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

FORM 10-Q

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

For the quarterly period ended September 30, 2022

OR

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

For the transition period from ______ to ______

Commission file number 0-24531

CoStar Group, Inc.
(Exact name of registrant as specified in its charter)

Delaware	52-2091509
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*

1331 L Street, NW
Washington, DC 20005

(Address of principal executive offices) (Zip Code)

(202) 346-6500
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock ($0.01 par value)	CSGP	Nasdaq Global Select Market

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 x No o

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 x No o

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	x	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

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

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

As of October 21, 2022, there were 406,690,060 shares of the registrant’s common stock outstanding.

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PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

COSTAR GROUP, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)
(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	**2021**	**2022**	**2021**
Revenues	$ 556,921	$ 499,319	$ 1,609,054	$ 1,437,349
Cost of revenues	108,364	92,597	304,814	270,911
Gross profit	448,557	406,722	1,304,240	1,166,438
Operating expenses:				
Selling and marketing (excluding customer base amortization)	185,395	180,055	510,736	483,354
Software development	56,912	53,143	162,520	148,500
General and administrative	91,270	64,671	246,576	186,747
Customer base amortization	29,651	19,121	60,621	55,885
	363,228	316,990	980,453	874,486
Income from operations	85,329	89,732	323,787	291,952
Interest income (expense), net	10,656	(7,943)	(461)	(23,698)
Other income, net	1,389	1,546	3,596	2,343
Income before income taxes	97,374	83,335	326,922	270,597
Income tax expense	25,084	19,031	81,841	70,933
Net income	$ 72,290	$ 64,304	$ 245,081	$ 199,664
Net income per share - basic	$ 0.18	$ 0.16	$ 0.62	$ 0.51
Net income per share - diluted	$ 0.18	$ 0.16	$ 0.62	$ 0.51
Weighted-average outstanding shares - basic	394,712	392,419	393,650	392,101
Weighted-average outstanding shares - diluted	396,209	394,295	394,973	394,036

See accompanying notes.

COSTAR GROUP, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in thousands)
(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Net income	$ 72,290	$ 64,304	$ 245,081	$ 199,664
Other comprehensive loss, net of tax				
Foreign currency translation adjustment	(16,671)	(6,229)	(40,869)	(4,380)
Total other comprehensive loss	(16,671)	(6,229)	(40,869)	(4,380)
Total comprehensive income	$ 55,619	$ 58,075	$ 204,212	$ 195,284

See accompanying notes.

COSTAR GROUP, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands)
(unaudited)

	September 30, 2022	December 31, 2021
ASSETS		
Current assets:		
Cash, cash equivalents and restricted cash	$ 4,774,465	$ 3,827,126
Accounts receivable	157,104	138,191
Less: Allowance for credit losses	(9,334)	(13,374)
Accounts receivable, net	147,770	124,817
Income tax receivable	9,278	—
Prepaid expenses and other current assets	75,074	36,182
Total current assets	5,006,587	3,988,125
Deferred income taxes, net	5,032	5,034
Property and equipment, net	306,319	271,431
Lease right-of-use assets	94,262	100,680
Goodwill	2,301,739	2,321,015
Intangible assets, net	343,232	435,662
Deferred commission costs, net	129,815	101,879
Deposits and other assets	16,872	21,762
Income tax receivable	2,005	11,283
Total assets	$ 8,205,863	$ 7,256,871
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 31,435	$ 22,244
Accrued wages and commissions	83,041	81,794
Accrued expenses	77,275	81,676
Income taxes payable	39	31,236
Lease liabilities	34,063	26,268
Deferred revenue	100,053	95,471
Total current liabilities	325,906	338,689
Long-term debt, net	988,890	987,944
Deferred income taxes, net	80,611	98,656
Income taxes payable	14,603	12,496
Lease and other long-term liabilities	88,941	107,414
Total liabilities	1,498,951	1,545,199
Total stockholders' equity	6,706,912	5,711,672
Total liabilities and stockholders' equity	$ 8,205,863	$ 7,256,871

See accompanying notes.

COSTAR GROUP, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(in thousands)
(unaudited)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Retained Earnings	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2021	394,936	$ 3,946	$ 4,253,318	$ (5,758)	$ 1,460,166	$ 5,711,672
Net income	—	—	—	—	89,318	89,318
Other comprehensive loss	—	—	—	(6,356)	—	(6,356)
Restricted stock grants	1,277	13	(13)	—	—	—
Restricted stock grants surrendered	(403)	(4)	(19,455)	—	—	(19,459)
Stock-based compensation expense	—	—	18,005	—	—	18,005
Employee stock purchase plan	64	1	4,117	—	—	4,118
Balance at March 31, 2022	395,874	$ 3,956	$ 4,255,972	$ (12,114)	$ 1,549,484	$ 5,797,298
Net income	—	—	—	—	83,473	83,473
Other comprehensive loss	—	—	—	(17,842)	—	(17,842)
Restricted stock grants	65	1	(1)	—	—	—
Restricted stock grants surrendered	(108)	(1)	(295)	—	—	(296)
Stock-based compensation expense	—	—	17,680	—	—	17,680
Employee stock purchase plan	65	1	4,039	—	—	4,040
Balance at June 30, 2022	395,896	$ 3,957	$ 4,277,395	$ (29,956)	$ 1,632,957	$ 5,884,353
Net income	—	—	—	—	72,290	72,290
Other comprehensive loss	—	—	—	(16,671)	—	(16,671)
Restricted stock grants	80	1	(1)	—	—	—
Restricted stock grants surrendered	(69)	(1)	(503)	—	—	(504)
Stock-based compensation expense	—	—	17,928	—	—	17,928
Employee stock purchase plan	56	1	3,815	—	—	3,816
Stock issued for equity offering, net of transaction costs	10,656	107	745,593	—	—	745,700
Balance at September 30, 2022	406,619	$ 4,065	$ 5,044,227	$ (46,627)	$ 1,705,247	$ 6,706,912

See accompanying notes.

COSTAR GROUP, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(in thousands)
(unaudited)

	Common Stock		Additional Paid-In Capital[1]	Accumulated Other Comprehensive (Loss) Income	Retained Earnings	Total Stockholders' Equity
	Shares[1]	Amount[1]				
Balance at December 31, 2020	394,285	$ 3,943	$ 4,204,703	$ (889)	$ 1,167,602	$ 5,375,359
Net income	—	—	—	—	74,212	74,212
Other comprehensive income	—	—	—	323	—	323
Exercise of stock options	206	2	6,339	—	—	6,341
Restricted stock grants	766	8	(7)	—	—	1
Restricted stock grants surrendered	(358)	(4)	(27,663)	—	—	(27,667)
Stock-based compensation expense	—	—	15,264	—	—	15,264
Employee stock purchase plan	36	—	3,092	—	—	3,092
Balance at March 31, 2021	394,935	$ 3,949	$ 4,201,728	$ (566)	$ 1,241,814	$ 5,446,925
Net income	—	—	—	—	61,148	61,148
Other comprehensive income	—	—	—	1,526	—	1,526
Restricted stock grants	50	—	—	—	—	—
Restricted stock grants surrendered	(75)	(1)	(737)	—	—	(738)
Stock-based compensation expense	—	—	14,811	—	—	14,811
Employee stock purchase plan	41	—	3,555	—	—	3,555
Balance at June 30, 2021	394,951	$ 3,948	$ 4,219,357	$ 960	$ 1,302,962	$ 5,527,227
Net income	—	—	—	—	64,304	64,304
Other comprehensive loss	—	—	—	(6,229)	—	(6,229)
Restricted stock grants	35	—	—	—	—	—
Restricted stock grants surrendered	(61)	(1)	(900)	—	—	(901)
Stock-based compensation expense	—	—	16,021	—	—	16,021
Employee stock purchase plan	35	—	3,001	—	—	3,001
Balance at September 30, 2021	394,960	$ 3,947	$ 4,237,479	$ (5,269)	$ 1,367,266	$ 5,603,423

[1] Prior period amounts have been adjusted to reflect the ten-for-one stock split, effected in the form of a stock dividend, in June 2021. See Note 2 for details.

See accompanying notes.

COSTAR GROUP, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(unaudited)

	Nine Months Ended September 30,	
	2022	**2021**
Operating activities:		
Net income	$ 245,081	$ 199,664
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	109,983	102,390
Amortization of deferred commissions costs	55,373	46,728
Amortization of Senior Notes discount and issuance costs	1,771	1,742
Non-cash lease expense	23,108	21,118
Stock-based compensation expense	54,097	46,988
Deferred income taxes, net	(21,676)	16,255
Credit loss expense	13,468	7,797
Other operating activities, net	(1,774)	10
Changes in operating assets and liabilities, net of acquisitions:		
Accounts receivable	(36,177)	(17,715)
Prepaid expenses and other current assets	(17,235)	(18,820)
Deferred commissions	(83,875)	(49,798)
Accounts payable and other liabilities	2,131	(27,912)
Lease liabilities	(27,615)	(23,596)
Income taxes payable	(29,051)	(3,583)
Deferred revenue	4,488	15,800
Other assets	1,492	2,150
Net cash provided by operating activities	293,589	319,218
Investing activities:		
Proceeds from sale of property and equipment and other assets	5,034	245
Purchase of Richmond assets and other intangibles	(31,530)	(123,623)
Purchases of property and equipment and other assets	(43,659)	(21,533)
Cash paid for acquisitions, net of cash acquired	(6,331)	(152,594)
Net cash used in investing activities	(76,486)	(297,505)
Financing activities:		
Repayments of long-term debt assumed in acquisition	(2,155)	—
Repurchase of restricted stock to satisfy tax withholding obligations	(20,259)	(29,306)
Proceeds from equity offering, net of transaction costs	746,170	—
Proceeds from exercise of stock options and employee stock purchase plan	10,777	15,025
Other financing activities	—	(57)
Net cash provided by (used in) financing activities	734,533	(14,338)
Effect of foreign currency exchange rates on cash and cash equivalents	(4,297)	(1,700)
Net increase in cash, cash equivalents and restricted cash	947,339	5,675
Cash, cash equivalents and restricted cash at the beginning of period	3,827,126	3,755,912
Cash, cash equivalents and restricted cash at the end of period	$ 4,774,465	$ 3,761,587
Supplemental cash flow disclosures:		
Interest paid	$ 29,473	$ 31,030
Income taxes paid	$ 141,869	$ 58,234
Supplemental non-cash investing and financing activities:		
Consideration owed for acquisitions	$ 52	$ 376
Accrued capital expenditures and non-cash landlord incentives	$ 5,808	$ 660
Accrued transaction costs from equity offering	$ 470	$ —

See accompanying notes.

COSTAR GROUP, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (unaudited)

1. ORGANIZATION

CoStar Group, Inc. (the “Company”) provides information, analytics, online marketplace and auction services to the commercial real estate and related business community through its comprehensive, proprietary database of commercial real estate information and related tools. The Company provides online marketplaces for commercial real estate, apartment rentals, residential real estate, land for sale and businesses for sale, and its services are typically distributed to its clients under subscription-based agreements that renew automatically, a majority of which have a term of at least one year. The Company operates within two operating segments, North America, which includes the United States ("U.S.") and Canada, and International, which primarily includes Europe, Asia-Pacific and Latin America.

On May 24, 2021, the Company acquired Homes Group, LLC ("Homes.com"), a residential real estate advertising and marketing services company primarily operating through its property listing and marketing portal, Homes.com. On October 1, 2021, the Company acquired Comreal Info, a French *société par actions simplifiée* ("BureauxLocaux"), the owner and operator of BureauxLocaux, a commercial real estate digital marketplace in France. On April 5, 2022, the Company acquired all of the issued share capital of BIH, a French *société par actions simplifiée ("Business Immo")*, the owner and operator of Business Immo, a leading commercial real estate news service provider in France.

See Note 5 for further discussion of these acquisitions.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation. Accounting policies are consistent for each operating segment.

Interim Financial Statements

The accompanying unaudited condensed consolidated financial statements of the Company have been prepared in accordance with U.S. generally accepted accounting principles (“GAAP”) for interim financial information. In the opinion of the Company’s management, the financial statements reflect all adjustments, consisting only of a normal recurring nature, necessary to present fairly the Company’s financial position at September 30, 2022 and December 31, 2021, the results of its operations for the three and nine months ended September 30, 2022 and 2021, its comprehensive income for the three and nine months ended September 30, 2022 and 2021, its changes in stockholders' equity for the three and nine months ended September 30, 2022 and 2021, and its cash flows for the nine months ended September 30, 2022 and 2021.

Certain notes and other information have been condensed or omitted from the interim financial statements presented in this Quarterly Report on Form 10-Q. Therefore, these financial statements should be read in conjunction with the Company’s Annual Report on Form 10-K for the year ended December 31, 2021.

Common Stock Split

At the Company's 2021 Annual Meeting of Stockholders in June 2021, upon the recommendation of the Company's Board of Directors, the Company's stockholders approved the adoption of the Company's Fourth Amended and Restated Certificate of Incorporation, which increased the total number of shares of common stock that the Company is authorized to issue from 60 million to 1.2 billion. The Fourth Amended and Restated Certificate of Incorporation became effective on June 7, 2021. On June 7, 2021, the Board of Directors approved a ten-for-one stock split of the Company's outstanding shares of common stock to be effected in the form of a stock dividend. Each stockholder of record on June 17, 2021 received a dividend of nine additional shares of common stock for each then-held share, distributed after close of trading on June 25, 2021. The par value of the Company's common stock remained $0.01 per share. All applicable share and per-share amounts in the unaudited condensed consolidated financial statements and the accompanying notes have been retroactively adjusted to reflect the impact of the stock split.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. On an ongoing basis, the Company evaluates its estimates and assumptions, including those related to revenue recognition, allowance for credit losses, the useful lives and recoverability of long-lived and intangible assets, goodwill, income taxes, accounting for business combinations, stock-based compensation and estimating the Company's incremental borrowing rate for its leases and contingencies, among others. The Company bases these estimates on historical and anticipated results, trends and various other assumptions that it believes are reasonable, including assumptions as to future events. These estimates form the basis for making judgments about the carrying values of assets and liabilities and recorded revenues and expenses. Actual results could differ from these estimates.

Revenue Recognition

The Company derives revenues primarily by (i) providing access to its proprietary database of commercial real estate information and (ii) providing online marketplaces for professional property management companies, property owners, real estate agents and brokers and landlords, in each case, typically through a fixed monthly fee for its subscription-based services. Other subscription based-services include (i) real estate and lease management solutions to commercial customers, real estate investors and lenders, (ii) access to applications to manage workflow and advertising and marketing services for residential real estate agents, (iii) benchmarking and analytics for the hospitality industry and (iv) market research, portfolio and debt analysis, management and reporting capabilities.

Subscription contract rates are generally based on the number of sites, number of users, organization size, the client’s business focus, geography, the number of properties reported on or analyzed, the number and types of services to which a client subscribes, the number of properties a client advertises and the prominence and placement of a client's advertised properties in the search results. The Company’s subscription-based license agreements typically renew automatically and a majority have a term of at least one year.

The Company also derives revenues from transaction-based services including: (i) an online auction platform for commercial real estate through Ten-X, LLC and its subsidiaries, (ii) providing online tenant applications, including background and credit checks, and rental payment processing and (iii) ancillary products and services that sold on an ad hoc basis.

The Company analyzes contracts to determine the appropriate revenue recognition using the following steps: (i) identification of contracts with customers, (ii) identification of distinct performance obligations in the contract, (iii) determination of contract transaction price, (iv) allocation of contract transaction price to the performance obligations, and (v) determination of revenue recognition based on timing of satisfaction of the performance obligations.

The Company recognizes revenues upon the satisfaction of its performance obligation(s) (upon transfer of control of promised services to its customers) in an amount that reflects the consideration to which it expects to be entitled to in exchange for those services. Revenues from subscription-based services are recognized on a straight-line basis over the term of the agreement. Revenues from transaction-based services are recognized when the promised product or services are delivered, which, in the case of Ten-X auctions, is at the time of a successful closing of the sale of the property.

In limited circumstances, the Company's contracts with customers include promises to transfer multiple services, such as contracts for its subscription-based services and professional services. For these contracts, the Company accounts for individual performance obligations separately if they are distinct, which involves the determination of the standalone selling price for each distinct performance obligation.

Deferred revenue results from amounts billed in advance to customers or cash received from customers in advance of the Company's fulfillment of its performance obligation(s) and is recognized as those obligations are satisfied.

Contract assets represent a conditional right to consideration for satisfied performance obligations that become a receivable when the conditions are satisfied. Contract assets are generated when contractual billing schedules differ from revenue recognition timing.

Certain sales commissions are considered incremental and recoverable costs of obtaining a contract with a customer. Sales commissions incurred for obtaining new contracts are deferred and then amortized as selling and marketing expenses on a straight-line basis over a period of benefit that the Company has determined to be three years. The three-year amortization period was determined based on several factors, including the nature of the technology and proprietary data underlying the services being purchased, customer contract renewal rates and industry competition. Certain commission costs are not capitalized as they do not represent incremental costs of obtaining a contract.

See Note 3 for further discussion of the Company's revenue recognition.

Cost of Revenues

Cost of revenues principally consists of salaries, benefits, bonuses, stock-based compensation expenses and other indirect costs for the Company's researchers who collect and analyze the real estate data that is the basis for the Company's information, analytics and online marketplaces and for employees that support these products. Additionally, cost of revenues includes the cost of data from third-party data sources and costs related to advertising purchased on behalf of customers, credit card and other transaction fees relating to processing customer transactions, which are expensed as incurred, and the amortization of acquired trade names, technology and certain other intangible assets.

Foreign Currency Translation

The Company’s reporting currency is the U.S. dollar. The functional currency for the majority of its operations is the local currency, with the exception of certain international locations for which the functional currency is the British pound. Assets and liabilities denominated in a foreign currency are translated into U.S. dollars using the exchange rates in effect as of the balance sheet date. Gains and losses resulting from translation are included in accumulated other comprehensive loss. Currency gains and losses on the translation of intercompany loans made to foreign subsidiaries that are of a long-term investment nature are also included in accumulated other comprehensive loss. Gains and losses resulting from transactions denominated in a currency other than the functional currency of the entity are included in other income, net in the condensed consolidated statements of operations using the average exchange rates in effect during the period. The Company recognized net foreign currency gains of $0.8 million and $0.5 million for the three months ended September 30, 2022 and 2021, respectively, and net foreign currency gains of $2.2 million and $0.1 million for the nine months ended September 30, 2022 and 2021, respectively, which are included in other income, net on the condensed consolidated statements of operations.

Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive loss were as follows (in thousands):

	September 30, 2022	December 31, 2021
Foreign currency translation adjustment	$ (46,627)	$ (5,758)
Total accumulated other comprehensive loss	$ (46,627)	$ (5,758)

There were no amounts reclassified out of accumulated other comprehensive loss to the condensed consolidated statements of operations for the three and nine months ended September 30, 2022 and 2021.

Advertising Costs

The Company expenses advertising costs as incurred. Advertising costs include digital marketing, television, radio, print and other media advertising. Advertising costs were approximately $91 million and $97 million for the three months ended September 30, 2022 and 2021, respectively, and $238 million and $252 million for the nine months ended September 30, 2022 and 2021, respectively.

Income Taxes

Deferred income taxes result from temporary differences between the tax basis of assets and liabilities and the basis reported in the Company's condensed consolidated financial statements. Deferred tax assets and liabilities are determined based on the difference between the financial statement and the tax basis of assets and liabilities using enacted rates in effect during the year in which the Company expects differences to reverse. Valuation allowances are provided against assets, including net operating losses, if the Company determines it is more likely than not that some portion or all of an asset may not be realized. Interest and penalties related to income tax matters are recognized in income tax expense.

See Note 11 for additional information regarding income taxes.

Net Income Per Share

Net income per share is computed by dividing net income by the weighted-average number of common shares outstanding during the period on a basic and diluted basis.

The following table sets forth the calculation of basic and diluted net income per share (in thousands, except per share data):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Numerator:				
Net income	$ 72,290	$ 64,304	$ 245,081	$ 199,664
Denominator:				
Denominator for basic net income per share — weighted-average outstanding shares	394,712	392,419	393,650	392,101
Effect of dilutive securities:				
Stock options, restricted stock awards and restricted stock units	1,497	1,876	1,323	1,935
Denominator for diluted net income per share — weighted-average outstanding shares	396,209	394,295	394,973	394,036
Net income per share — basic	$ 0.18	$ 0.16	$ 0.62	$ 0.51
Net income per share — diluted	$ 0.18	$ 0.16	$ 0.62	$ 0.51

The Company's potentially dilutive securities include outstanding stock options, unvested stock-based awards, which include restricted stock awards that vest over a specific service period, restricted stock awards with a performance and a market condition, restricted stock units, and awards of matching restricted stock units ("Matching RSUs") awarded under the Company's Management Stock Purchase Plan (the "MSPP"). Shares underlying unvested restricted stock awards that vest based on a performance and a market condition that have not been achieved as of the end of the period are not included in the computation of basic or diluted earnings per share. Diluted net income per share considers the impact of potentially dilutive securities except when the inclusion of the potentially dilutive securities would have an anti-dilutive effect.

