief Accounting Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated below on February 15, 2023.

<u>Signature</u>	<u>Title</u>
<u>/s/ RICHARD BARTON</u> Richard Barton	Chief Executive Officer (Principal Executive Officer) and Director
<u>/s/ ALLEN PARKER</u> Allen Parker	Chief Financial Officer (Principal Financial Officer)
<u>/s/ JENNIFER ROCK</u> Jennifer Rock	Chief Accounting Officer (Principal Accounting Officer)
<u>/s/ LLOYD D. FRINK</u> Lloyd D. Frink	Executive Chairman, President and Director
<u>/s/ AMY C. BOHUTINSKY</u> Amy Bohutinsky	Director
<u>/s/ ERIK BLACHFORD</u> Erik Blachford	Director
<u>/s/ JAY C. HOAG</u> Jay C. Hoag	Director
<u>/s/ GREGORY B. MAFFEI</u> Gregory B. Maffei	Director
<u>/s/ GORDON STEPHENSON</u> Gordon Stephenson	Director
<u>/s/ CLAIRE CORMIER THIELKE</u> Claire Cormier Thielke	Director
<u>/s/ APRIL UNDERWOOD</u> April Underwood	Director

SUBSIDIARIES OF ZILLOW GROUP, INC.

The following is a list of subsidiaries of the company as of December 31, 2022, omitting subsidiaries which, considered in the aggregate, would not constitute a significant subsidiary.

Name	Place of Organization
MFTB Holdco, Inc.	Washington Corporation
Zillow, Inc.	Washington Corporation

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-225918 and 333-253207 on Form S-3, Registration Statement No. 333-198695 on Form S-4, and Registration Statement Nos. 333-202132, 333-206434, 333-206512, 333-209951, 333-212933, 333-216002, 333-223045, 333-229772, 333-233105, 333-236524, 333-238077, 333-253038 and 333-262630 on Form S-8 of our reports dated February 15, 2023, relating to the financial statements of Zillow Group, Inc. (“the Company”) and the effectiveness of the Company’s internal control over financial reporting, appearing in this Annual Report on Form 10-K of the Company for the year ended December 31, 2022.

/s/ DELOITTE & TOUCHE LLP

Seattle, Washington

February 15, 2023

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO SECTION 302(a) OF THE SARBANES-OXLEY ACT OF 2002**

I, Richard Barton, certify that:

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

ZILLOW GROUP, INC.

Date: February 15, 2023

By: /s/ RICHARD BARTON
Name: Richard Barton
Title: Chief Executive Officer

**CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO SECTION 302(a) OF THE SARBANES-OXLEY ACT OF 2002**

I, Allen Parker, certify that:

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

ZILLOW GROUP, INC.

Date: February 15, 2023

By: /s/ ALLEN PARKER
Name: Allen Parker
Title: Chief Financial Officer

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

In connection with the Annual Report of Zillow Group, Inc. (the “Company”) on Form 10-K for the fiscal year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Richard Barton, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

ZILLOW GROUP, INC.

Date: February 15, 2023

By: /s/ RICHARD BARTON

Name: Richard Barton

Title: Chief Executive Officer

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

In connection with the Annual Report of Zillow Group, Inc. (the “Company”) on Form 10-K for the fiscal year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Allen Parker, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

ZILLOW GROUP, INC.

Date: February 15, 2023

By: /s/ ALLEN PARKER
Name: Allen Parker
Title: Chief Financial Officer