The following table summarizes the shares underlying the unvested performance-based restricted stock and anti-dilutive securities excluded from the basic and diluted earnings per share calculations (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Performance-based restricted stock awards	621	718	621	718
Anti-dilutive securities	748	192	1,144	433

Stock-Based Compensation

Equity instruments issued in exchange for services performed by officers, employees, and directors of the Company are accounted for using a fair-value based method and the fair value of such equity instruments is recognized as expense in the condensed consolidated statements of operations.

For stock-based awards that vest over a specific service period, compensation expense is measured based on the fair value of the awards at the grant date and is recognized on a straight-line basis over the service period of the awards, net of an estimated forfeiture rate. For equity instruments that vest based on achievement of both a performance and market condition, stock-based compensation expense is recognized over the service period of the awards based on the expected achievement of the related performance conditions at the end of each reporting period. If the Company's initial estimates of the achievement of the performance conditions change, the related stock-based compensation expense may fluctuate from period to period based on those estimates. If the performance conditions are not met, no stock-based compensation expense will be recognized, and any previously recognized stock-based compensation expense will be reversed. For awards with both a performance and a market condition, the Company estimates the fair value of each equity instrument granted on the date of grant using a Monte-Carlo simulation model. This pricing model uses multiple simulations to evaluate the probability of achieving the market condition to calculate the fair value of the awards.

Stock-based compensation expense for stock options, restricted stock awards and restricted stock units issued under equity incentive plans, stock purchases under the Employee Stock Purchase Plan, Deferred Stock Units and Matching RSUs awarded under the Company's MSPP included in the Company’s statements of operations were as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Cost of revenues	$ 3,041	$ 2,835	$ 9,002	$ 8,283
Selling and marketing (excluding customer base amortization)	1,957	1,620	5,605	4,644
Software development	3,158	3,316	9,262	9,289
General and administrative	9,982	8,528	30,228	24,772
Total stock-based compensation expense	$ 18,138	$ 16,299	$ 54,097	$ 46,988

Cash, Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents. The Company had no restricted cash as of September 30, 2022 and December 31, 2021.

Allowance for Credit Losses

The Company maintains an allowance for credit losses to cover its current expected credit losses ("CECL") on its trade receivables and contract assets arising from the failure of customers to make contractual payments. The Company estimates credit losses expected over the life of its trade receivables and contract assets based on historical information combined with current conditions that may affect a customer’s ability to pay and reasonable and supportable forecasts. While the Company uses various credit quality metrics, it primarily monitors collectability by reviewing the duration of collection pursuits on its delinquent trade receivables and historical write-off trends. Based on the Company’s experience, the customer's delinquency status, which is analyzed periodically, is the strongest indicator of the credit quality of the underlying trade receivables. The Company’s policy is to write-off trade receivables when they are deemed uncollectible. A majority of the Company's trade receivables are less than 365 days outstanding.

Under the CECL impairment model, the Company develops and documents its allowance for credit losses on its trade receivables based on five portfolio segments. The determination of portfolio segments is based primarily on the qualitative consideration of the nature of the Company’s business operations and the characteristics of the underlying trade receivables, as follows:

- *CoStar Portfolio Segment* - The CoStar portfolio segment consists of two classes of trade receivables based on geographical location: North America and International.

- *Information Services Portfolio Segment* - The Information Services portfolio segment consists of four classes of trade receivables: CoStar Real Estate Manager; Information Services, North America; STR, North America; and STR, International.

- *Multifamily Portfolio Segment* - The Multifamily portfolio segment consists of one class of trade receivables.

- *LoopNet Portfolio Segment* - The LoopNet portfolio segment consists of one class of trade receivables.

- *Other Marketplaces Portfolio Segment* - The Other Marketplaces portfolio segment consists of two classes of trade receivables: Ten-X and other marketplaces.

The majority of Residential revenue is e-commerce based and does not result in accounts receivable. Residential accounts receivable and the related allowance for credit losses are not material.

See Note 4 for further discussion of the Company’s accounting for allowance for credit losses.

Leases

The determination of whether an arrangement contains a lease and the classification of a lease, if applicable, is made at the commencement of the arrangement, at which time the Company also measures and recognizes a right-of-use ("ROU") asset, representing the Company’s right to use the underlying asset, and a lease liability, representing the Company’s obligation to make lease payments under the terms of the arrangement. For the purposes of recognizing ROU assets and lease liabilities associated with the Company’s leases, the Company has elected the practical expedient to not recognize a ROU asset or lease liability for short-term leases, which are leases with a term of twelve months or less. The lease term is defined as the noncancelable portion of the lease term, plus any periods covered by an option to extend the lease if it is reasonably certain that the option will be exercised.

In determining the amount of lease payments used in measuring ROU assets and lease liabilities, the Company has elected the practical expedient not to separate non-lease components from lease components for all classes of underlying assets. Consideration deemed part of the lease payments used to measure ROU assets and lease liabilities generally includes fixed payments and variable payments based on either an index or a rate, offset by lease incentives. Upon commencement, the initial ROU asset also includes any lease prepayments. ROU assets and liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. The rates implicit within the Company's leases are generally not determinable. Therefore, the Company's incremental borrowing rate is used to determine the present value of lease payments. The determination of the Company’s incremental borrowing rate requires judgment and is determined at lease commencement, or as of January 1, 2019 for operating leases in existence upon adoption of the new lease standard. The incremental borrowing rate is subsequently reassessed upon a modification to the lease arrangement.

Lease costs related to the Company's operating leases are generally recognized as a single ratable lease cost over the lease term.

See Note 7 for further discussion of the Company’s accounting for leases.

Long-Lived Assets, Intangible Assets and Goodwill

Long-lived assets, such as property and equipment, and purchased intangibles subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the estimated undiscounted future cash flows expected to be generated by the asset or asset group. If the carrying amount of an asset exceeds its estimated undiscounted future cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset exceeds the fair value of the asset. In the fourth quarter of 2021, the Company began removing fully amortized intangible assets from the cost and accumulated amortization amounts disclosed.

Goodwill is tested annually for impairment by each reporting unit on October 1 of each year or more frequently if an event or other circumstance indicates that the Company may not recover the carrying value of the asset. The Company may first assess qualitative factors to evaluate whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, or elect to bypass such assessment. If it is determined that it is more likely than not that the fair value of a reporting unit is less than its carrying value, or the Company elects to bypass such assessment, the Company then determines the fair value of each reporting unit. The fair value of each reporting unit is compared to the carrying amount of the reporting unit. If the carrying value of the reporting unit exceeds the fair value, then an impairment loss is recognized for the difference.

Debt Issuance Costs

Costs incurred in connection with the issuance of long-term debt are deferred and amortized as interest expense over the term of the related debt using the effective interest method for term debt and on a straight-line basis for revolving debt. The Company made a policy election to classify deferred issuance costs on the revolving credit facility as a long-term asset on its condensed consolidated balance sheets. Upon a refinancing or amendment, previously capitalized debt issuance costs are expensed and included in loss on extinguishment of debt if the Company determines that there has been a substantial modification of the related debt. If the Company determines that there has not been a substantial modification of the related debt, any previously capitalized debt issuance costs are amortized as interest expense over the term of the new debt instrument.

See Note 10 for additional information regarding the Company's accounting for its outstanding debt, revolving credit facility, and related issuance costs.

Business Combinations

The Company generally allocates the purchase consideration to the tangible assets acquired and liabilities assumed and intangible assets acquired, based on their estimated fair values. The purchase price is, generally, determined based on the fair value of the assets transferred, liabilities assumed and equity interests issued, after considering any transactions that are separate from the business combination. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. The Company applies significant assumptions, estimates and judgments in determining the fair value of assets acquired and liabilities assumed on the acquisition date, especially with respect to intangible assets and contingent liabilities. Significant estimates in valuing certain intangible assets include, but are not limited to, future expected cash flows from acquired customer bases, acquired technology and acquired trade names, useful lives, royalty rates and discount rates. Any adjustments to provisional amounts that are identified during the measurement period are recorded in the reporting period in which the adjustment amounts are determined. Upon the conclusion of the measurement period, any subsequent adjustments are recorded to earnings.

For a given acquisition, the Company may identify certain pre-acquisition contingencies as of the acquisition date and may extend its review and evaluation of these pre-acquisition contingencies throughout the measurement period in order to obtain sufficient information to assess whether the Company includes these contingencies as a part of the fair value estimates of assets acquired and liabilities assumed and, if so, to determine their estimated amounts.

If the Company cannot reasonably determine the fair value of a pre-acquisition contingency (non-income tax related) by the end of the measurement period, which is generally the case given the nature of such matters, the Company will recognize an asset or a liability for such pre-acquisition contingency if: (i) it is probable that an asset existed or a liability had been assumed at the acquisition date and (ii) the amount of the asset or liability can be reasonably estimated. Subsequent to the measurement period, changes in the Company's estimates of such contingencies will affect earnings and could have a material effect on its results of operations and financial position.

In addition, uncertain tax positions and tax related valuation allowances assumed in connection with a business combination are initially estimated as of the acquisition date. The Company reevaluates these items based upon facts and circumstances that existed as of the acquisition date with any adjustments to its preliminary estimates being recorded to goodwill, provided that the Company is within the measurement period. Subsequent to the measurement period, changes to these uncertain tax positions and tax related valuation allowances will affect the Company's provision for income taxes in its condensed consolidated statements of operations and comprehensive income and could have a material impact on its results of operations and financial position.

Further, contract assets and liabilities acquired or assumed in an acquisition are measured in accordance with the accounting framework for revenue from contracts with customers as if the Company had originated the acquired contract.

Recent Accounting Pronouncements

Recent Accounting Pronouncements Not Yet Adopted

On March 12, 2020, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2020-04, *Reference Rate Reform (“ASC 848”): Facilitation of the Effects of Reference Rate Reform on Financial Reporting.* Accounting Standards Codification ("ASC") 848 contains optional expedients and exceptions for applying GAAP to debt, contracts, hedging relationships and other transactions affected by reference rate reform. The provisions of ASC 848 must be applied to all contracts that are accounted for under a Topic, Subtopic or Industry Subtopic for all transactions other than derivatives, which may be applied at a hedging relationship level. This guidance is effective for fiscal years beginning after January 1, 2021, including interim periods within those fiscal years. The Company's 2020 Credit Agreement (as defined in Note 10) provides for a $750 million revolving credit facility and a letter of credit sublimit of $20 million, with interest rates benchmarked to LIBOR. As of September 30, 2022, no amounts were issued or drawn under this facility. The Company is currently evaluating the impact this guidance will have on its consolidated financial statements and related disclosures.

In March 2022, the FASB issued ASU 2022-02, *Financial Instruments-Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosures.* This ASU eliminates prior guidance on troubled debt restructurings ("TDRs") for creditors that have adopted ASU 2016-13, *Measurement of Credit Losses in Financial Statements*, and adds enhanced disclosures for creditors with respect to loan refinancings and restructurings for borrowers experiencing financial difficulty. In addition, the ASU amends guidance on "vintage disclosures" to require the disclosure of current period gross write offs by year of origination. This guidance is effective for fiscal years beginning after December 15, 2022. The Company expects there to be no material impact on its consolidated financial statements and related disclosures from the adoption of this ASU.

3. REVENUE FROM CONTRACTS WITH CUSTOMERS

Disaggregated Revenue

The Company provides information, analytics and online marketplaces to the commercial real estate industry, hospitality industry, residential industry and related professionals. Revenues by operating segment and type of service consist of the following (in thousands):

	Three Months Ended September 30,					
	2022			2021		
	North America	International	Total	North America	International	Total
CoStar	$ 203,657	$ 9,033	$ 212,690	$ 174,071	$ 9,194	$ 183,265
Information Services	32,524	8,489	41,013	29,177	6,749	35,926
Multifamily	189,536	—	189,536	171,125	—	171,125
LoopNet	57,126	1,775	58,901	52,103	424	52,527
Residential	19,351	—	19,351	24,747	—	24,747
Other Marketplaces	35,430	—	35,430	31,729	—	31,729
Total revenues	$ 537,624	$ 19,297	$ 556,921	$ 482,952	$ 16,367	$ 499,319

	Nine Months Ended September 30,					
	2022			2021		
	North America	International	Total	North America	International	Total
CoStar	$ 590,141	$ 27,764	$ 617,905	$ 505,470	$ 26,958	$ 532,428
Information Services	93,306	23,424	116,730	84,959	20,820	105,779
Multifamily	547,372	—	547,372	508,629	—	508,629
LoopNet	164,417	5,228	169,645	151,770	1,082	152,852
Residential	57,565	—	57,565	53,939	—	53,939
Other Marketplaces	99,837	—	99,837	83,722	—	83,722
Total revenues	$ 1,552,638	$ 56,416	$ 1,609,054	$ 1,388,489	$ 48,860	$ 1,437,349

Deferred Revenue

Changes in deferred revenue for the period were as follows (in thousands):

Balance at December 31, 2021[(1)]	$ 96,724
Revenue recognized in the current period from the amounts in the beginning balance	(88,431)
New deferrals, net of amounts recognized in the current period	94,791
Effects of foreign currency	(2,840)
Balance at September 30, 2022[(2)]	$ 100,244

[(1)] Deferred revenue was comprised of $95.5 million of current liabilities and $1.2 million of noncurrent liabilities classified within lease and other long-term liabilities on the Company's consolidated balance sheet as of December 31, 2021.

[(2)] Deferred revenue is comprised of $100.1 million of current liabilities and $0.2 million of noncurrent liabilities classified within lease and other long-term liabilities on the Company's condensed consolidated balance sheet as of September 30, 2022. This balance includes $1.9 million of net new deferrals recognized in connection with the Business Immo acquisition made in 2022. See Note 5 for further discussion of acquisitions.

Contract Assets

Contract assets are generated when contractual billing schedules differ from revenue recognition timing and represent a conditional right to consideration for satisfied performance obligations that becomes a receivable when the conditions are satisfied. Contract assets as of September 30, 2022 and December 31, 2021 were as follows (in thousands):

Balance	Balance Sheet Caption	September 30, 2022	December 31, 2021
Current portion	Prepaid expenses and other current assets	$ 3,335	$ 3,094
Non-current portion	Deposits and other assets	7,459	6,146
Total contract assets		$ 10,794	$ 9,240

The revenue recognized from contract assets for the three and nine months ended September 30, 2022 was $0.8 million and $1.6 million, respectively. The revenue recognized from contract assets for the three and nine months ended September 30, 2021 was negligible.

Commissions

Commissions expense is included in selling and marketing expense in the Company's condensed consolidated statements of operations. Commissions expense activity for the three and nine months ended September 30, 2022 and 2021 was as follows (in thousands). The Company determined that no deferred commissions were impaired as of September 30, 2022:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Commissions incurred	$ 40,511	$ 30,337	$ 115,749	$ 83,983
Commissions capitalized in the current period	(29,720)	(17,876)	(83,875)	(49,798)
Amortization of deferred commissions costs	19,377	15,881	55,373	46,728
Total commissions expense	$ 30,168	$ 28,342	$ 87,247	$ 80,913

Unsatisfied Performance Obligations

Remaining contract consideration for which revenue has not been recognized due to unsatisfied performance obligations was approximately $462 million at September 30, 2022, which the Company expects to recognize over the next five years. This amount does not include contract consideration for contracts with a duration of one year or less.

4. ALLOWANCE FOR CREDIT LOSSES

The following table details the activity related to the allowance for credit losses for trade receivables by portfolio segment (in thousands):

	Nine Months Ended September 30, 2022					
	CoStar	Information Services	Multifamily	LoopNet	Other Marketplaces	Total
Beginning balance at December 31, 2021	$ 5,380	$ 1,820	$ 3,393	$ 1,968	$ 813	$ 13,374
Current-period provision for expected credit losses[1], [2]	7,089	(703)	4,032	3,000	50	13,468
Write-offs charged against the allowance, net of recoveries and other	(8,917)	(198)	(4,362)	(4,031)	—	(17,508)
Ending balance at September 30, 2022	$ 3,552	$ 919	$ 3,063	$ 937	$ 863	$ 9,334

[1] Credit loss expense is included in general and administrative expenses on the condensed consolidated statements of operations.
[2] Credit loss expense related to contract assets was not material for the nine months ended September 30, 2022.

	Nine Months Ended September 30, 2021					
	CoStar	Information Services	Multifamily	LoopNet	Other Marketplaces	Total
Beginning balance at December 31, 2020	$ 5,531	$ 2,739	$ 4,387	$ 1,667	$ 786	$ 15,110
Current-period provision for expected credit losses[1], [2]	3,932	(257)	2,167	1,955	—	7,797
Write-offs charged against the allowance, net of recoveries and other	(3,933)	(518)	(3,779)	(1,628)	—	(9,858)
Ending balance at September 30, 2021	$ 5,530	$ 1,964	$ 2,775	$ 1,994	$ 786	$ 13,049

[1] Credit loss expense is included in general and administrative expenses on the condensed consolidated statements of operations.
[2] Credit loss expense related to contract assets was not material for the nine months ended September 30, 2021.

5. ACQUISITIONS

Business Immo

On April 5, 2022, the Company acquired all of the issued share capital of BIH, a French *société par actions simplifiée*, the owner and operator of Business Immo, a leading commercial real estate news service provider in France, for €6 million ($6 million), net of cash acquired, and the assumption of outstanding debt. As part of the acquisition, the Company recorded goodwill and intangible assets of $8 million and $4 million, respectively. The net assets of Business Immo were recorded at their estimated fair value. The purchase price allocation is preliminary, subject primarily to the Company's assessment of certain tax matters and contingencies. The Company retired the assumed debt in the second quarter of 2022.

BureauxLocaux

On October 1, 2021, CoStar UK Limited, a wholly owned subsidiary of the Company, M.A.J.E. Marketing & Strategie and an individual entered into a Share Sale and Purchase Agreement pursuant to which the Company acquired all of the share capital interests in Comreal Info, a French *société par actions simplifiée*, the owner and operator of BureauxLocaux, a leading commercial real estate digital marketplace in France, for a base purchase price of €35 million ($41 million) in cash, subject to customary working capital and other post-closing adjustments which were settled in the fourth quarter of 2021. As part of the acquisition, the Company recorded goodwill and intangibles assets of $27 million and $18 million, respectively, in the Company's International operating segment. The net assets of BureauxLocaux were recorded at their estimated fair value. The purchase price allocation is preliminary, subject primarily to the Company's assessment of certain tax matters and contingencies.

Homes.com

On April 14, 2021, Landmark Media Enterprises, LLC (“Landmark”), Homes Group, LLC ("Homes.com") and CoStar Realty Information, Inc., a Delaware corporation and wholly owned subsidiary of the Company entered, into a securities purchase agreement, pursuant to which the Company agreed to acquire all of the outstanding equity interests in Homes.com from Landmark for a purchase price of $150 million in cash, subject to customary working capital and other post-closing adjustments. The Company's acquisition of Homes.com closed on May 24, 2021. The securities purchase agreement required an initial payment of $148 million, net of working capital adjustments, at the time of closing, with the remainder of the purchase price payable four months following the acquisition date, subject to offset for adjustments to the purchase price after final determination of closing net working capital. These amounts were settled in the third quarter of 2021 resulting in total consideration of $152 million. Homes.com is a residential real estate advertising and marketing services company primarily operating through its property listing and marketing portal, Homes.com.

The following table summarizes the amounts recorded for acquired assets and assumed liabilities recorded at their fair values as of the acquisition date (in thousands):

	Final: May 24, 2021
Cash, cash equivalents and restricted cash	$ —
Accounts receivable	1,798
Lease right-of-use assets	371
Goodwill	91,875
Intangible assets	53,400
Deferred tax assets	7,862
Lease liabilities	(371)
Deferred revenue	(1,521)
Other assets and liabilities	(1,239)
Fair value of identifiable net assets acquired	$ 152,175

The net assets of Homes.com were recorded at their estimated fair values. In valuing the acquired assets and assumed liabilities, fair value estimates were based primarily on future expected cash flows, market rate assumptions for contractual obligations and appropriate discount rates. The estimated fair value of the customer base assets incorporated significant assumptions that had a material impact on the estimated fair value, such as discount rates, projected revenue growth rates, customer attrition rates and profit margins.

The following table summarizes the fair values of the identifiable intangible assets acquired in the Homes.com acquisition included in the Company's North America operating segment, their related estimated useful lives (in years) and their respective amortization methods (in thousands):

	Estimated Fair Value	Estimated Useful Life	Amortization Method
Customer base	$ 32,000	8	Accelerated
Trade name	21,000	15	Straight-line
Technology	400	2	Straight-line
Total intangible assets	$ 53,400		

Goodwill is calculated as the excess of the consideration transferred over the net assets recognized and represents the future economic benefits arising from other assets acquired that could not be individually identified and separately recognized. Specifically, the goodwill recorded as part of the Homes.com acquisition includes but is not limited to: (i) the expected synergies and other benefits that the Company believes will result from combining its operations with Homes.com operations; and (ii) any intangible assets that do not qualify for separate recognition, such as the assembled workforce. The $92 million of goodwill recorded as part of the acquisition is associated with the Company's North America operating segment, of which $20 million is expected to be deductible for income tax purposes.

Transaction costs associated with the Homes.com acquisition were not material. In addition, the Company paid $5 million into a cash escrow account for stay bonuses for certain Homes.com employees, and recognized compensation expense for the stay bonus over the six-month post-combination period. Upon acquisition, the Company assessed the probability Homes.com would be required to pay certain state tax liabilities and recorded an accrual of $7 million determined in accordance with the provisions of *ASC* 450, “Contingencies,” as the fair value was not determinable. Landmark has agreed to indemnify the Company for tax liabilities related to periods prior to the acquisition and an indemnification asset was established for $7 million in the purchase price allocation.

Pro Forma Financial Information

The unaudited pro forma financial information presented below summarizes the combined results of operations for the Company and Homes.com as though the companies were combined as of January 1, 2020. The impact of the October 2021 BureauxLocaux and April 2022 Business Immo acquisitions on the pro forma financial information was not material and, therefore, has not been included. The unaudited pro forma financial information for all periods presented includes amortization charges from acquired intangible assets along with certain other accounting effects, and the related tax effects, but excludes the impacts of any expected operational synergies. The unaudited pro forma financial information as presented below is for informational purposes only and is not necessarily indicative of the results of operations that would have been achieved if the Homes.com acquisition had taken place on January 1, 2020.

The unaudited pro forma financial information for the three and nine months ended September 30, 2021 combine the historical results of the Company and Homes.com for the periods prior to the acquisition date, and the effects of the pro forma adjustments listed above.

The unaudited pro forma financial information, in the aggregate, was as follows (in thousands, except per share data):

	Three Months Ended September 30,	Nine Months Ended September 30,
	2021	2021
Revenue	$ 499,319	$ 1,455,316
Net income	$ 64,304	$ 193,596
Net income per share - basic	$ 0.16	$ 0.49
Net income per share - diluted	$ 0.16	$ 0.49

The impact of the Homes.com acquisition on the Company's revenues in the condensed consolidated statements of operations was an increase of $8 million and $12 million for the three and nine months ended September 30, 2021, respectively. The impact of the Homes.com acquisition on the Company's net income was a decrease of $7 million an $10 million for the three and nine months ended September 30, 2021, respectively.

6. INVESTMENTS AND FAIR VALUE MEASUREMENTS

Fair value is defined as the price that would be received in the sale of an asset or paid to transfer a liability in an orderly transaction between market participants. There is a three-tier fair value hierarchy, which categorizes the inputs used in measuring fair value. These tiers include: Level 1, defined as observable inputs such as quoted prices in active markets for identical assets or liabilities; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs for which little or no market data exists, therefore requiring an entity to develop its own assumptions.

As of September 30, 2022 and December 31, 2021, the Company's financial assets comprise Level 1 cash equivalents with original maturities of three months or less in the amount of $4.6 billion and $3.0 billion, respectively. As of September 30, 2022 and December 31, 2021, the Company had no Level 2 or Level 3 financial assets measured at fair value.

The Company holds other financial instruments, including cash equivalents, cash deposits, accounts receivable, accounts payable, accrued expenses and Senior Notes (as defined in Note 10). The carrying value for such financial instruments, other than the Senior Notes, each approximated their fair values as of September 30, 2022 and December 31, 2021. The estimated fair value of the Company's outstanding Senior Notes using quoted prices from the over-the-counter markets, considered Level 2 inputs, was $0.8 billion and $1.0 billion as of September 30, 2022 and December 31, 2021, respectively.

7. LEASES

The Company has operating leases for its office facilities and data centers, as well as finance leases for office equipment. The Company's leases have remaining terms of less than one year to six years. The leases contain various renewal and termination options. The period that is subject to an option to extend the lease is included in the lease term if it is reasonably certain that the option will be exercised. The period that is subject to an option to terminate the lease is included if it is reasonably certain that the option will not be exercised.

Lease costs related to the Company's operating leases included in the condensed consolidated statements of operations were as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Operating lease costs:				
Cost of revenues	$ 2,439	$ 2,717	$ 7,848	$ 7,446
Software development	1,998	1,910	5,895	4,913
Selling and marketing (excluding customer base amortization)	3,175	3,452	9,219	8,876
General and administrative	1,469	1,594	4,378	4,369
Total operating lease costs	$ 9,081	$ 9,673	$ 27,340	$ 25,604

The impact of lease costs related to finance leases and short-term leases was not material for the three and nine months ended September 30, 2022 and 2021.

Supplemental balance sheet information related to operating leases was as follows (in thousands):

Balance	Balance Sheet Location	September 30, 2022	December 31, 2021
Operating lease liabilities		$ 126,004	$ 134,150
Less: imputed interest		(7,072)	(8,512)
Present value of lease liabilities		118,932	125,638
Less: current portion of lease liabilities	Lease liabilities	34,063	26,268
Long-term lease liabilities	Lease and other long-term liabilities	$ 84,869	$ 99,370
Weighted-average remaining lease term in years		3.7	4.0
Weighted-average discount rate		3.1 %	3.1 %

Balance sheet information related to finance leases was not material as of September 30, 2022 and December 31, 2021.

Supplemental cash flow information related to leases was as follows (in thousands):

	Nine Months Ended September 30,	
	2022	2021
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows used in operating leases	$ 31,847	$ 28,082
ROU assets obtained in exchange for lease obligations:		
Operating leases	$ 19,184	$ 32,107

8. GOODWILL

The changes in the carrying amount of goodwill by operating segment consist of the following (in thousands):

	North America	International	Total
Goodwill, December 31, 2020	$ 2,085,494	$ 150,505	$ 2,235,999
Acquisitions, including measurement period adjustments(1)	60,352	27,441	87,793
Effect of foreign currency translation	—	(2,777)	(2,777)
Goodwill, December 31, 2021	2,145,846	175,169	2,321,015
Acquisitions, including measurement period adjustments(2)	3,401	7,548	10,949
Effect of foreign currency translation	—	(30,225)	(30,225)
Goodwill, September 30, 2022	$ 2,149,247	$ 152,492	$ 2,301,739

(1) North America goodwill recorded during the year ended December 31, 2021, includes goodwill recorded in connection with the acquisition of Homes.com of $88.5 million, offset by measurement period adjustments of $1.4 million for Ten-X and $26.7 million for Homesnap primarily related to the measurement of the fair value of Homesnap customer relationships in the first quarter of 2021. International goodwill recorded in connection with the acquisition of BureauxLocaux was $27.4 million.
(2) North America goodwill recorded during the nine months ended September 30, 2022 relates to a measurement period adjustment for income taxes for Homes.com of $3.4 million. International goodwill recorded in connection with the acquisition of Business Immo was $7.5 million.

No impairments of the Company's goodwill were recognized during the three and nine months ended September 30, 2022 or 2021.

9. INTANGIBLE ASSETS

Intangible assets consist of the following (in thousands, except amortization period data):

	September 30, 2022	December 31, 2021	Weighted-Average Amortization Period (in years)
Acquired technology and data	$ 39,412	$ 41,979	5
Accumulated amortization	(18,598)	(15,333)	
Acquired technology and data, net	20,814	26,646	
Acquired customer base	458,038	569,666	10
Accumulated amortization	(272,235)	(319,039)	
Acquired customer base, net	185,803	250,627	
Acquired trade names and other intangible assets	250,707	262,136	13
Accumulated amortization	(114,092)	(103,747)	
Acquired trade names and other intangible assets, net	136,615	158,389	
Intangible assets, net	$ 343,232	$ 435,662	

No impairments of the Company's intangible assets were recognized during the nine months ended September 30, 2022 and 2021. During the third quarter of 2022, the Company decided to eliminate certain usage fees related to agent access to a Homesnap product. This resulted in an acceleration of $16 million of amortization expense in the third quarter of 2022 for acquired customer base. During the nine months ended September 30, 2022, the Company removed $83 million of intangible assets that were fully amortized from the acquired intangible assets and accumulated amortization, which had no net impact on the Company's financial results.

10. LONG-TERM DEBT

The table below presents the components of outstanding debt (in thousands):

	September 30, 2022	December 31, 2021
2.800% Senior Notes due July 15, 2030	$ 1,000,000	$ 1,000,000
2020 Credit Agreement, due July 1, 2025	—	—
Total face amount of long-term debt	1,000,000	1,000,000
Senior Notes unamortized discount and issuance costs	(11,110)	(12,056)
Long-term debt, net	$ 988,890	$ 987,944

Senior Notes

On July 1, 2020, the Company issued $1.0 billion aggregate principal amount of 2.800% Senior Notes due July 15, 2030 (the “Senior Notes”). The Senior Notes were sold to a group of financial institutions as initial purchasers who subsequently resold the Senior Notes to non-U.S. persons pursuant to Regulation S under the Securities Act of 1933, as amended (the “Securities Act”), and to persons reasonably believed to be qualified institutional buyers pursuant to Rule 144A under the Securities Act at a purchase price equal to 99.921% of their principal amount. Interest on the Senior Notes is payable semi-annually in arrears on January 15 and July 15. The Senior Notes may be redeemed in whole or in part by the Company (a) at any time prior to April 15, 2030 at a redemption price equal to 100% of the principal amount of the Senior Notes, plus the Applicable Premium (as calculated in accordance with the indenture governing the Senior Notes), and any accrued and unpaid interest, if any, on the principal amount of Senior Notes being redeemed to, but excluding, the redemption date, and (b) on or after April 15, 2030 at a redemption price equal to 100% of the principal amount of the Senior Notes, plus any accrued and unpaid interest, if any, on the principal amount of Senior Notes being redeemed to, but excluding, the redemption date. The Company’s obligations under the Senior Notes are guaranteed on a senior, unsecured basis by the Company’s domestic wholly owned subsidiaries and the indenture governing the Senior Notes contains covenants and other customary provisions with which the Company was in compliance as of September 30, 2022.

Revolving Credit Facility

On July 1, 2020, the Company also entered into a second amended and restated credit agreement (the "2020 Credit Agreement"), which amended and restated in its entirety the then-existing credit agreement originally entered into in April 1, 2014 and amended and restated on October 19, 2017. The 2020 Credit Agreement provides for a $750 million revolving credit facility with a term of five years (maturing July 1, 2025) and a letter of credit sublimit of $20 million from a syndicate of financial institutions as lenders and issuing banks. A commitment fee of 0.25% to 0.30% per annum, depending on the Total Leverage Ratio (defined in 2020 Credit Agreement), is payable quarterly in arrears based on the unused revolving commitment.

Subject to certain conditions, on no more than five occasions, the Company may request increases in the amount of revolving commitments and/or the establishment of term commitments under the 2020 Credit Agreement. Borrowings under the 2020 Credit Agreement will bear interest at a floating rate which can be, at the Company’s option, either (a) an alternate base rate plus an applicable rate ranging from 0.50% to 1.25% or (b) a LIBOR or EURIBOR (with a floor of 0.00%) for the specified interest period plus an applicable rate ranging from 1.50% to 2.25%, in each case depending on the Company's Total Leverage Ratio (as defined in the 2020 Credit Agreement). As LIBOR may not always be available to the Company as a base interest rate for borrowings under the credit facility, the 2020 Credit Agreement allows the Company and the administrative agent under the 2020 Credit Agreement to amend the 2020 Credit Agreement to replace LIBOR with one or more Secured Overnight Financing Rate (“SOFR”) based rates or another alternative benchmark rate. Funds drawn down on the revolving credit facility pursuant to the 2020 Credit Agreement may be used for working capital and other general corporate purposes of the Company and its restricted subsidiaries. The obligations under the 2020 Credit Agreement are guaranteed by each of the Company’s current and future direct or indirect wholly owned restricted domestic subsidiaries, other than certain excluded subsidiaries, in each case subject to certain exceptions, pursuant to guarantee agreements.

The 2020 Credit Agreement includes covenants, including ones that, subject to certain exceptions, restrict the ability of the Company and its subsidiaries to (i) merge and consolidate with other companies, (ii) incur indebtedness, (iii) grant liens or security interests on assets, (iv) make investments, acquisitions, loans or advances, (v) pay dividends and (vi) sell or otherwise transfer assets. During any period of time that the Company has obtained and maintained a corporate investment grade rating from at least two designated rating agencies and no Event of Default is continuing, the Company is not subject to certain covenants, such as restrictions on the ability to incur indebtedness (such period, a "Covenant Suspension Period"). As of September 30, 2022, the Company is in a Covenant Suspension Period. The 2020 Credit Agreement also requires the Company to maintain a Total Leverage Ratio (as defined in the 2020 Credit Agreement) not exceeding 4.50 to 1.00. The Company was in compliance with the covenants in the 2020 Credit Agreement as of September 30, 2022.

As of September 30, 2022, the Company had not drawn any amounts under this facility.

The Company had $3.0 million and $3.8 million of deferred debt issuance costs as of September 30, 2022 and December 31, 2021, respectively, in connection with the 2020 Credit Agreement. These amounts are included in deposits and other assets on the Company's condensed consolidated balance sheets.

The Company recognized interest expense as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	**2021**	**2022**	**2021**
Interest on outstanding borrowings	$ 7,000	$ 7,000	$ 21,000	$ 21,000
Amortization of Senior Notes discount and issuance costs	593	583	1,771	1,742
Commitment fees and other	529	522	1,484	1,499
Total interest expense	$ 8,122	$ 8,105	$ 24,255	$ 24,241

11. INCOME TAXES

The income tax provision reflects an effective tax rate of approximately 26% and 23% for the three months ended September 30, 2022 and 2021, respectively, and 25% and 26% for the nine months ended September 30, 2022 and 2021, respectively. The increase in the effective tax rate for the three months ended September 30, 2022 was due to higher income before income taxes for the three months ended September 30, 2022. The decrease in the effective tax rate for the nine months ended September 30, 2022 was due to a discrete restructuring gain for the nine months ended September 30, 2021, partially offset by a decrease in excess tax benefits for the nine months ended September 30, 2022.

12. COMMITMENTS AND CONTINGENCIES

The following summarizes the Company's significant contractual obligations, including related payments due by period, as of September 30, 2022 (in thousands):

Year Ending December 31,	Operating lease obligations	Long-term debt principal payments	Long-term interest payments
Remainder of 2022	$ 6,029	$ —	$ —
2023	41,375	—	28,000
2024	36,491	—	28,000
2025	18,948	—	28,000
2026	9,771	—	28,000
Thereafter	13,390	1,000,000	112,000
Total	$ 126,004	$ 1,000,000	$ 224,000

Currently, and from time to time, the Company is involved in litigation incidental to the conduct of its business. In accordance with GAAP, the Company records a provision for a liability when it is both probable that a liability has been incurred and the amount can be reasonably estimated. While it is reasonably possible that an unfavorable outcome may occur as a result of one or more of the Company's current litigation matters, at this time, management has concluded that the resolutions of these matters are not expected to have a material effect on the Company's consolidated financial position, future results of operations or liquidity. Legal defense costs are expensed as incurred.

13. SEGMENT REPORTING

Segment Information

The Company manages its business geographically in two operating segments, with the primary areas of measurement and decision-making being North America, which includes the U.S. and Canada, and International, which primarily includes Europe, Asia-Pacific and Latin America. Management relies on an internal management reporting process that provides revenue and operating segment net income before interest expense (income) and other expense (income), loss on debt extinguishment, income taxes, depreciation and amortization ("EBITDA"). Management believes that operating segment EBITDA is an appropriate measure for evaluating the operational performance of the Company's operating segments. EBITDA is used by management to internally measure operating and management performance, and to evaluate the performance of the business. However, this measure should be considered in addition to, not as a substitute for or superior to, income from operations or other measures of financial performance prepared in accordance with GAAP.

Summarized EBITDA information by operating segment consists of the following (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
North America	$ 127,965	$ 119,823	$ 422,454	$ 385,857
International	1,184	2,849	5,133	5,683
Total EBITDA	$ 129,149	$ 122,672	$ 427,587	$ 391,540

The reconciliation of net income to EBITDA consists of the following (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Net income	$ 72,290	$ 64,304	$ 245,081	$ 199,664
Amortization of acquired intangible assets in cost of revenues	6,945	7,209	21,980	21,565
Amortization of acquired intangible assets in operating expenses	29,651	19,121	60,621	55,885
Depreciation and other amortization	7,224	6,610	21,199	22,138
Interest (income) expense, net	(10,656)	7,943	461	23,698
Other income, net	(1,389)	(1,546)	(3,596)	(2,343)
Income tax expense	25,084	19,031	81,841	70,933
EBITDA	$ 129,149	$ 122,672	$ 427,587	$ 391,540

Summarized information by operating segment consists of the following (in thousands):

	September 30, 2022	December 31, 2021
Property and equipment, net:		
North America	$ 305,388	$ 269,792
International	931	1,639
Total property and equipment, net	$ 306,319	$ 271,431
Goodwill:		
North America	$ 2,149,247	$ 2,145,846
International	152,492	175,169
Total goodwill	$ 2,301,739	$ 2,321,015
Assets:		
North America	$ 7,970,371	$ 6,976,752
International	235,492	280,119
Total assets	$ 8,205,863	$ 7,256,871
Liabilities:		
North America	$ 1,456,678	$ 1,502,497
International	42,273	42,702
Total liabilities	$ 1,498,951	$ 1,545,199

14. STOCKHOLDER'S EQUITY

Equity Offering

On September 20, 2022, the Company completed a public equity offering of 10,656,436 shares of common stock at an offering price of $70.38 per share. Net proceeds from the public equity offering were approximately $745.7 million, after deducting approximately $4.3 million of underwriting fees, commissions and other stock issuance costs. The Company expects to use the net proceeds from the sale of the shares of common stock to fund all or a portion of the costs of any strategic acquisitions it pursues in the future, to finance the growth of its business and for working capital and other general corporate purposes. General corporate purposes may include additions to working capital, capital expenditures, repayment of debt, investments in the Company’s subsidiaries, and the repurchase, redemption or retirement of securities, including the Company’s common stock.

Refer to the Company's Annual Report on Form 10-K for the year ended December 31, 2021, filed with the Securities and Exchange Commission on February 23, 2022, for further details on the Company's Stockholders' Equity.

15. SUBSEQUENT EVENTS

The Company has evaluated subsequent events and transactions that occurred after the balance sheet date up to the date that the financial statements were issued. Based upon this review, the company did not identify any material subsequent events that would have required adjustment or disclosure in the financial statements.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following Management’s Discussion and Analysis of Financial Condition and Results of Operations contains “forward-looking statements,” including statements about our beliefs and expectations. There are many risks and uncertainties that could cause actual results to differ materially from those discussed in the forward-looking statements. Potential factors that could cause actual results to differ materially from those discussed in any forward-looking statements include, but are not limited to, those stated under the heading “Cautionary Statement Concerning Forward-Looking Statements” at the end of this Item 2 and “Risk Factors” in Item 1A of Part II of this Quarterly Report on Form 10-Q, as well as those described from time to time in our filings with the Securities and Exchange Commission.

All forward-looking statements are based on information available to us on the date of this filing, and we assume no obligation to update such statements, whether as a result of new information, future events or otherwise, except as required by law. The following discussion should be read in conjunction with our Annual Report on Form 10-K for the year ended December 31, 2021 (the “2021 Form 10-K”), our subsequent Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and other filings with the Securities and Exchange Commission and the condensed consolidated financial statements and related notes included in this Quarterly Report on Form 10-Q.

Overview

CoStar Group, Inc. (the “Company,” “CoStar Group,” “we,” “us” or “our”) is a leading provider of information, analytics and online marketplaces to the commercial real estate industry in the United States (“U.S.”) and United Kingdom (“U.K.”) based on the fact that we offer a comprehensive commercial real estate database available; have the largest research department in the industry; own and operate leading online marketplaces for commercial real estate and apartment listings in the U.S., based on the numbers of unique visitors and site visits per month; and provide more information, analytics and marketing services than any of our competitors. We have created and compiled a standardized platform of information, analytics and online marketplace services where industry professionals and consumers of commercial real estate, including apartments, and the related business communities, can continuously interact and facilitate transactions by efficiently accessing and exchanging accurate and standardized real estate-related information. Our service offerings span all commercial property types, including office, retail, industrial, multifamily, commercial land, mixed-use and hospitality. With our recent acquisitions of Homesnap, Inc. (“Homesnap”) and Homes Group, LLC ("Homes.com"), we also offer online platforms for marketing and workflow management for residential real estate agents and brokers and residential property listings for homebuyers.

We manage our business geographically in two operating segments, with our primary areas of measurement and decision-making being North America, which includes the U.S. and Canada, and International, which primarily includes Europe, Asia-Pacific and Latin America. Our most recent strategic acquisitions include Homes.com; ComReal Info, the owner and operator of BureauxLocaux in France and BIH the owner and operator of Business Immo, a leading commercial real estate news service provider in France. See Notes 5 and 8 to the accompanying Notes to the condensed consolidated financial statements included in Part I of this Quarterly Report on Form 10-Q for further discussion of these acquisitions.

Our services are typically distributed to our clients under subscription-based license agreements that renew automatically, a majority of which have a term of at least one year. Upon renewal, many of the subscription contract rates may change in accordance with contract provisions or as a result of contract renegotiations. To encourage clients to use our services regularly, we generally charge a fixed monthly amount for our subscription-based services rather than charging fees based on actual system usage or number of paid clicks. Depending on the type of service, contract rates are generally based on one or more of the following factors: the number of sites, number of users, organization size, the client’s business focus, geography, the number of properties reported on or analyzed, the number and types of services to which a client subscribes, the number of properties a client advertises and the prominence and placement of a client's advertised properties in the search results. Our subscription clients generally pay contract fees on a monthly basis, but in some cases may pay us on a quarterly or annual basis. Our transaction-based services primarily consist of auction fees from our Ten-X online auction platform, which are generally calculated as a percentage of the final sales price for the commercial real estate property sold and recognized as revenue upon the successful closure of an auction. Other transaction-based services are described by service offering below.

Our primary brands include CoStar®, LoopNet®, Apartments.com™, STR®, Ten-X®, BizBuySell®, LandsofAmerica™, HomeSnap®, and Homes.com®, which are accessible via the Internet and through our mobile applications. Our principal service offerings are discussed in more detail below.

Impacts of the COVID-19 Pandemic and Current Economic Conditions

The COVID-19 pandemic has created significant economic volatility, uncertainty and disruption around the world. Further, in response to the concerns over inflation risk, the U.S. Federal Reserve has raised interest rates in the first, second and third quarters of 2022 and signaled it expects additional rate increases. While the impacts of the COVID-19 pandemic and current economic conditions continue to evolve, they have not materially affected our consolidated financial statements during 2021 or our condensed consolidated financial statements for September 30, 2022. It is currently unclear how the commercial real estate industry will ultimately be impacted by the COVID-19 pandemic as businesses formulate and execute plans for employees to return to the office, implement hybrid work arrangements – allowing work from the office or home, or switch to all work from home. These activities may result in reduced demand for office space and rising interest rates may reduce demand for all types of real estate. If the demand for office space or other real estate decreases significantly, there could be a downturn in the commercial real estate market that may materially adversely affect many of our clients. A depressed commercial real estate market would have a negative impact on our core customer base, which could impact our customers' ability to subscribe and pay for our services and reduce demand for our services. Reduced demand and increased cancellations could cause our revenues or our revenue growth rates to decline and reduce our profitability.

Service Offerings

Our portfolio of information, analytics and online marketplace services are branded and marketed to our customers and marketplace end users. Our services are primarily derived from a database of building-specific information and offering customers specialized tools for accessing, analyzing and using our information. Over time, we enhanced and expanded, and we expect to continue to enhance and expand, our existing information, analytics and online marketplace services and we have developed, and we expect to continue to develop, additional services that use our comprehensive database to meet the needs of our existing customers as well as potential new categories of customers.

Our principal information, analytics and online marketplace services are described in the following paragraphs by type of service:

CoStar

CoStar® is our subscription-based integrated platform for commercial real estate intelligence, which includes information about office, industrial, retail, multifamily and student housing properties, properties for sale, comparable sales, tenants, space available for lease, industry professionals and their business relationships, industry news, and market and lease analytical capabilities. CoStar's year-over-year revenue growth rate for the third quarter of 2022 increased compared to the third quarter of 2021. The number of subscribers has increased year-over-year and we have also realized the impact of price increases and existing customers upgrading to our global service offering. We began applying price increases in late 2021, which had been temporarily suspended earlier in the COVID-19 pandemic. We expect CoStar's revenue growth rate for 2022 to increase compared to the revenue growth rate for 2021 as a result of expected increases in subscriber counts and price increases and customer upgrades for renewing contracts.

Information Services

We provide real estate and lease management technology solutions, including lease administration, lease accounting and abstraction services, through our CoStar Real Estate Manager® service offerings, as well as portfolio and debt analysis, management and reporting capabilities through our CoStar Investment Analysis and CoStar Risk Analytics® service offerings. We also provide benchmarking reports for the hospitality industry. STAR™ reports are provided on a subscription basis and we also provide one-time or ad hoc reports or analysis on a transaction basis. We provide information services internationally, through our Grecam, Belbex and Thomas Daily businesses in France, Spain and Germany, respectively. Information Services' year-over-year revenue growth rate for the third quarter of 2022 increased compared to the third quarter of 2021 as a result of increased revenue from CoStar Real Estate Manager services. We expect the Information Services revenue growth rate for 2022 to be consistent with the revenue growth rate for 2021.

Multifamily

Apartments.com™ is part of our network of apartment marketing sites, which primarily includes ApartmentFinder®, ForRent.com®, ApartmentHomeLiving.com™, Apartamentos.com™, Westside Rentals, and Off Campus Partners, LLC. Our network of subscription-based advertising services provides property management companies and landlords with a comprehensive advertising destination for their available rental units and offers renters a platform for searching for available rentals. Apartments.com also receives transaction-based revenue for tenant processing fees. Multifamily's year-over-year revenue growth rate in the third quarter of 2022 increased compared to the third quarter of 2021 as a result of the new pricing structure implemented in late 2021. We expect Multifamily's year-over-year revenue growth rate for 2022 to decrease compared to the revenue growth rate for 2021 primarily due to pricing of contracts executed prior to new pricing structure.

LoopNet

Our LoopNet.com network of commercial real estate websites offer subscription-based online marketplace services that enable commercial property owners, landlords and real estate agents working on their behalf to advertise properties for sale or for lease and to submit detailed information about property listings. Commercial real estate agents, buyers and tenants use the LoopNet.com network of online marketplace services to search for available property listings that meet their criteria. LoopNet's year-over-year revenue growth rate for the third quarter of 2022 decreased compared to the third quarter of 2021. We expect LoopNet's year-over-year revenue growth rate for 2022 to decrease compared to the revenue growth rate for 2021 as we continue to develop a dedicated sales force for LoopNet.

Residential

On December 22, 2020, we acquired Homesnap, an online and mobile software platform that provides subscription-based access to applications that manage residential real estate agent workflow and marketing campaigns delivered on third-party platforms. Homesnap also receives transaction-based revenue for short-term advertising delivered on third-party platforms. On May 24, 2021, we acquired Homes.com, a residential advertising and marketing services company primarily operating through its portal, Homes.com. Residential's third quarter 2022 revenue decreased compared to the third quarter of 2021 due to the discontinuation of certain Homes.com products and services that were inconsistent with our long-term business strategy, partially offset by increased sales of Homesnap products and services. We expect Residential's revenue for the year ended December 31, 2022 to decline when compared to the year ended December 31, 2021 due to the same factors.

Other Marketplaces

On June 24, 2020, we acquired Ten-X, an online auction platform for commercial real estate. Our BizBuySell network, which includes BizQuest® and FindaFranchise, and our Land.com network of sites, which includes LandsofAmerica, LandAndFarm and LandWatch®, are also included in Other Marketplaces revenue. The BizBuySell network provides online marketplaces for businesses for-sale and our Land.com network of sites provides online marketplaces for rural lands for-sale. Other Marketplaces' third quarter 2022 revenue growth rate decreased compared to the third quarter of 2021 due to the impact of the Ten-X acquisition in 2020. Other Marketplaces' revenue growth rate is expected to be lower in 2022 compared to 2021 given the impact of the Ten-X acquisition in 2020.

Subscription-based Services

The majority of our revenue is generated from service offerings, which are distributed to our clients under subscription-based agreements that typically renew automatically and have a term of at least one year. We recognize subscription revenues on a straight-line basis over the life of the contract.

For the three months ended September 30, 2022 and September 30, 2021, our annualized net new bookings of subscription-based services on all contracts were approximately $76 million and $47 million, respectively. Net new bookings is calculated based on the annualized amount of change in our sales bookings resulting from all new subscription-based contracts or upgrades on existing subscription-based contracts, less downgrades and cancellations for the period reported. Net new bookings is considered an operating metric that is an indicator of future subscription revenue growth and is also used as a metric of sales force productivity by us and investors. However, information regarding net new bookings is not comparable to, nor should it be substituted for, an analysis of our revenues over time. Revenue from our subscription-based contracts was approximately 92% and 90% of total revenue for the three months ended September 30, 2022 and September 30, 2021, respectively.

For the trailing twelve months ended September 30, 2022 and 2021, our contract renewal rates for existing CoStar Group subscription-based services for contracts with a term of at least one year were approximately 91% and 92%, respectively, and therefore our cancellation rates for those services for the same periods were approximately 9% and 8% respectively. Our contract renewal rate is a quantitative measurement that is typically closely correlated with our revenue results. As a result, we believe that the rate may be a reliable indicator of short-term and long-term performance absent extraordinary circumstances. Our trailing twelve-month contract renewal rate may decline as a result of negative economic conditions, consolidations among our clients, reductions in customer spending, or decreases in our customer base. Revenue from our subscription-based contracts with a term of at least one year was approximately 79% and 77% of total revenue for the trailing twelve months ended September 30, 2022 and September 30, 2021, respectively.

Development, Investments and Expansion

We plan to continue to invest in our business and our services, evaluate strategic growth opportunities, and pursue our key priorities as described below, while we closely monitor the economic impacts of the COVID-19 pandemic and manage our response. We are committed to supporting, improving and enhancing our information, analytics and online marketplace solutions, including expanding and improving our offerings for our client base and site users, including property owners, property managers, buyers, commercial tenants, brokers, agents and residential renters. We expect to continue our software development efforts to improve existing services, introduce new services, integrate and cross-sell services, integrate recently completed acquisitions and expand and develop supporting technologies for our research, sales and marketing organizations. We reevaluate our priorities on a regular basis and may reevaluate our priorities as the COVID-19 pandemic continues to evolve.

Our key priorities for the remainder of 2022 currently include:

- Continuing to develop and invest in residential marketplaces. Our residential team is creating new and improved tools to help consumers have a highly contextual experience when searching for homes supported by high quality media and in-depth attributes of homes and details of the surrounding neighborhoods, parks and schools and to help consumers collaborate with their agent and co-buyers. We are also creating new and improved tools to help agents promote their residential listings, connect with buyers and sellers and streamline their daily workflow. In the second quarter of 2022, we launched Citysnap™, a consumer-facing search website and mobile app specifically for the five boroughs of New York City in conjunction with the Real Estate Board of New York. To support the expanded product offerings, we expect to increase our investment in residential products in 2022 by approximately $125 million compared to 2021 levels. The most significant components of our investment are expected to be content development, marketing costs and technology resources. The increase in our investment in residential products in 2022 is expected to reduce our results of operations and cash flow from operations for the year ended December 31, 2022. We plan to continue to monitor and evaluate these investments and adjust our residential business strategy and level of investment as we determine appropriate.

- Continuing to invest in our international business. We plan to enhance our international commercial real estate marketplaces leveraging our LoopNet brand in the United Kingdom, Spain, France and Germany and to expand our international presence by hiring managers and teams of field researchers in certain European markets.

- Continuing to expand our sales forces. We have implemented initiatives to improve our retention and new employee training and have increased the size of our sales recruiting team. These actions have resulted in a net increase in our sales force headcount. We plan further increases in our sales force headcount and further development of sales teams dedicated to our key products.

- Continuing to invest in CoStar, including:

    - Enhancing benchmarking capabilities. We integrated STR's data into CoStar in 2021 and plan to apply STR's benchmarking expertise within CoStar. We will continue to integrate the STR products into our core platform.

    - Continuing to develop and market a solution for lenders that leverages CoStar's Risk Analytics capabilities to support lenders with risk management, underwriting, surveillance and compliance reporting. We released our new Lender product in the first quarter of 2022. This solution provides a focus on portfolio risk analytics and surveillance to help lenders meet regulatory and accounting requirements. Subsequent product releases are expected to focus on loan origination and underwriting.

    - Enhancing analytics capabilities. We are adding information on commercial property investment funds and linking property data to to allow fund investors to perform detailed analysis on their property portfolios directly in the CoStar platform.

We intend to continue to assess the need for additional investments in our business in order to develop and distribute new services and functionality within our current platform or expand the reach of, or otherwise improve, our current service offerings. Any future product development or expansion of services, combination and coordination of services or elimination of services or corporate expansion, development or restructuring efforts could reduce our profitability and increase our capital expenditures. Any new investments, changes to our service offerings or other unforeseen events could cause us to experience reduced revenues or generate losses and negative cash flow from operations in the future. Any development efforts must comply with our credit facility, which contains restrictive covenants that restrict our operations and use of our cash flow and may prevent us from taking certain actions that we believe could increase our profitability or otherwise enhance our business.

Non-GAAP Financial Measures

We prepare and publicly release quarterly unaudited financial statements prepared in accordance with generally accepted accounting principles (“GAAP”). We also disclose and discuss certain non-GAAP financial measures in our public releases, investor conference calls and filings with the Securities and Exchange Commission. The non-GAAP financial measures that we may disclose include net income before interest (expense) income, other (expense) income, loss on debt extinguishment, income taxes, depreciation and amortization (“EBITDA”), adjusted EBITDA, adjusted EBITDA margin, non-GAAP net income and non-GAAP net income per diluted share. EBITDA is our net income before interest (expense) income, other (expense) income, loss on debt extinguishment, income taxes, depreciation and amortization. We typically disclose EBITDA on a consolidated and an operating segment basis in our earnings releases, investor conference calls and filings with the Securities and Exchange Commission. Adjusted EBITDA is different from EBITDA because we further adjust EBITDA for stock-based compensation expense, acquisition- and integration-related costs, restructuring costs and settlements and impairments incurred outside our ordinary course of business. Adjusted EBITDA margin represents adjusted EBITDA divided by revenues for the period. Non-GAAP net income is determined by adjusting our net income for stock-based compensation expense, acquisition- and integration-related costs, restructuring costs, settlement and impairment costs incurred outside our ordinary course of business and loss on debt extinguishment, as well as amortization of acquired intangible assets and other related costs, and then subtracting an assumed provision for income taxes. Non-GAAP net income per diluted share is a non-GAAP financial measure that represents non-GAAP net income divided by the number of diluted shares outstanding for the period used in the calculation of GAAP net income per diluted share.

We may disclose adjusted EBITDA, adjusted EBITDA margin, non-GAAP net income and non-GAAP net income per diluted share on a consolidated basis in our earnings releases, investor conference calls and filings with the Securities and Exchange Commission. The non-GAAP financial measures that we use may not be comparable to similarly titled measures reported by other companies. Also, in the future, we may disclose different non-GAAP financial measures in order to help our investors meaningfully evaluate and compare our results of operations to our previously reported results of operations or to those of other companies in our industry.

We view EBITDA, adjusted EBITDA, adjusted EBITDA margin, non-GAAP net income and non-GAAP net income per diluted share as operating performance measures. We believe that the most directly comparable GAAP financial measure to EBITDA, adjusted EBITDA and non-GAAP net income is net income. We believe the most directly comparable GAAP financial measures to non-GAAP net income per diluted share and adjusted EBITDA margin are net income per diluted share and net income divided by revenue, respectively. In calculating EBITDA, adjusted EBITDA, adjusted EBITDA margin, non-GAAP net income and non-GAAP net income per diluted share, we exclude from net income the financial items that we believe should be separately identified to provide additional analysis of the financial components of the day-to-day operation of our business. We have outlined below the type and scope of these exclusions and the material limitations on the use of these non-GAAP financial measures as a result of these exclusions. EBITDA, adjusted EBITDA, adjusted EBITDA margin, non-GAAP net income and non-GAAP net income per diluted share are not measurements of financial performance under GAAP and should not be considered as a measure of liquidity, as an alternative to net income or as an indicator of any other measure of performance derived in accordance with GAAP. Investors and potential investors in our securities should not rely on EBITDA, adjusted EBITDA, adjusted EBITDA margin, non-GAAP net income and non-GAAP net income per diluted share as a substitute for any GAAP financial measure, including net income and net income per diluted share. In addition, we urge investors and potential investors in our securities to carefully review the GAAP financial information included as part of our Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q that are filed with the Securities and Exchange Commission, as well as our quarterly earnings releases, and compare the GAAP financial information with our EBITDA, adjusted EBITDA, adjusted EBITDA margin, non-GAAP net income and non-GAAP net income per diluted share.

EBITDA, adjusted EBITDA, adjusted EBITDA margin, non-GAAP net income and non-GAAP net income per diluted share may be used by management to internally measure our operating and management performance and may be used by investors as supplemental financial measures to evaluate the performance of our business. We believe that these non-GAAP measures, when viewed with our GAAP results and accompanying reconciliations, provide additional information to investors that is useful to understand the factors and trends affecting our business without the impact of certain acquisition-related items. We have spent more than 30 years building our database of commercial real estate information and expanding our markets and services partially through acquisitions of complementary businesses. Due to these acquisitions, our net income has included significant charges for amortization of acquired intangible assets, depreciation and other amortization, acquisition- and integration-related costs, restructuring costs, and loss on debt extinguishment. Adjusted EBITDA, adjusted EBITDA margin, non-GAAP net income and non-GAAP net income per diluted share exclude these charges and provide meaningful information about the operating performance of our business, apart from charges for amortization of acquired intangible assets, depreciation and other amortization, acquisition- and integration-related costs, restructuring costs; settlement and impairment costs incurred outside our ordinary course of business. We believe the disclosure of non-GAAP measures can help investors meaningfully evaluate and compare our performance from quarter to quarter and from year to year without the impact of these items. We also believe the non-GAAP measures we disclose are measures of our ongoing operating performance because the isolation of non-cash charges, such as amortization and depreciation, and other items, such as interest (expense) income and other (expense) income, income taxes, stock-based compensation expenses, acquisition- and integration-related costs, restructuring costs, loss on debt extinguishment and settlement and impairment costs incurred outside our ordinary course of business, provides additional information about our cost structure, and, over time, helps track our operating progress. In addition, investors, securities analysts and others have regularly relied on EBITDA and may rely on adjusted EBITDA, adjusted EBITDA margin, non-GAAP net income or non-GAAP net income per diluted share to provide a financial measure by which to compare our operating performance against that of other companies in our industry.

Set forth below are descriptions of financial items that have been excluded from net income to calculate EBITDA and the material limitations associated with using this non-GAAP financial measure as compared to net income:

- Amortization of acquired intangible assets in cost of revenues may be useful for investors to consider because it represents the diminishing value of any acquired trade names and other intangible assets and the use of our acquired technology, which is one of the sources of information for our database of commercial real estate information. We do not believe these charges necessarily reflect the current and ongoing cash charges related to our operating cost structure.

- Amortization of acquired intangible assets in operating expenses may be useful for investors to consider because it represents the estimated attrition of our acquired customer base. We do not believe these charges necessarily reflect the current and ongoing cash charges related to our operating cost structure.

- Depreciation and other amortization may be useful for investors to consider because they generally represent the wear and tear on our property and equipment used in our operations. We do not believe these charges necessarily reflect the current and ongoing cash charges related to our operating cost structure.

- The amount of interest (expense) income and other (expense) income we generate and incur may be useful for investors to consider and may result in current cash inflows and outflows. However, we do not consider the amount of interest (expense) income and other (expense) income to be a representative component of the day-to-day operating performance of our business.

- Income tax expense may be useful for investors to consider because it generally represents the taxes which may be payable for the period and the change in deferred income taxes during the period and may reduce the amount of funds otherwise available for use in our business. However, we do not consider the amount of income tax expense to be a representative component of the day-to-day operating performance of our business.

- The amount of loss on our debt extinguishment may be useful for investors to consider because it generally represents losses from the early extinguishment of debt. However, we do not consider the amount of the loss on debt extinguishment to be a representative component of the day-to-day operating performance of our business.

Set forth below are descriptions of additional financial items that have been excluded from EBITDA to calculate adjusted EBITDA and the material limitations associated with using this non-GAAP financial measure as compared to net income:

- Stock-based compensation expense may be useful for investors to consider because it represents a portion of the compensation of our employees and executives. Determining the fair value of the stock-based instruments involves a high degree of judgment and estimation and the expenses recorded may bear little resemblance to the actual value realized upon the future exercise or termination of the related stock-based awards. Therefore, we believe it is useful to exclude stock-based compensation in order to better understand the long-term performance of our core business.

- The amount of acquisition- and integration-related costs incurred may be useful for investors to consider because such costs generally represent professional service fees and direct expenses related to acquisitions. Because we do not acquire businesses on a predictable cycle, we do not consider the amount of acquisition- and integration-related costs to be a representative component of the day-to-day operating performance of our business.

- The amount of settlement and impairment costs incurred outside of our ordinary course of business may be useful for investors to consider because they generally represent gains or losses from the settlement of litigation matters or impairments on acquired intangible assets. We do not believe these charges necessarily reflect the current and ongoing cash charges related to our operating cost structure.

- The amount of restructuring costs incurred may be useful for investors to consider because they generally represent costs incurred in connection with a change in a contract or a change in the makeup of our properties or personnel. We do not consider the amount of restructuring related costs to be a representative component of the day-to-day operating performance of our business.

The financial items that have been excluded from our net income to calculate non-GAAP net income and non-GAAP net income per diluted share are amortization of acquired intangible assets and other related costs, stock-based compensation, acquisition- and integration-related costs, restructuring and related costs and settlement and impairment costs incurred outside our ordinary course of business. These items are discussed above with respect to the calculation of adjusted EBITDA together with the material limitations associated with using this non-GAAP financial measure as compared to net income. In addition to these exclusions from net income, we subtract an assumed provision for income taxes to calculate non-GAAP net income. In 2022 and 2021, we assumed a 26% and 25% tax rate, respectively, which approximated our historical long-term statutory corporate tax rate, excluding the impact of discrete items.

We compensate for the above-described limitations of using non-GAAP measures by using a non-GAAP measure only to supplement our GAAP results and to provide additional information that is useful to investors to understand the factors and trends affecting our business.

The following table shows our net income reconciled to our EBITDA and our net cash flows from operating, investing and financing activities for the indicated periods (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Net income	$ 72,290	$ 64,304	$ 245,081	$ 199,664
Amortization of acquired intangible assets in cost of revenues	6,945	7,209	21,980	21,565
Amortization of acquired intangible assets in operating expenses	29,651	19,121	60,621	55,885
Depreciation and other amortization	7,224	6,610	21,199	22,138
Interest (income) expense, net	(10,656)	7,943	461	23,698
Other income, net	(1,389)	(1,546)	(3,596)	(2,343)
Income tax expense	25,084	19,031	81,841	70,933
EBITDA	$ 129,149	$ 122,672	$ 427,587	$ 391,540
Net cash flows provided by (used in)				
Operating activities	$ 81,490	$ 98,929	$ 293,589	$ 319,218
Investing activities	$ (18,779)	$ (12,715)	$ (76,486)	$ (297,505)
Financing activities	$ 749,103	$ 1,800	$ 734,533	$ (14,338)

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

The following table provides a comparison of our selected consolidated results of operations for the three months ended September 30, 2022 and September 30, 2021 (in thousands):

	Three Months Ended September 30,			
	2022	2021	Increase (Decrease) ($)	Increase (Decrease) (%)
Revenues:				
CoStar	$ 212,690	$ 183,265	$ 29,425	16 %
Information Services	41,013	35,926	5,087	14
Multifamily	189,536	171,125	18,411	11
LoopNet	58,901	52,527	6,374	12
Residential	19,351	24,747	(5,396)	(22)
Other Marketplaces	35,430	31,729	3,701	12
Total revenues	556,921	499,319	57,602	12
Cost of revenues	108,364	92,597	15,767	17
Gross profit	448,557	406,722	41,835	10
Operating expenses:				
Selling and marketing (excluding customer base amortization)	185,395	180,055	5,340	3
Software development	56,912	53,143	3,769	7
General and administrative	91,270	64,671	26,599	41
Customer base amortization	29,651	19,121	10,530	55
Total operating expenses	363,228	316,990	46,238	15
Income from operations	85,329	89,732	(4,403)	(5)
Interest income (expense), net	10,656	(7,943)	(18,599)	NM
Other income, net	1,389	1,546	(157)	(10)
Income before income taxes	97,374	83,335	14,039	17
Income tax expense	25,084	19,031	6,053	32
Net income	$ 72,290	$ 64,304	$ 7,986	12

NM - Not meaningful

Revenues. Revenues increased to $557 million for the three months ended September 30, 2022, from $499 million for the three months ended September 30, 2021. The $58 million increase was attributable to increases in revenues for several of our service offerings. CoStar revenues increased $29 million, or 16%, due to higher sales volume driven by an increase in subscribers, as well as, the impact of annual price increases and customer upgrades on contract renewals. Multifamily revenues increased $18 million, or 11%, due to increases in pricing on renewals, partially offset by a less favorable mix of ad packages purchased. LoopNet revenue increased $6 million or 12%, primarily as a result of an increase in average prices, and to a lesser extent, due to the acquisition of BureauxLocaux. Information Services revenues increased $5 million, or 14%, primarily attributable to increased revenue for our CoStar Real Estate Manager product and STR service offerings. Other Marketplaces revenues increased $4 million, or 12%, driven by an increase of Land for Sale revenue and to a lesser extent, an increase in revenue for BizBuySell, and Ten-X. Residential revenues decreased $5 million, or 22%, due to the discontinuation of certain Homes.com products and services that were inconsistent with our long-term business strategy, partially offset by an increase in sales of Homesnap's products and services.

Gross Profit. Gross profit increased to $449 million for the three months ended September 30, 2022, from $407 million for the three months ended September 30, 2021, and the gross profit percentage was consistent at 81% for both the three months ended September 30, 2022 and 2021, The increase in gross profit was due to higher revenues, partially offset by, an increase in cost of revenues of $16 million, or 17%. The increase in cost of revenues was primarily due to an increase of $11 million in personnel costs, driven by a $5 million increase in salaries attributable to an increase in headcount and a $3 million increase in bonus and severance expenses. In addition, there was an increase of $4 million in software and equipment, to support our researchers and investment and further development of our residential marketplaces.

Selling and Marketing Expenses. Selling and marketing expenses increased to $185 million for the three months ended September 30, 2022, from $180 million for the three months ended September 30, 2021. The $5 million increase was primarily attributable to a $9 million increase in personnel costs driven by a $6 million increase in salaries, primarily attributable to an increase in headcount, and an increase in commissions of $2 million, as well as, a $2 million increase in travel spend. These increases were partially offset by a $7 million decrease in marketing costs, primarily attributable to an $18 million decrease in marketing spend for products, excluding our residential marketplaces, mostly due to lower agency fees for LoopNet and multifamily. The decrease in marketing costs was partially offset by, an $11 million increase in marketing for our residential marketplace products, lead by increases in spending on search engine marketing, agency fees, digital marketing, and events spending.

Software Development Expenses. Software development expenses increased to $57 million for the three months ended September 30, 2022, from $53 million for the three months ended September 30, 2021, and decreased as a percentage of revenues to 10% for the three months ended September 30, 2022 from 11% from the three months ended September 30, 2021. The $4 million increase was primarily due to an increase of $3 million in personnel costs, driven by an increase in headcount to support the development of our products, and to lesser extent, an increase of $1 million in occupancy expense.

General and Administrative Expenses. General and administrative expenses increased to $91 million for the three months ended September 30, 2022, from $65 million, for the three months ended September 30, 2021 and increased as a percentage of revenues to 16% for the three months ended September 30, 2022 from 13% for the three months ended September 30, 2021. The increase of $27 million was due to a $5 million increase in personnel costs, driven by a $3 million increase in salaries, as well as, a $1 million increase in stock-based compensation expense, and increases of $5 million in professional services fees, $5 million in bad debt expense, a $4 million increase in travel and entertainment and conference costs, and a $4 million fee to terminate a contract.

Customer Base Amortization Expense. Customer base amortization expense increased to $30 million for the three months ended September 30, 2022 from $19 million for the three months ended September 30, 2021, and increased as a percentage of revenues at 5% for the three months ended September 30, 2022 from 4% for the three months ended September 30, 2021. The increase was primarily attributable to an increase of $15 million in amortization expense driven by intangible assets related to a Homesnap product for which we decided to eliminate usage fees in the third quarter of 2022. This increase was offset by decreases in amortization expense related to the customer base intangible assets acquired in the acquisitions of ForRent, Ten-X, and STR, which have been amortizing on an accelerated basis since their acquisitions.

Interest Income, net. Interest income, net was $11 million for the three months ended September 30, 2022, as compared to interest expense, net of $8 million for the three months ended September 30, 2021. This change was primarily due to an increased rate of return on cash equivalents.

Other Income, net. Other income, net remained consistent for the three months ended September 30, 2022 and September 30, 2021.

Income Tax Expense. Income tax expense increased to $25 million for the three months ended September 30, 2022, from $19 million for the three months ended September 30, 2021. The increase was mostly due to higher income before taxes during the three months ended September 30, 2022.

Comparison of Business Segment Results for Three Months Ended September 30, 2022 and Three Months Ended September 30, 2021

We manage our business geographically in two operating segments, with our primary areas of measurement and decision-making being North America, which includes the U.S. and Canada, and International, which primarily includes Europe, Asia-Pacific, and Latin America. Management relies on an internal management reporting process that provides revenue and operating segment EBITDA, which is our net income before interest (expense) income and other (expense) income, loss on debt extinguishment, income taxes, depreciation and amortization. Management believes that operating segment EBITDA is an appropriate measure for evaluating the operational performance of our operating segments. EBITDA is used by management to internally measure our operating and management performance and to evaluate the performance of our business. However, this measure should be considered in addition to, not as a substitute for or superior to, income from operations or other measures of financial performance prepared in accordance with GAAP. See “*Non-GAAP Financial Measures*” for further information regarding our segment operating results.

Segment Revenues. North America revenues increased to $538 million for the three months ended September 30, 2022, from $483 million for the three months ended September 30, 2021. The $55 million increase in North America revenues was attributable to increases in revenues for several of our service offerings, including an increase in CoStar revenues of $30 million due to higher sales volume driven by an increase in subscribers, as well as, the impact of annual price increases and customer upgrades on contract renewals. Multifamily revenues increased $18 million, due to increases in pricing on renewals, partially offset by a less favorable mix of ad packages purchased. LoopNet revenues increased $5 million as a result of price increases. Other Marketplaces revenues increased $4 million, driven by an increase of Land for Sale revenue and to a lesser extent, an increase in revenue for BizBuySell, and Ten-X. Information Services revenues increased $3 million due to increased revenue from our CoStar Real Estate Manager product and STR service offerings. Residential revenues decreased $5 million due to the discontinuation of certain Homes.com products and services that were inconsistent with our long-term business strategy, partially offset by an increase in sales of Homesnap's products and services. International revenues increased to $19 million for the three months ended September 30, 2022, from $16 million for the three months ended September 30, 2021. The increase in International revenues was primarily driven by the acquisitions of BureauxLocaux and Business Immo.

Segment EBITDA. North America EBITDA increased to $128 million for the three months ended September 30, 2022, from $120 million for the three months ended September 30, 2021. The increase in North America EBITDA was primarily due to an increase in revenue, partially offset by, increases in general and administrative, and personnel costs, partially offset by, a decrease in marketing costs. International EBITDA for the three months ended September 30, 2022 decreased to $1 million from $3 million for the three months ended September 30, 2021. The decrease was due to an increases in personnel and general and administrative costs, partially offset by, an increase in revenue.

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

The following table provides a comparison of our selected consolidated results of operations for the nine months ended September 30, 2022 and 2021 (in thousands):

	Nine Months Ended September 30,			
	2022	2021	Increase (Decrease) ($)	Increase (Decrease) (%)
Revenues:				
CoStar	$ 617,905	$ 532,428	$ 85,477	16 %
Information Services	116,730	105,779	10,951	10
Multifamily	547,372	508,629	38,743	8
LoopNet	169,645	152,852	16,793	11
Residential	57,565	53,939	3,626	7
Other Marketplaces	99,837	83,722	16,115	19
Total revenues	1,609,054	1,437,349	171,705	12
Cost of revenues	304,814	270,911	33,903	13
Gross profit	1,304,240	1,166,438	137,802	12
Operating expenses:				
Selling and marketing (excluding customer base amortization)	510,736	483,354	27,382	6
Software development	162,520	148,500	14,020	9
General and administrative	246,576	186,747	59,829	32
Customer base amortization	60,621	55,885	4,736	8
Total operating expenses	980,453	874,486	105,967	12
Income from operations	323,787	291,952	31,835	11
Interest expense, net	(461)	(23,698)	(23,237)	(98)
Other income, net	3,596	2,343	1,253	53
Income before income taxes	326,922	270,597	56,325	21
Income tax expense	81,841	70,933	10,908	15
Net income	$ 245,081	$ 199,664	$ 45,417	23

Revenues. Revenues increased to $1,609 million for the nine months ended September 30, 2022, from $1,437 million for the nine months ended September 30, 2021. The $172 million increase was attributable to increases in revenues for several of our service offerings. CoStar revenues increased $85 million, or 16%, due to higher sales volume driven by the impact of annual price increases and customer upgrades on contract renewals, as well as, an increase in subscribers. Multifamily revenues increased $39 million, or 8%, due to increases in pricing on renewals, partially offset by a less favorable mix of ad packages purchased. LoopNet revenues increased $17 million, or 11%, primarily as a result of an increase in average prices, and to a lesser extent, due to the acquisition of BureauxLocaux. Other Marketplaces revenues increased $16 million, or 19%, primarily driven by increases in Ten-X and Land for Sale revenue in nearly equal amounts, and to a lesser extent, an increase in revenue for BizBuySell. Information Services revenues increased $11 million, or 10%, primarily due to increased revenue from our CoStar Real Estate Manager product and STR service offerings. Residential revenues increased $4 million, or 7%, due to an increase in sales of Homesnap's products and services, partially offset by, the discontinuation of certain Homes.com products and services that were inconsistent with our long-term business strategy.

Gross Profit. Gross profit increased to $1,304 million for the nine months ended September 30, 2022, from $1,166 million for the nine months ended September 30, 2021, and the gross profit percentage remained consistent at 81% for the nine months ended September 30, 2022 and 2021. The increase in gross profit was due to higher revenues, partially offset by, an increase in cost of revenues of $34 million, or 13%, mostly due to an increase of $20 million related to our investment and further development of our residential marketplaces, including research equipment, personnel, software and equipment, and data and content costs. There were also increases of $7 million in personnel costs, driven by an increase in salaries, and $5 million in software and equipment to support our researchers.

Selling and Marketing Expenses. Selling and marketing expenses increased to $511 million for the nine months ended September 30, 2022, from $483 million for the nine months ended September 30, 2021. The $27 million increase was primarily attributable to increases of $20 million in personnel costs driven by a $11 million increase in salaries, primarily attributable to an increase in headcount, and an increase in commissions of $6 million, as well as, a $13 million increase in conferences and travel costs. These increases were partially offset by a $10 million decrease in marketing costs, primarily attributable to a $34 million decrease in marketing spend for our other products, mainly to lower agency fees for LoopNet and Multifamily, partially offset by a $25 million increase in marketing for our residential marketplace products led by increases in spending on search engine marketing, agency fees, events, and digital marketing.

Software Development Expenses. Software development expenses increased to $163 million for the nine months ended September 30, 2022, from $149 million for the nine months ended September 30, 2021, and remained consistent as a percentage of revenues at 10% for the nine months ended September 30, 2022, and 2021. The $14 million increase was primarily due to an increase of $10 million in personnel costs, driven by increased headcount to support the development of our products, and to a lesser extent to an increase of $2 million in occupancy costs.

General and Administrative Expenses. General and administrative expenses increased to $247 million for the nine months ended September 30, 2022, from $187 million for the nine months ended September 30, 2021, and increased as a percentage of revenues to 15% for the nine months ended September 30, 2022 from 13% for the nine months ended September 30, 2021. The $60 million increase in the amount of general and administrative expense was driven by an increase of $15 million in personnel costs, primarily due to increases in salaries and stock-based compensation expense, and to a lesser extent, increases of $10 million in professional services, and $9 million in travel and conferences costs, driven partially by an increase in the average cost of air travel. There were also increases of $6 million each in software and equipment and bad debt expense,$2 million each in property taxes and recruiting agency fees, and an increase of $4 million for a fee paid to a counterparty to terminate a contract.

Customer Base Amortization Expense. Customer base amortization expense increased to $61 million for the nine months ended September 30, 2022 from $56 million for the nine months ended September 30, 2021, and remained consistent as a percentage of revenues at 4% for the nine months ended September 30, 2022, and 2021. The increase in customer base amortization expense was primarily attributable to an increase of $14 million in amortization expense driven by intangible assets related to a Homesnap product for which we decided to eliminate usage fees in the third quarter of 2022. This increase was offset by decreases in amortization expense related to the customer base intangible assets acquired in the acquisitions of ForRent, STR, and Ten-X, which had been amortizing on an accelerated basis since their acquisitions.

Interest Expense, net. Interest expense, net was a net expense of $0.5 million for the nine months ended September 30, 2022, as compared to net expense of $24 million for the nine months ended September 30, 2021. The decrease of $23 million for the nine months ended September 30, 2022 was primarily due to an increased rate of return on cash equivalents.

Other Income, net. Other income, net increased $1 million for the nine months ended September 30, 2022 compared to the nine months ended September 30, 2021. The increase was primarily due to increases in foreign exchange gains due to rate fluctuations.

Income Tax Expense. Income tax expense increased to $82 million for the nine months ended September 30, 2022 from $71 million for the nine months ended September 30, 2021. The increase was mostly due to higher income before taxes and a decrease in excess tax benefits, partially offset by, a tax restructuring gain recognized in the nine months ended September 30, 2021.

Comparison of Business Segment Results for Nine Months Ended September 30, 2022 and Nine Months Ended September 30, 2021

We manage our business geographically in two operating segments, with our primary areas of measurement and decision-making being North America, which includes the U.S. and Canada, and International, which primarily includes Europe, Asia-Pacific, and Latin America. Management relies on an internal management reporting process that provides revenue and operating segment EBITDA, which is our net income before interest (expense) income and other (expense) income, loss on debt extinguishment, income taxes, depreciation and amortization. Management believes that operating segment EBITDA is an appropriate measure for evaluating the operational performance of our operating segments. EBITDA is used by management to internally measure our operating and management performance and to evaluate the performance of our business. However, this measure should be considered in addition to, not as a substitute for or superior to, income from operations or other measures of financial performance prepared in accordance with GAAP.

Segment Revenues. North America revenues increased to $1,553 million for the nine months ended September 30, 2022, from $1,388 million for the nine months ended September 30, 2021. The $164 million increase in North America revenues was attributable to increases in revenues for several of our services. CoStar revenues increased $85 million, due to higher sales volume driven by the impact of annual price increases and customer upgrades on contract renewals, as well as, an increase in subscribers. Multifamily revenues increased $39 million, due to increases in pricing on renewals, partially offset by a less favorable mix of ad packages purchased. Other Marketplaces revenues increased $16 million, primarily driven by increases in Ten-X and Land for Sale revenue in nearly equal amounts, and to a lesser extent, an increase in revenue for BizBuySell. LoopNet revenues increased $13 million, primarily as a result of an increase in average prices. Information Services revenues increased $8 million, primarily due to increased revenue from our CoStar Real Estate Manager and STR service offerings. Residential revenues increased $4 million, due to an increase in sales of Homesnap's products and services partially offset by the discontinuation of certain Homes.com products and services that were inconsistent with our long-term business strategy. International revenues increased to $56 million for the nine months ended September 30, 2022, from $49 million for the nine months ended September 30, 2021. The increase in International revenues was primarily driven by the acquisitions of BureauxLocaux and Business Immo, and to a lesser extent, due to growth in our CoStar product revenue.

Segment EBITDA. North America EBITDA increased to $422 million for the nine months ended September 30, 2022, from $386 million for the nine months ended September 30, 2021. The increase in North America EBITDA was primarily due to an increase in revenue, and to a lesser extent, to a decrease in marketing costs, partially offset by, increases in general and administrative and personnel costs. International EBITDA for the nine months ended September 30, 2022 was income of $5 million, as compared to $6 million for the nine months ended September 30, 2021, the decrease was due to increases in personnel, general and administrative, and marketing costs, partially offset by, an increase in revenue.

Liquidity and Capital Resources

We believe the balance of cash, cash equivalents and restricted cash, which was approximately $4.8 billion as of September 30, 2022, along with cash generated by ongoing operations and continued access to capital markets, will be sufficient to satisfy our cash requirements over the next 12 months and beyond. Our cash requirements have not changed materially since the 2021 Form 10-K.

Our future capital requirements will depend on many factors, including, among others, our operating results, expansion and integration efforts, and our level of acquisition activity or other strategic transactions. To date, we have grown in part by acquiring other companies, and we expect to continue to make acquisitions.

We currently plan to expand our Richmond, Virginia campus which may result in a material cash requirement in 2022 and beyond. We currently plan to fund the expansion with cash on hand.

Cash, cash equivalents and restricted cash increased to approximately $4.8 billion as of September 30, 2022, compared to cash, cash equivalents and restricted cash of approximately $3.8 billion as of December 31, 2021. The increase in cash, cash equivalents, and restricted cash for the nine months ended September 30, 2022 was primarily due to $746 million of net proceeds from our September 2022 equity offering, and cash provided by operating activities of $294 million. These increases were partially offset by $76 million of cash used in investing activities, primarily attributable to purchases of property and equipment and other assets of $75 million, including the purchase of assets related to the expansion of our campus in Richmond, Virginia.

Net cash provided by operating activities for the nine months ended September 30, 2022 was approximately $294 million compared to approximately $319 million for the nine months ended September 30, 2021. The $26 million decrease in cash provided by operating activities was primarily due a decrease from changes in net working capital of $62 million, partially offset by, an increase in net income excluding certain non-cash expenses such as deferred income taxes and stock-based compensation expense.

Net cash used in investing activities for the nine months ended September 30, 2022 was approximately $76 million compared to approximately $298 million of cash used in investing activities for the nine months ended September 30, 2021. The $221 million decrease in cash used in investing activities was primarily due to $146 million additional cash paid for acquisitions during the nine months ended September 30, 2021 , as well as, $92 million additional cash paid for assets related to the expansion of our campus in Richmond, Virginia, partially offset by, an increase in cash used for the purchase of other property and equipment, including capitalized software development costs, during the nine months ended September 30, 2022.

Net cash provided by financing activities for the nine months ended September 30, 2022 was approximately $735 million compared to approximately $14 million used in financing activities for the nine months ended September 30, 2021. The $749 million increase in cash used in financing activities was primarily due to $746 million of net proceeds from our September 2022 equity offering.

Critical Accounting Estimates

The preparation of financial statements and related disclosures in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and revenues and expenses during the period reported. The following accounting policies involve a "critical accounting estimate" because they are particularly dependent on estimates and assumptions made by management about matters that are highly uncertain at the time the accounting estimates are made. In addition, while we have used our best estimates based on facts and circumstances available to us at the time, different acceptable assumptions would yield different results. Changes in the accounting estimates are reasonably likely to occur from period to period, which may have a material impact on the presentation of our financial condition and results of operations. We review these estimates and assumptions periodically and reflect the effects of revisions in the period that they are determined to be necessary. We consider the following significant accounting policies to contain critical accounting estimates:

- Long-lived assets, intangible assets and goodwill;
- Income taxes;
- Revenue recognition; and
- Business combinations.

For an in-depth discussion of each of our significant accounting policies, including the related critical accounting estimates. and further information regarding estimates and assumptions involved in their application, see the 2021 Form 10-K and Note 2 to the condensed consolidated financial statements included in Part I of this Quarterly Report on Form 10-Q. During the nine months ended September 30, 2022, there were no material changes to our critical accounting estimates from those described in the 2021 Form 10-K.

Recent Accounting Pronouncements

See Note 2 of the Notes to the condensed consolidated financial statements included in Part I of this Quarterly Report on Form 10-Q.

Cautionary Statement Concerning Forward-Looking Statements

We have made forward-looking statements in this Quarterly Report on Form 10-Q and make forward-looking statements in our press releases, investor conference calls, Annual Reports on Form 10-K, other Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other filings with the Securities and Exchange Commission that are subject to risks and uncertainties. Forward-looking statements include information that is not purely historic fact and include, without limitation, statements concerning our financial outlook for 2022 and beyond, our possible or assumed future results of operations generally, and other statements and information regarding assumptions or expectations about our revenues, revenue growth rates, gross margin percentage, net income, net income per share, fully diluted net income per share, EBITDA, adjusted EBITDA, adjusted EBITDA margin, non-generally accepted accounting principles ("GAAP") net income, non-GAAP net income per share, weighted-average outstanding shares, cash flow from operating activities, operating costs, capital and other expenditures, the impact of COVID-19 on our revenues, revenue growth rates and profitability, key priorities for 2022, trends in customer behavior, legal proceedings and claims, legal costs, effective tax rate, the anticipated benefits of completed or proposed acquisitions, the anticipated timing for integration of completed acquisitions, the anticipated benefits of cross-selling efforts, product development and release, geographic and product expansion, planned service enhancements, expansion and development of our sales forces, planned sales and marketing activities and investments, the impact or results of sales and marketing initiatives, product integrations, elimination and de-emphasizing of services, investments in residential marketplace services and our residential marketplace strategy, net new sales, contract renewal rates, use of proceeds from equity and debt offerings, the use of proceeds of any draws under our $750 million credit facility (the “2020 Credit Agreement”), employee relations, attrition and retention, management’s plans, goals and objectives for future operations, deferral of tax payments, sources and adequacy of liquidity, and growth and markets for our stock. Sections of this Report which contain forward-looking statements include the Financial Statements and related Notes, “Management's Discussion and Analysis of Financial Condition and Results of Operations,” “Quantitative and Qualitative Disclosures About Market Risk,” “Controls and Procedures,” “Legal Proceedings” and “Risk Factors.”

Our forward-looking statements may be identified by words such as “hope,” “anticipate,” “may,” “believe,” “expect,” “intend,” “will,” “should,” “plan,” “estimate,” “predict,” “continue” and “potential” or the negative of these terms or other comparable terminology. You should understand that these forward-looking statements are estimates reflecting our judgment, beliefs and expectations, not guarantees of future performance. They are subject to a number of assumptions, risks and uncertainties that could cause actual results to differ materially from those expressed or implied in the forward-looking statements. The following important factors, in addition to those discussed or referred to under the heading “Risk Factors,” and other unforeseen events or circumstances, could affect our future results and could cause those results or other outcomes to differ materially from those expressed or implied in our forward-looking statements: potential declines in our revenues, revenue growth rates and profitability due to the impacts of the COVID-19 pandemic and economic conditions on the commercial real estate industry and our core customer base; our inability to attract and retain clients; our inability to successfully develop and introduce new or upgraded information, analytics and online marketplace services that are attractive to our users and advertisers or successfully combine or shift focus from current services with less demand; our inability to compete successfully against existing or future competitors in attracting advertisers; a downturn or consolidation in the real estate industry that may decrease customer demand for our services; our inability to hire qualified persons or retain and continue to develop our sales force; downward pressure on our operating margins by our internal and external investments; our inability to increase awareness of our brands, including CoStar, LoopNet, Apartments.com, BizBuySell, LandsofAmerica, STR, Ten-X, Homes.com and Homesnap; our inability to maintain or increase traffic to our marketplaces and the possibility of internet search engines not featuring our websites on the search engine results page; competition; our inability to successfully identify, finance, integrate and/or manage costs related to acquisitions; our actual or perceived failure to comply with privacy laws and standards; cyberattacks and security vulnerabilities; technical problems or disruptions that affect either our customers’ ability to access our services, or the software, internal applications, database and network systems underlying our services; the costs of a large infrastructure project to build out our campus in Richmond, Virginia; our current or future geographic expansion plans that may not result in increased revenues; fluctuations and market cyclicality; our inability to retain and attract highly capable management and operating personnel; changes in tax laws, regulations or fiscal and tax policies; risks related to acceptance of credit cards and debit cards and facilitation of other customer payments; risks related to our data, intellectual property and listings; risks related to our international operations, including fluctuating foreign currencies and the economic effects of “Brexit” and risks related to our indebtedness.

Accordingly, you should not place undue reliance on forward-looking statements, which speak only as of, and are based on information available to us on, the date of this Quarterly Report on Form 10-Q (unless otherwise indicated). All subsequent written and oral forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. We do not undertake any obligation to update any such statements or release publicly any revisions to these forward-looking statements to reflect new information or events or circumstances after the date of this Report or to reflect the occurrence of unanticipated events.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We provide information, analytics and online marketplace services to commercial real estate and related business communities within the regions where we operate which primarily include, North America, Europe, Asia-Pacific and Latin America. The functional currency for a majority of our operations is the local currency, with the exception of certain international locations for which the functional currency is the British Pound.

Fluctuations in the British pound, Canadian dollar and Euro may have an impact on our business, results of operations and financial position. For the three and nine months ended September 30, 2022, revenues denominated in foreign currencies were approximately 4%. For the three and nine months ended September 30, 2022 our revenues would have decreased by approximately $2 million and $6 million, respectively, if the U.S. dollar exchange rate used strengthened by 10%. For the three and nine months ended September 30, 2022, our revenues would have increased by approximately $2 million and $6 million, respectively, if the U.S. dollar exchange rate used weakened by 10%. In addition, we have assets and liabilities denominated in foreign currencies. We currently do not use financial instruments to hedge our exposure to exchange rate fluctuations with respect to our foreign subsidiaries. We may seek to enter into hedging transactions in the future to reduce our exposure to exchange rate fluctuations, but we may be unable to enter into hedging transactions successfully, on acceptable terms or at all. As of September 30, 2022, accumulated other comprehensive loss included a loss from foreign currency translation adjustments of approximately $47 million.

We do not have material exposure to market risks associated with changes in interest rates related to cash equivalent securities held as of September 30, 2022. As of September 30, 2022, we had approximately $4.8 billion of cash, cash equivalents and restricted cash. If there is an increase or decrease in interest rates, there will be a corresponding increase or decrease in the amount of interest earned on our cash and cash equivalents. We currently diversify our cash and cash equivalents holdings amongst multiple financial institutions and AAA rated Government and Treasury Money Market Funds.

We are subject to interest rate market risk in connection with our revolving credit facility. On July 1, 2020, we entered into the 2020 Credit Agreement, which provides for variable rate borrowings of up to $750 million. On July 1, 2020, we issued $1.0 billion aggregate principal amount of 2.800% Senior Notes due July 15, 2030. Changes in interest rates would not have a material impact to our current interest and debt financing expense, as all our borrowings except for our credit facility are fixed rate, and our credit facility is currently undrawn as of September 30, 2022. See Note 10 to the accompanying condensed consolidated financial statements included in Part I of this Quarterly Report on Form 10-Q for information regarding our 2020 Credit Agreement.

We had approximately $2.6 billion of goodwill and intangible assets as of September 30, 2022. As of September 30, 2022, we believe our intangible assets will be recoverable; however, changes in the economy, the industry in which we operate and our own relative performance could change the assumptions used to evaluate intangible asset recoverability. In the event that we determine that an asset has been impaired, we would recognize an impairment charge equal to the amount by which the carrying amount of the assets exceeds the fair value of the asset. We continue to monitor these assumptions and their effect on the estimated recoverability of our intangible assets.

Item 4. Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports filed or submitted under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As of September 30, 2022, we carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures. Based on the foregoing, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of September 30, 2022 and were operating at a reasonable assurance level.

We continue to implement a financial system that is designed to improve the efficiency and effectiveness of our operational and financial accounting processes. This implementation is expected to continue beyond 2022. Consistent with any process change that we implement, the design of the internal controls has and will continue to be evaluated for effectiveness as part of our overall assessment of the effectiveness of our disclosure controls and procedures. We expect that the implementation of this system will further improve our internal control over financial reporting.

Other than the implementation of a new financial system noted above, there have been no changes in our internal control over financial reporting during our most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

Currently, and from time to time, we are involved in litigation incidental to the conduct of our business. We are not currently a party to any lawsuit or proceeding that, in the opinion of our management based on consultations with legal counsel, is likely to have a material adverse effect on our financial position or results of operations. See Note 12 of the Notes to the condensed consolidated financial statements included in Part I of this Quarterly Report on Form 10-Q for further discussion.

Item 1A. Risk Factors

Risks related to our business

Our revenues and financial position will be adversely affected if we are not able to attract and retain clients. Our success and revenues depend on attracting and retaining subscribers to our information, analytics and online marketplace services. Our subscription-based services generate the largest portion of our revenues. Our revenue may not grow, or could decrease, if we cannot attract new customers, continue to keep our cancellation rate low and continue to sell new services to our existing customers. We may not be able to continue to grow our customer base, keep the cancellation rate low or sell new services to existing customers as a result of several factors, including, without limitation: economic pressures; the business failure of current clients; customer decisions that they do not need our services or to use alternative services; customers' and potential customers' budgetary constraints; consolidation in the real estate and/or financial services industries; data quality; technical problems; competitive pressures; or devaluation of the local currencies of international customers relative to the U.S. dollar which impairs the purchasing power of such customers. We compete against many other real estate information, analytics and marketing service providers for business. If clients cancel services or decide not to renew their subscription agreements and we do not sell new services to our existing clients or attract new clients, then our renewal rate, net new sales and revenues may decline or fail to meet expectations.

We may not be able to successfully develop and introduce new or upgraded information, analytics and online marketplace services that are attractive to our users and advertisers or successfully combine or shift focus from current services with less demand, which could decrease our revenues and our profitability. Our future business and financial success will depend on our ability to continue to anticipate the needs of customers and potential customers and to successfully introduce new and upgraded services, including services that make our marketplaces useful for users and attractive to advertisers. To be successful, we must be able to quickly adapt to changes in the industry, as well as rapid technological changes by continually enhancing our information, analytics and online marketplace services. As a result, we must continually invest resources in research and development to improve the appeal and comprehensiveness of our services and effectively incorporate new technologies.

Developing new services and upgrades to services, as well as integrating and coordinating current services, imposes heavy burdens on our systems department, product development team, management and researchers. The processes are costly and our efforts to develop, integrate and enhance our services may not be successful. In addition, launching and selling a new or upgraded service puts additional strain on our sales and marketing resources. If we are unsuccessful in obtaining greater market share or in obtaining widespread adoption of new or upgraded services, we may not be able to offset the expenses associated with the development, launch and marketing of the new or upgraded service, which could have a material adverse effect on our financial results. For example, to generate brand awareness and site traffic for our marketplaces, we have and will continue to invest significant resources in multi-channel marketing campaigns. If these marketing campaigns do not increase brand awareness, site traffic and/or revenues, the cost of these campaigns could have an adverse effect on our financial results.

In addition, as we integrate acquired businesses, we continue to assess which services we believe will best meet the needs of our customers. If we eliminate or phase out a service and are not able to offer and successfully market and sell an alternative service, our revenue may decrease, which could have a material adverse effect on our results of operations.

We may not be able to compete successfully against existing or future competitors in attracting advertisers, which could harm our business, results of operations and financial condition. We compete to attract advertisers. Our competitors may have greater brand recognition or more direct sales personnel than we have and may generate more web traffic than we do, which may provide them with competitive advantages. To compete successfully for advertisers, we must continue to invest resources in developing our advertising platform and proving the effectiveness and relevance of our advertising services. Pressure from competitors seeking to acquire a greater share of our advertisers' 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, our business, results of operations or financial condition could be adversely affected.

Competition could render our services uncompetitive and reduce our profitability. The markets for information systems and services and for online marketplaces in general are highly competitive and rapidly changing. Competition in these markets may increase further if economic conditions or other circumstances cause customer bases and customer spending to decrease and service providers to compete for fewer customer resources. Our existing or future competitors, may have greater name recognition, larger customer bases, better technology or data, lower prices, easier access to data, greater user traffic or greater financial, technical or marketing resources than we have to provide services that users might view as superior to our offerings. Competitors may introduce different solutions that attract users away from our services or provide solutions similar to ours that have the advantage of better branding or marketing resources. Our competitors may be able to undertake more effective marketing campaigns, obtain more data, adopt more aggressive pricing policies, make more attractive offers to potential employees, subscribers, advertisers, distribution partners and content providers or may be able to respond more quickly to new or emerging technologies or changes in user requirements. Increased competition could result in lower revenues and higher expenses, which would reduce our profitability.

Our operating results and revenues are subject to fluctuations and our quarterly financial results may be subject to market cyclicality, each of which could negatively affect our stock price. The real estate market may be influenced by general economic conditions, economic cycles, seasonality and many other factors, which in turn may impact our financial results. The different sectors of the large and fragmented industry, such as office, industrial, retail, multifamily, single family and others, are influenced differently by different factors, and have historically moved through economic cycles with different timing. As such, it is difficult to estimate the potential impact of economic cycles and conditions or seasonality from year-to-year on our overall operating results. We generally see higher sales of Apartments.com listing services during the peak summer rental season and higher CoStar sales towards the end of the year; however, sales fluctuate from year-to-year and may fluctuate more widely when there are changes in general economic conditions or the industry, such as changes resulting from the COVID-19 pandemic. In addition, we generally incur greater marketing expenses during the second quarter, which coincides with the peak season for apartment rentals. The timing of widely observed holidays and vacation periods, particularly slowdowns during the end-of-year holiday period, and availability of real estate agents and related service providers during these periods, could significantly affect our quarterly operating results during that period. If we are unable to adequately respond to economic, seasonal or cyclical conditions, our revenues, expenses and operating results may fluctuate from quarter to quarter. Our operating results, revenues and expenses may fluctuate for many reasons, including those described in this paragraph and below:

- Rates of subscriber adoption and retention;
- Timing of our sales conference or significant marketing events;
- Changes in our pricing strategy and timing of changes;
- The timing and success of new service introductions and enhancements;
- The shift of focus from certain services we offer or the phase out of services that overlap or are redundant with other services we offer;
- The amount and timing of our expenses and capital expenditures;
- The amount and timing of non-cash stock-based charges;
- Acquisition-related costs or impairment charges associated with investments and acquisitions;
- Competition;
- Changes or consolidation in the real estate industry;
- Interest rate fluctuations;
- Execution of our expansion and integration plans;
- The development of our sales force;
- Foreign currency exchange rate fluctuations;
- Inflation; and
- Changes in client budgets.

These fluctuations could negatively affect our results of operations during the period in question and/or future periods or cause our stock price to decline. In addition, changes in accounting policies or practices may affect our level of net income. Fluctuations in our financial results, revenues and expenses may cause the market price of our common stock to decline.

A downturn or consolidation in the real estate industry may decrease customer demand for our services. The real estate market may be adversely impacted by many different factors, including lower than expected job growth or job losses resulting in reduced real estate demand; reduced real estate demand due to increased remote work policies; rising interest rates and slowing transaction volumes due to the impact of the COVID-19 pandemic or otherwise that negatively impact investment returns; excessive speculative new construction in localized markets resulting in increased vacancy rates and diminished rent growth; and unanticipated disasters and other adverse events such as slowing of the growth in the working age population resulting in reduced demand for all types of real estate. A downturn in the real estate market, including as a result of a decline in leasing activity and absorption rates may affect our ability to generate revenues and may lead to more cancellations by our current or future customers, either of which could cause our revenues or our revenue growth rate to decline and reduce our profitability. A depressed real estate market has a negative impact on our core customer base, which could decrease demand for our information, analytics and online marketplaces. Also, companies in this industry may consolidate, often in order to reduce expenses. Consolidation, or other cost-cutting measures by our customers, may lead to cancellations of our information, analytics and online marketplace services by our customers, reduce the number of our existing clients, reduce the size of our target market or increase our clients' bargaining power, all of which could cause our revenues to decline and reduce our profitability. If cancellations, reductions of services and failures to pay increase, and we are unable to offset the resulting decrease in revenues by increasing sales to new or existing customers, our revenues may decline or grow at lower rates.

If we are unable to hire qualified persons for, or retain and continue to develop, our sales force, or if our sales force is unproductive, our revenues could be adversely affected. In order to support revenues and revenue growth, we need to continue to develop, train and retain our sales force. Our ability to build and develop a strong sales force may be affected by a number of factors, including: our ability to attract, integrate and motivate sales personnel; our ability to effectively train our sales force; the ability of our sales force to sell an increased number and different types of services; our ability to manage effectively an outbound telesales group; the length of time it takes new sales personnel to become productive; the competition we face from other companies in hiring and retaining sales personnel; our ability to effectively structure our sales force; and our ability to effectively manage a multi-location sales organization, including field sales personnel. If we are unable to hire qualified sales personnel and develop and retain our sales force, including sales force management, or if our sales force is unproductive, our revenues or growth rate could decline and our expenses could increase. We may face additional challenges in hiring employees in an increasingly competitive job market.

Our internal and external investments may place downward pressure on our operating margins. To increase our revenue growth, we continue to invest in our business, including internal investments in product and content development to expand the breadth and depth of services we provide to our customers and external investments in sales and marketing to generate brand awareness. Our operating margins may experience downward pressure in the short term as a result of these investments. Furthermore, our investments may not produce the expected results. If we are unable to successfully execute our investment strategy, we may experience decreases in our revenues or revenue growth rate and operating margins.

We may be unable to increase awareness of our brands, including CoStar, LoopNet, Apartments.com, BizBuySell, LandsofAmerica, STR, Ten-X, Homes.com and Homesnap, which could adversely affect our business. We rely heavily on our brands, which we believe are key assets of our company. Awareness and differentiation of our brands are important for attracting and expanding the number of users of, and subscribers to, our online marketplaces, such as LoopNet, the Apartments.com network of rental websites, our Homes.com and Homesnap residential marketplaces, CoStar Showcase and the Land.com network of rural lands for-sale. We continue to invest significantly in sales and marketing in 2022 as we seek to grow the numbers of users of, subscribers to and advertisers on, our marketplaces. Our methods of advertising may not be successful in increasing brand awareness or, ultimately, be cost-effective. If we are unable to maintain or enhance user and advertiser awareness of our brands, or if we are unable to recover our marketing and advertising costs through increased usage of our services and increased advertising on our websites, our business, results of operations and financial condition could be adversely affected.

*If internet search engines do not prominently feature our websites on the search engine results page, traffic to our websites would decrease and, if we are unable to maintain or increase traffic to our marketplaces, our business and operating results could be adversely affecte**d.*** Our ability to generate revenues from our marketplace business depends, in part, on our ability to attract users to our websites. Google, Bing, DuckDuckGo and other internet search engines drive traffic to our websites, including CoStar.com, the Apartments.com network of rental websites, the LoopNet.com network of commercial real estate websites, Ten-X.com, our Homes.com and Homesnap residential marketplaces, the BizBuySell.com network of business for-sale websites and the Land.com network of rural lands for-sale. For example, when a user enters in a search query for an apartment building name or address into an internet search engine, the internet search engine's ranking of our Apartments.com webpages will determine how prominently such webpages are displayed on the search engine results page. Our ability to maintain prominent search result rankings and positioning is not entirely within our control. Our competitors' Search Engine Optimization (SEO) and Search Engine Marketing (SEM) efforts may result in webpages from their websites receiving higher rankings than the webpages from our websites. Internet search engines could revise their algorithms and methodologies in ways that would adversely affect our search result rankings. Internet search engine providers could form partnerships or enter into other business relationships with our competitors resulting in competitors' sites receiving higher search result rankings. Internet search engines are increasingly placing alternative search features (such as featured snippets, local map results and other immersive experiences) on the search engine results page above or more prominently than search engine results. If our search result rankings are not prominently displayed, traffic to our websites may decline which could slow the growth of our user base. Our websites have experienced fluctuations in search result rankings in the past and we anticipate similar fluctuations will occur in the future. If we experience a material reduction in the number of users directed to our websites through internet search engines or otherwise fail to maintain or increase traffic to our marketplaces, our ability to acquire additional subscribers or advertisers and deliver leads to and retain existing subscribers and advertisers could be adversely affected. As a result, our business, results of operations and financial condition could be adversely affected. Our marketing expenses may increase in connection with our efforts to maintain or increase traffic to our websites. Increases in our operating expenses could negatively impact our operating results if we are unable to generate more revenues through increased sales of subscriptions to our marketplace products.

If real estate professionals or other advertisers reduce or cancel their advertising spending with us and we are unable to attract new advertisers, our operating results would be harmed. Our marketplace businesses, including LoopNet, the Apartments.com network of rental websites, our residential brands including Homes.com and Homesnap and the Land.com network of rural lands for-sale, depend on advertising revenues generated primarily through sales to persons in the real estate industry, including property managers and owners and other advertisers. Our ability to attract and retain advertisers, and ultimately to generate advertising revenue, depends on a number of factors, including:

- Increasing the number of unique visitors to, and users of, our websites and mobile applications;
- The quantity and quality of the leads that we provide to our advertisers;
- The success of any marketing and product development efforts directed at attracting additional users and advertisers to our marketplaces;
- Keeping pace with changes in technology and with our competitors; and
- Offering an attractive return on investment to our advertisers for their advertising dollars spent with us.

Further, with respect to the Apartments.com network of rental websites, our ability to attract and retain advertisers also depends on the current apartment rental market and apartment vacancy rates. If vacancy rates are too high or too low, advertisers may not need to utilize our marketplace services.

Many of the advertisers who advertise on our marketplaces do not have long-term contracts. These advertisers could choose to modify or discontinue their relationships with us with little or no advance notice. As existing subscriptions for advertising expire, we may not be successful in renewing these subscriptions or securing new subscriptions. We may not succeed in retaining existing advertisers’ spending or capturing a greater share of such spending if we are unable to convince advertisers of the effectiveness of our services as compared to alternatives. In addition, future changes to our pricing methodology for advertising services may cause advertisers to reduce or discontinue their advertising with us. If current advertisers reduce or end their advertising spending with us and we are unable to attract new advertisers, our advertising revenues and business, results of operations and financial condition could be adversely affected.

If we are not able to successfully identify, finance, integrate and/or manage costs related to acquisitions, our business operations and financial position could be adversely affected. We have expanded our markets and services in part through acquisitions of complementary businesses, services, databases and technologies, and expect to continue to do so in the future. Our acquisition strategy depends on our ability to identify, and the availability of, suitable acquisition candidates. We are likely to incur costs in connection with proposed acquisitions, but may ultimately be unable or unwilling to consummate any particular proposed transaction for various reasons. For example, in 2021, the Federal Trade Commission (“FTC”) withheld approval for our proposed acquisition of RentPath Holdings, Inc. (“RentPath”), the purchase agreement was subsequently terminated and we incurred a termination fee of $52 million. We are also likely to incur severance costs and other integration costs post-acquisition. Costs in connection with acquisitions and integrations may be higher than expected and could adversely affect our financial condition, results of operation or prospects of the combined business. In addition, acquisitions involve numerous risks, including risks that we will not be able to realize or capitalize on synergies created through combinations; manage the integration of personnel and products or services; manage the integration of acquired infrastructure and controls; control potential increases in operating costs; manage geographically remote operations; maintain management’s attention on other business concerns and avoid potential disruptions in ongoing operations during an acquisition process or integration efforts; successfully enter markets and sectors in which we have either limited or no direct experience, including foreign markets whose practices, regulations or laws may pose increased risk; and retain key employees, clients or vendors and other business partners of the acquired companies. We may not successfully integrate acquired businesses or assets and may not achieve anticipated benefits of an acquisition, including expected synergies. For example, we may be unable to fully integrate Homesnap, Homes.com and BureauxLocaux with CoStar when and as expected.

We were previously subject to a consent order agreed to among the FTC staff, CoStar and LoopNet on April 17, 2012 in connection with the LoopNet merger. This consent order expired in August 2022, but if we become subject to similar orders in the future, compliance with such orders could prevent us from closing certain acquisitions or add significant time and cost to such acquisitions, ultimately making an acquisition prohibitive or preventing us from realizing its anticipated benefits.

External factors, such as compliance with laws and regulations and shifting market preferences, may also impact the successful integration of an acquired business. An acquired business could strain our system of internal controls and diminish its effectiveness. Acquisitions could result in dilutive issuances of equity securities, the incurrence of debt and substantial amortization expenses of other intangible assets. We may be unable to obtain financing on favorable terms, or at all, if necessary to finance future acquisitions, making it impossible or more costly to complete future acquisitions. If we are able to obtain financing, the terms may be onerous and restrict our operations. Further, certain acquisitions may be subject to regulatory approval, which can be time consuming and costly to obtain or may be denied, as in the case of RentPath. If regulatory approval is obtained, the terms of any such approval may impose limitations on our ongoing operations or require us to divest assets or lines of business. If regulatory approval is denied, we may incur significant, additional costs payable to an acquisition target as a result of failure to close the transaction. For example, we incurred a termination fee of $52 million in connection with termination of the RentPath purchase agreement. Significant break-up fees incurred in the future may adversely affect our results of operation and financial condition.

As a result of our acquisitions, we had approximately $2.6 billion of goodwill and intangibles as of September 30, 2022. Future acquisitions may increase this amount. If we are required to recognize goodwill and intangibles impairment charges in the future, this would negatively affect our financial results in the periods of such charges, which may reduce our profitability.

Cyberattacks and security vulnerabilities could result in serious harm to our reputation, business and financial condition. As stated above, our business relies on IT Systems and involves the collection, storage, processing and transmission of Confidential Information, including personal information and proprietary business information. An increasing number of organizations, including large merchants, businesses, technology companies and financial institutions, as well as government institutions, have disclosed security incidents, disruptions to, and breaches of their or third-party providers' IT Systems, some of which have involved sophisticated and highly targeted attacks, including on websites, mobile applications and infrastructure.

We have expended resources to implement and maintain security measures designed to protect IT Systems and Confidential Information, including engaging a third-party vendor to conduct an annual audit of our information security systems in accordance with NIST CSF benchmarks. Despite these measures and similar measures implemented by many third-party providers, our IT Systems may be disrupted or damaged and our Confidential Information may be compromised, corrupted, lost or stolen. The techniques used to obtain unauthorized, improper or illegal access to a target's systems, data or customers' data, disable or degrade services, or sabotage systems are constantly evolving and have become increasingly complex and sophisticated, may be difficult to detect quickly and often are not recognized or detected until after they have been launched against a target. We expect that unauthorized parties will continue to attempt to gain access to or disrupt our IT systems or facilities through various means, including hacking into IT Systems or facilities or those of our customers or vendors, or attempting to fraudulently induce (for example, through spear phishing attacks or social engineering) our employees, customers, vendors or other users of IT Systems into disclosing user names, passwords, or other sensitive information, which may in turn be used to access our IT Systems.

Numerous and evolving cybersecurity threats, including advanced and persisting cyberattacks, phishing and social engineering schemes, could compromise the confidentiality, availability and integrity of the data in our systems. Our efforts to prevent, detect and respond to data security incidents, may not be effective. Further, the security measures and procedures our customers, vendors and other users of our systems have in place to protect IT Systems and Confidential information may not be successful or sufficient to counter all data breaches, cyberattacks or system failures. In addition, the COVID-19 pandemic has increased cybersecurity risk as a result of global remote working dynamics that may continue into the future due to additional opportunities for threat actors to engage in social engineering (for example, phishing) and to exploit vulnerabilities in non-corporate networks.

Our IT Systems may be vulnerable to cyberattacks or security breaches, and third parties may be able to access our, our customers' or our employees' Confidential Information, including personal or proprietary information, that is stored on or accessible through those systems. We have experienced from time to time, and expect to experience in the future, cyberattacks as well as breaches of our security measures due to human error, malfeasance, system errors or vulnerabilities or other irregularities. In the past three years, we have not experienced a materially disruptive information security breach, but any actual or perceived breaches of our security could result in any or all of the following, among other things, any of which could adversely affect our business and results of operations:

- Interrupt our operations;

- Result in our systems or services being unavailable;
- Result in improper disclosures of data;
- Result in improper payments;
- Materially harm our reputation and brands;
- Result in significant regulatory scrutiny and legal and financial exposure;
- Cause us to incur significant remediation and compliance costs;
- Lead to loss of customer confidence in, or decreased use of, our products and services;
- Divert the attention of management from the operation of our business; and
- Result in significant contractual penalties or other payments as a result of third-party losses or claims.

In addition, any cyberattacks or data security breaches affecting companies that we acquire or our customers or vendors (including data center and cloud computing providers) could have similar negative effects on our business. For example, in December 2020, we became aware that one of our vendors providing IT infrastructure management software, SolarWinds Corporation, had been compromised by cyberattacks. As of December 22, 2020, we had implemented the fully patched versions of the SolarWinds software and we took additional measures to block internet connectivity to and from all SolarWinds' Orion servers. Although we have not identified any compromise of our IT Systems due to the use of SolarWinds software to date, we continue to monitor our network for any potential impact related to the SolarWinds cyberattack. Similarly, we are regularly exposed to vulnerabilities in widely deployed third-party software that we use in the ordinary course of business, such as the recently identified Log4J vulnerability. While this vulnerability did not have a material adverse effect on our operations, it and similar incidents require us to devote time and resources to remediation on a regular basis. Notwithstanding our efforts, there can be no assurance that vulnerabilities in widely deployed software will not materially harm our business. Any breach of our security measures or the loss, inadvertent disclosure or unapproved dissemination of Confidential Information about us or our customers, including the potential loss or disclosure of such information or data as a result of the SolarWinds cyberattack, could result in litigation, regulatory enforcement and potential liability for us, damage our brand and reputation or otherwise materially harm our business.

The coverage under our insurance policies for cybersecurity and related issues may not be adequate to reimburse us for losses caused by cyberattacks or other security incidents.

Technical problems or disruptions that affect either our customers' ability to access our services, or the software, internal applications, database and network systems underlying our services, could damage our reputation and lead to reduced demand for our information, analytics and online marketplace services, lower revenues and increased costs. Our business, brands and reputation depend upon the satisfactory performance, reliability and availability of our websites, the internet and our service providers. Interruptions in these systems, whether due to system failures, computer viruses, software errors, physical or electronic break-ins, or malicious hacks or attacks on our systems (such as denial of service attacks or use of malware such as ransomware), could affect the security and availability of our services on our mobile applications and our websites and prevent or inhibit users' access to our services. Our operations also depend on our ability to protect our databases, computers and software, telecommunications equipment and facilities against damage from potential dangers such as fire, flood, power loss, security breaches, computer viruses, telecommunications failures, terrorist attacks, acts of war, electronic and physical break-ins, computer viruses, earthquakes and similar events.

In addition, the software, internal applications and systems underlying our services are complex and may not be error-free. We may encounter technical problems when we attempt to enhance our software, internal applications and systems. Our users rely on our services for the conduct of their own businesses. Disruptions in, technical problems with, or reductions in ability to access, our services for any reason could damage our users' businesses, harm our reputation, result in additional costs or reduce demand for our information, analytics and online marketplace services, any of which could harm our business, results of operations and financial condition.

The majority of the communications, network and computer hardware used to operate our mobile applications and websites are located at facilities in Virginia and 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, security breaches, computer viruses, telecommunications failure, terrorist attacks, acts of war, electronic and physical break-ins, earthquakes and similar events. These risks may be increased with respect to operations housed at facilities we do not own or control. 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 any site could result in reduced functionality for our users, and a total failure of our systems could cause our mobile applications or websites to be inaccessible. Problems faced or caused by our information technology service providers, including content distribution service providers, private network providers, internet providers and third-party web-hosting providers, or with the systems by which they allocate capacity among their customers (as applicable), could adversely affect the experience of our users. Any financial difficulties, such as bankruptcy reorganization, faced by these third-party service 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 service providers are unable to keep up with our growing needs for capacity, our 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.

Our business interruption insurance may not cover certain events or may be insufficient 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 or malicious attacks. Any errors, defects, disruptions or other performance problems with our services could harm our reputation, business, results of operations and financial condition.

We are planning to undertake a large infrastructure project to build out our campus in Richmond, Virginia, the costs of which could impact our financial condition and results of operations. In December 2021, we announced our plans to expand our research and technology center in Richmond, Virginia. These plans will require significant capital expenditures over the next several years and our business plans may change. Future changes in growth or fluctuations in cash flow may also negatively impact our ability to finance this project. Additionally, actual capital expenditures could vary materially from our projected capital expenditures, which could negatively impact our business, operating results and financial condition. If we are provided with any grants, tax credits, abatements or other incentives related to this expansion effort and do not meet requirements associated with those incentives, we may not be able to benefit from those incentives, which could cause the cost of the project to be significantly more than anticipated or significantly increase our taxes above what we currently expect. We currently plan to finance construction with cash on hand. Use of cash on hand to finance construction would reduce the amount of cash available for other corporate uses and could also reduce our ability to meet our scheduled debt service obligations or to meet the covenants required to borrow additional funds under our 2020 Credit Agreement. Any of the foregoing may adversely affect our financial position and results of operations.

Our current or future geographic expansion plans may not result in increased revenues, which may negatively impact our business, results of operations and financial position. Expanding into new markets and increasing the depth of our coverage in existing markets imposes additional burdens on our research, systems development, sales, marketing and general managerial resources. If we are unable to manage our expansion efforts effectively, if our expansion efforts take longer or are more expensive than planned or we are not successful in marketing and selling our services in existing or new markets, our expansion may have a material adverse effect on our financial position by increasing our expenses without increasing our revenues.

Our business depends on retaining and attracting highly capable management and operating personnel. Our success depends in large part on our ability to retain and attract management and operating personnel, including our President and Chief Executive Officer, Andrew Florance, and our other officers and key employees. Our business requires highly skilled technical, sales, management, web product and development, marketing and research personnel, who are in high demand and are often subject to competing offers. To retain and attract key personnel, we use various measures, including employment agreements, awards under a stock incentive plan and incentive bonuses for key employees. These measures may not be enough to retain and attract the personnel we need or to offset the impact on our business of the loss of the services of Mr. Florance or other key officers or employees. We experienced an increase in turnover as we returned nearly all our workforce to the office. We may face additional challenges in retaining employees in an increasingly competitive job market.

Our business and results of operations have been and may be, and our financial condition may continue to be, impacted by the COVID-19 pandemic, and such impact could be materially adverse and continue for an unknown period of time. The COVID-19 pandemic has created significant economic volatility, uncertainty and disruption around the world. The extent to which COVID-19 will further impact our business, operations and financial results, including the duration and magnitude of such impact, is uncertain and will depend on numerous rapidly evolving factors that we cannot accurately predict including, among others:

- The length and severity of the pandemic, including new variants;
- The negative impact on global and regional economies, credit markets and economic activity;
- Governmental, business and individual actions taken in response to the pandemic and the impact of those actions on global economic activity;
- The impact of business disruptions and reductions in employment levels and the level of consumer confidence in the economy on our clients and the resulting impact on their demand for our services and solutions;
- Business consolidations or failures among businesses that we serve;
- Our clients’ ability to pay for our services and solutions and our ability to collect payment for services provided; and

- The pace and extent of economic recovery following the COVID-19 pandemic, including recovery in the real estate industry in particular.

The demand for office space could decrease significantly as businesses implement hybrid or all work from home arrangements in response to employee desire for more flexibility, which may lead to a downturn in the commercial real estate market. A depressed commercial real estate market would have a negative impact on our core customer base, which could impact our customers' ability to subscribe and pay for our services and reduce demand for our services. Reduced demand and increased cancellations could cause our revenues or our revenue growth rates to decline and reduce our profitability. As a result of COVID-19 and its impact on global economic conditions, including the real estate industry, towards the end of the first quarter and in the first two months of the second quarter of 2020, we saw an increase in customer requests for cancellations or suspensions, a reduction in new customer sales, failures to pay and delays in payments of amounts owed to us. We may see additional requests as current economic conditions cause customers to reduce expenses and prolong the decision-making time before purchasing third party services, which may lead to fewer of our services being purchased or service cancellations. The extent and duration of any future continued weakening of the economy is unknown, and there can be no assurance that any of the governmental or private sector initiatives designed to strengthen the economy will be successful or available to us and our customers and, if successful, when the benefits will be seen.

COVID-19, and the disruption in global economic conditions stemming from the pandemic, could also precipitate or aggravate the other risk factors discussed therein, which could materially adversely affect our business, financial condition and results of operations. Further, the COVID-19 pandemic may also affect our operating and financial results in a manner that is not presently known to us or that we currently do not consider to present significant risks.

We are subject to a number of risks related to acceptance of credit cards and debit cards and facilitation of other customer payments.

We depend on processing vendors to complete credit and debit card transactions. If we or our processing vendors fail to maintain adequate systems to authorize and process credit card transactions, one or more of the major credit card companies could disallow our continued use of their payment products. 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. We could lose customers if we are not able to continue to use payment products of the major credit card companies. In addition, if the systems to authorize and process credit card transactions 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.

We depend on processing vendors to complete credit and debit card transactions and Automated Clearing House (ACH) payments, both for payments made to us directly for our services and for payments made by renters to landlords using our online leasing services. If we or any one or more of these service providers fail to maintain adequate systems for authorization and processing credit card payments, it could cause one or more of the major credit card companies to disallow our continued use of their payment products. Further, if we or any one or more of these service providers fail to maintain adequate systems for authorization and processing of credit, debit, ACH or similar payments or if any such service provider were to terminate or modify its relationship with us unexpectedly, our ability to process those customer transactions would be adversely affected, which could decrease sales, discourage customers away from our marketplace services, result in potential legal liability, and harm our business and reputation. In addition, if the systems for the authorization and processing of credit card transactions 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.

We are also subject to payment card association operating rules, certification requirements and rules governing electronic funds transfers, which could change or be reinterpreted in ways that 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 also may subject us to fines, penalties, damages and civil liability, and may result in the loss 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, cardholders and transactions.

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 payment transactions, we may face civil liability, diminished public perception of our security measures and higher costs, each of which could harm our business, results of operations and financial condition.

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 services to offset the increase. The termination of our ability to process payments on any major credit or debit card would significantly impair our ability to operate our business.

Climate change and other events beyond our control could harm our business. Natural disasters, disease outbreaks and pandemics, power shortages, terrorism, political unrest, telecommunications failure, vandalism, geopolitical instability, war, climate change, and other events beyond our control could negatively impact our operations or otherwise harm our business. Such events may result in damage or loss of service to our data centers or other infrastructure that our operations rely on, potentially reduce the attractiveness of real estate in areas we provide services, cause delays in product development or availability, or result in losses of critical data, any of which may adversely impact our operations.

In addition, the impacts of climate change on the global economy and our industry are rapidly evolving. Physical impacts of climate change (including but not limited to floods, droughts, more frequent and/or intense storms, and wildfires), may disrupt our operations, as well as the operations of our suppliers and customers. Longer-term physical impacts may also result in changing consumer preferences, which may adversely impact demand for certain of our products. Transition impacts of climate change may subject us to increase regulations, reporting requirements (such as the SEC's proposed climate change disclosure rule), standards, or expectations regarding the environmental impacts of our business. Failure to disclose accurate information in a timely manner may also adversely affect our reputation, business, or financial performance.

Increased attention to environmental, social and governance ("ESG") matters may require us to incur additional costs or otherwise adversely impact our business. Increased attention to climate change; diversity, equity, and inclusion; and other ESG issues, as well as societal expectations regarding voluntary ESG initiatives and disclosures, may result in increased costs (including but not limited to increased costs related to compliance, stakeholder engagement, and contracting), impact our reputation, or otherwise affect our business performance. In addition, organizations that provide information to investors on corporate governance and related matters have developed ratings processes for evaluating companies on ESG matters. Such ratings are used by some investors to inform their investment or voting decisions. Unfavorable ESG ratings could lead to negative investor sentiment toward us and/or our industry, which could have a negative impact on our access to and costs of capital. To the extent ESG matters negatively impact our reputation, we may also not be able to compete as effectively to recruit or retain employees. We may take certain actions, including the establishment of ESG-related goals or targets, to improve the ESG profile of our Company and/or offerings; however, such actions may be costly or be subject to numerous conditions that are outside our control, and we cannot guarantee that such actions will have the desired effect.

Moreover, while we may create and publish voluntary disclosures regarding ESG matters from time to time, many of the statements in those voluntary disclosures are based on hypothetical expectations and assumptions that may or may not be representative of current or actual risks or events or forecasts of expected risks or events, including the costs associated therewith. Such expectations and assumptions are necessarily uncertain and may be prone to error or subject to misinterpretation given the long timelines involved and the lack of an established single approach to identifying, measuring and reporting on many ESG matters. Such disclosures may also be at least partially reliant on third-party information that we have not independently verified or cannot be independently verified. In addition, we expect there will likely be increasing levels of regulation, disclosure-related and otherwise, with respect to ESG matters, and increased regulation will likely lead to increased compliance costs as well as scrutiny that could heighten all of the risks identified in this risk factor. Such ESG matters may also impact our suppliers or customers, which may adversely impact our business, financial condition, or results of operations.

Risks related to our data, intellectual property and listings

If we are not able to obtain and maintain accurate, comprehensive or reliable data, we could experience reduced demand for our information, analytics and online marketplace services. Our success depends on our clients' confidence in the comprehensiveness, accuracy and reliability of the data and analysis we provide.

Establishing and maintaining accurate and reliable data and analysis is challenging. If our data, including the data we obtain from third parties or directly from brokers through the Marketing Center feature on CoStar and LoopNet, or analysis is not current, accurate, comprehensive or reliable, we could experience reduced demand for our services or be subject to legal claims by our customers, either of which could result in lower revenues and higher expenses.

If we are unable to enforce or defend our ownership and use of intellectual property, our business, brands, competitive position and operating results could be harmed. The success of our business depends in large part on our intellectual property, including intellectual property involved in our methodologies, databases, services and software. We rely on a combination of trademark, trade secret, patent, copyright and other laws, nondisclosure and noncompetition provisions, license agreements and other contractual provisions and technical measures to protect our intellectual property rights. However, current law may not provide for adequate protection of our databases and the actual data. In addition, legal standards relating to the validity, enforceability and scope of protection of proprietary rights in internet-related businesses are uncertain and evolving, and changes in these standards may adversely impact the viability or value of our proprietary rights. We find our proprietary content on competitors' sites. If we are not successful in protecting our intellectual property, including our content, our brands and our business, results of operations and financial condition could be harmed. The same would be true if a court found that our services infringe other persons' intellectual property rights. Any intellectual property lawsuits or threatened lawsuits in which we are involved, either as a plaintiff or as a defendant, have cost us and could continue to cost us a significant amount of time and money and distract management's attention from operating our business. In addition, if we do not prevail on an intellectual property claim, this could result in a change to our methodology or information, analytics and online marketplace services and could reduce our profitability.

Effective trademark, trade secret, patent and copyright protection may not be available in every country in which we provide our services. The laws of certain countries do not protect proprietary rights to the same extent as the laws of the U.S. and, therefore, in certain jurisdictions, we may be unable to protect our intellectual property and our proprietary technology adequately against unauthorized third-party copying or use, which could harm our competitive position. This risk will increase as we continue to expand our business into new international jurisdictions.

We may not be able to successfully halt the operation of websites that aggregate our data, as well as data from other companies, or copycat websites that may misappropriate our data. Third parties may misappropriate our data through website scraping, robots or other means and aggregate and display this data on their websites. In addition, "copycat" websites may misappropriate data on our website and attempt to imitate our brands or the functionality of our website. We may not be able to detect all such websites in a timely manner and, even if we could, technological and legal measures available to us may be insufficient to stop their operations and the misappropriation of our data. Any measures that we may take to enforce our rights could require us to expend significant financial or other resources.

We may be subject to legal liability for collecting, displaying or distributing information. Because the content in our database is collected from various sources and distributed to others, we may be subject to claims for breach of contract, defamation, negligence, unfair competition or copyright or trademark infringement or claims based on other theories, such as breach of laws related to privacy and data protection. We could also be subject to claims based upon the content that is accessible from our website through links to other websites or information on our website supplied by third parties. Even if these claims do not result in liability to us, we could incur significant costs in investigating and defending against any claims and we could be subject to public notice requirements that may affect our reputation. Our potential liability for information distributed by us to others could require us to implement measures to reduce our exposure to such liability, which may require us to expend substantial resources and limit the attractiveness of our information, analytics and online marketplaces to users. These risks may be exacerbated from impacts, or perceived impacts, of emerging technologies (including but not limited to machine learning) on human rights, privacy, or other social considerations, which may result in reputational harm, compliance costs for any new rules or interpretations, or other adverse impacts on our operations and financial performance.

If we are unable to obtain or retain listings from real estate brokers, agents, property owners and apartment property managers, our marketplace services, could be less attractive to current or potential customers, which could reduce our revenues. The value of our real estate marketplace services to our customers depends on our ability to increase the number of property listings provided and searches conducted. As the number of listings increases, so does the utility of a marketplace's search, listing and marketing services. We depend substantially on brokers, agents, property owners and, in the case of apartment rentals, property managers to submit listings to our marketplaces. If these parties choose not to continue their listings with us, or choose to list them with a competitor, our marketplace services could be less attractive to other real estate industry transaction participants, resulting in reduced revenue.

Risks related to our international operations

International operations expose us to additional business risks, which may reduce our profitability. Our international operations and expansion subject us to additional business risks, including: currency exchange rate fluctuations; difficulty in adapting to the differing business practices and laws in foreign countries, including differing laws regarding privacy and data protection; difficulties in managing foreign operations; limited protection for intellectual property rights in some countries; difficulty in collecting accounts receivable and longer collection periods; costs of enforcing contractual obligations; impact of recessions in economies outside the U.S.; and potentially adverse tax consequences. In addition, international expansion imposes additional burdens on our executive and administrative personnel, systems development, research and sales departments and general managerial resources. If we are not able to manage our international operations successfully, we may incur higher expenses and our profitability may be reduced. Finally, the investment required for additional international expansion sometimes exceeds the profit generated from such expansion, which reduces our profitability and may adversely affect our financial position.

Fluctuating foreign currency exchange rates may negatively impact our business, results of operations and financial position. A portion of our business is denominated in foreign currencies. We translate sales and other results denominated in foreign currency into U.S. dollars for our financial statements. During periods of a strengthening U.S. dollar, our reported international sales and earnings could be reduced because foreign currencies may translate into fewer U.S. dollars. Foreign currency exchange rates have fluctuated and may continue to fluctuate.

Significant foreign currency exchange rate fluctuations may negatively impact our international revenue, which in turn affects our consolidated revenue. Currently, we are not party to any hedging transactions intended to reduce our exposure to exchange rate fluctuations. We may seek to enter into hedging transactions in the future, but we may be unable to enter into these transactions successfully, on acceptable terms or at all. We cannot predict whether we will incur foreign exchange losses in the future. Further, significant foreign exchange rate fluctuations resulting in a decline in the respective local currency may decrease the value of our foreign assets, as well as decrease our revenues and earnings from our foreign subsidiaries, which would reduce our profitability and adversely affect our financial position.

The economic effects of "Brexit" may affect relationships with existing and future customers and could have an adverse impact on our business and operating results. On June 23, 2016, the U.K. held a referendum in which British citizens approved an exit from the European Union ("E.U."), commonly referred to as "Brexit." On January 31, 2020, the U.K. officially withdrew from the E.U., beginning a transition period of negotiations between the British government and the E.U. and other governments. On December 24, 2020, the E.U. and the U.K. announced they had entered into a post-Brexit deal on certain aspects of trade and other strategic and political issues. The impact of Brexit, the December 2020 post-Brexit agreement and the future relationship between the E.U. and the U.K., including terms not addressed in the December 2020 agreement, remain uncertain. Such uncertainty could cause political and economic uncertainty in the U.K. and the rest of Europe, which could harm our business and financial results. In particular, Brexit caused and could continue to cause significant volatility in global equity markets, currency exchange rates and other asset prices, including those related to real property. Brexit may also lead to divergent national laws and regulations as the U.K. determines which E.U. laws to replace or replicate, and compliance with those laws and regulations may be cumbersome, difficult or costly. Further, Brexit may lead other E.U. member countries to consider referendums regarding their E.U. membership. We cannot yet predict the future implications of Brexit, including whether it could increase our cost of doing business or otherwise adversely affect our financial condition or results of operations. The impact to us from Brexit may affect not only our U.K. operations but operations in other parts of the E.U.

Risks related to our indebtedness

We have a significant amount of indebtedness, which could decrease our flexibility and adversely affect our business, financial condition and results of operations. As of September 30, 2022, we had approximately $792 million of Senior Notes outstanding and an additional approximately $750 million available to be drawn under the 2020 Credit Agreement. There can be no assurance that our future cash flows will be sufficient to make payments of interest or principal on the Senior Notes or any amounts due and payable under the 2020 Credit Agreement. If our cash flows and capital resources are insufficient to fund our debt service obligations, we could face substantial liquidity problems and could be forced to reduce or delay investments and capital expenditures or to dispose of material assets or operations, seek additional debt or equity capital or restructure or refinance our indebtedness. We may not be able to effect any such alternative measures on commercially reasonable terms or at all, and, even if successful, those alternative actions may not allow us to meet our scheduled debt service obligations. Furthermore, we may incur substantial additional indebtedness, including secured indebtedness, and if we incur additional indebtedness or other liabilities, the related risks that we face could intensify.

The 2020 Credit Agreement contains customary restrictive covenants imposing operating and financial restrictions on us, including restrictions that may limit our ability to engage in acts that we believe may be in our long-term best interests. These covenants restrict our ability and the ability of our domestic subsidiaries to, among other things, (i) incur additional indebtedness, (ii) incur liens, (iii) pay dividends or make certain other restricted payments, investments or acquisitions, (iv) merge or consolidate with another person, and (v) sell, assign, lease or otherwise dispose of all or substantially all of our assets.

In addition, the 2020 Credit Agreement requires us to comply with a maintenance covenant that we will not exceed a total net leverage ratio, calculated as total consolidated debt, net of up to $1.0 billion of unrestricted cash and cash equivalents, to consolidated EBITDA, of 4.50 to 1.00. The operating restrictions and financial covenants in the 2020 Credit Agreement may limit our ability to finance future operations or capital needs, to engage in other business activities or to respond to changes in market conditions. Our ability to comply with any financial covenants could be affected materially by events beyond our control, and we may be unable to satisfy any such requirements. If we fail to comply with these covenants, we may need to seek waivers or amendments of such covenants, seek alternative or additional sources of financing or reduce our expenditures. We may be unable to obtain such waivers, amendments or alternative or additional financing on a timely basis or at all, or on favorable terms.

A breach of the covenants under the 2020 Credit Agreement or the indenture that governs the Senior Notes could result in an event of default under the applicable indebtedness. Such a default may allow the creditors to accelerate the related debt and may result in the acceleration of any other debt to which a cross-acceleration provision applies. In the event the holders of the Senior Notes or our other debt accelerate the repayment of our borrowings, we and our subsidiaries may not have sufficient assets to repay that indebtedness.

Our borrowings under the 2020 Credit Agreement will carry a variable interest rate based on the Euro Interbank Offered Rate (“EURIBOR”) or the London Interbank Offered Rate (“LIBOR”) as a benchmark for establishing the rate of interest. LIBOR is the subject of recent national, international and other regulatory guidance and proposals for reform. The U.K. authority that regulates LIBOR announced that it will not compel banks to submit rates for the calculation of LIBOR after June 2023. The full impact of any transition away from LIBOR remains unclear. The 2020 Credit Agreement allows us and the administrative agent under the 2020 Credit Agreement to amend the 2020 Credit Agreement to replace LIBOR with one or more Secured Overnight Financing Rate based rates or another alternative benchmark rate. We may not be able to agree with the administrative agent on a replacement reference rate that is as favorable as LIBOR, which may increase in the cost of our borrowings under the 2020 Credit Agreement.

Our indebtedness increases our vulnerability to general adverse economic and industry conditions; requires us to dedicate a portion of our cash flow from operations to payments on indebtedness, reducing the availability of cash flow to fund capital expenditures, marketing and other general corporate activities; limits our ability to borrow additional funds; and may limit our flexibility in planning for, or reacting to, changes in our business and the industries in which we operate.

A lowering or withdrawal of the ratings assigned to our debt securities by rating agencies may increase our future borrowing costs, reduce our access to capital or result in the loss of certain covenant suspensions. Our debt rating could be lowered or withdrawn entirely by a rating agency if, in that rating agency’s judgment, future circumstances relating to the basis of the rating, such as adverse changes, warrant. Any future lowering of our ratings likely would make it more difficult or more expensive for us to obtain additional debt financing.

In addition, the 2020 Credit Agreement provides that, during any period of time in which we maintain a corporate investment grade rating from any two of Standard & Poor’s Rating Services, Fitch Ratings, Inc. or Moody’s Investors Services, Inc. (such period, a “Covenant Suspension Period”), certain customary negative and affirmative covenants contained in the 2020 Credit Agreement are suspended, including the covenants restricting affiliate transactions, incurrence of indebtedness, investments, asset sales and restricted payments. A lowering of one or both of our investment grade ratings would result in increased compliance costs and would impose certain operating restrictions, either of which could be materially adverse to our operations and financial results.

Risks related to regulatory compliance and legal matters

Our actual or perceived failure to comply with privacy laws and standards could adversely affect our business, financial condition and results of operations. We depend on information technology networks, systems and infrastructure to process, transmit and store electronic information and to communicate among our locations around the world and with our clients and vendors (collectively “IT Systems”). We own and manage some of IT Systems but also rely on third-party service providers and vendors for a range of products and services, including cloud products/services, that are critical to internal and/or external customer-facing operations. In the course of our business, we and certain of our third-party providers collect, use, transmit and disclose information about customers, employees, contractors, suppliers, vendors, and others such as landlords and tenants, including personal information such as names, addresses, phone numbers, email addresses, credit card information, biometric data, sensitive or confidential transaction and account information, social security numbers, birthdates and financial information (for example, to facilitate the apartment rental application and payment process between a renter and property manager), as well as a broad range of proprietary and confidential business information (collectively, “Confidential Information”).

As a result, we are subject to a variety of state, national and international laws and regulations that apply to the collection, use, retention, protection, disclosure, transfer and other processing of personal information including but not limited to the General Data Protection Regulation ("GDPR") and California Consumer Privacy Act ("CCPA"). These laws and regulations are evolving, with new or modified laws and regulations proposed and implemented frequently and existing laws and regulations subject to new or different interpretations. For example, the GDPR introduced new data protection requirements in the EU and imposes substantial fines for breaches of the data protection rules. The GDPR increased our responsibility and liability in relation to personal data that we process. The CCPA expands the rights of California residents to access and require deletion of their personal information, opt out of certain personal information sharing and receive detailed information about how their personal information is used. The CCPA also provides for civil penalties for violations, as well as a private right of action for data breaches that may increase data breach litigation. Many states have adopted, or are considering enacting, similar laws. For example, the California Privacy Rights Act ("CPRA") will go into effect in January 2023 (with a lookback period until January 2022) and will expand upon the CCPA. The CPRA builds on the CCPA and imposes additional obligations on covered businesses, including additional consumer rights processes, limitations on data uses, new audit requirements for higher risk data, and opt outs for certain uses and disclosure of sensitive personal information. The CPRA also creates a new California data protection agency authorized to issue substantive regulations and could result in increased privacy, cybersecurity, and data protection enforcement. Similar laws are in motion in other states across the United States. For example, in 2021, Virginia enacted the Virginia Consumer Data Protection Act ("VCDPA") and Colorado enacted the Colorado Privacy Act ("CPA"), both of which laws are comprehensive statutes that share similarities with the CCPA and CPRA. Recently, Utah enacted the Utah Consumer Privacy Act ("UCPA"), which like the VCDPA and CPA, go into effect in 2023. Similar laws have been proposed, and likely will be proposed, in other states and at the federal level, and if passed, may have potentially conflicting requirements that would make compliance challenging.

In addition to risks we face under privacy laws, we are subject to evolving consumer protection and marketing laws and increased litigation and government enforcement by the Federal Trade Commission and state Attorneys General. These agencies are aggressively interpreting and enforcing federal and state consumer protection laws in relation to very broad sales and marketing and advertising contexts. There are also federal laws covering our such activities that are a source of potential liability for our business, including the Controlling the Assault of Non-Solicited Pornography and Marketing Act (known as the "CAN-SPAM" Act), the Telephone Consumer Protection Act (as implemented by the Telemarketing Sales Rule) ("TCPA"), and the Fair Credit Reporting Act ("FCRA"). In particular, any claims that we have violated the TCPA could be costly to litigate and could expose us to substantial statutory damages or settlement costs.

Any failure or alleged failure to comply with privacy, data protection or consumer protection laws could lead to government enforcement actions and litigation and significant penalties against us, and could materially adversely affect our reputation, business, financial condition, cash flows and results of operations. Compliance with any of the foregoing laws and regulations can be costly, can delay or impede the development of new products, and may require us to change the way we operate.

The interpretation and application of many privacy and data protection laws are uncertain. These laws may be interpreted and applied in a manner that is inconsistent with our existing data management practices or the features of our products. If so, in addition to the possibility of negative publicity, fines, lawsuits and other claims and penalties, we could be required to fundamentally change our business activities and practices or modify our products, which could harm our business.

Changes in tax laws, regulations or fiscal and tax policies or the manner of their interpretation or enforcement could adversely impact our financial performance. New tax laws or regulations, or changes in existing laws or regulations, or the manner of their interpretation or enforcement, could increase our cost of doing business. In addition, from time to time, U.S. and foreign tax authorities, including state and local governments consider legislation that could increase our effective tax rate. For example, the U.S. Congress has advanced a variety of tax legislation proposals, and while the final form of any legislation is uncertain, the current proposals, if enacted, could have a material effect on our effective tax rate.

Third-party claims, litigation, regulatory proceedings or government investigations to which we are subject or in which we become involved, regardless of their merit, may significantly increase our expenses and adversely affect our stock price. From time to time we may be subject to third-party claims, lawsuits, regulatory proceedings or government investigations into whether our business practices comport with applicable law, which may include claims with respect to intellectual property, cybersecurity, privacy, data protection, antitrust, breach of contract, employment, mergers and acquisitions and other matters. Regardless of the merit of such claims, proceedings or investigations, defending against them could cost us a significant amount of time and money, result in negative publicity, and/or adversely affect our stock price. In addition, if any claims or proceedings are decided against us or if a settlement requires us to pay a large monetary amount or take other action that materially restricts or impedes our operations, our profitability could be significantly reduced and our financial position could be adversely affected.

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

The following table is a summary of our repurchases of common stock during each of the three months in the quarter ended September 30, 2022:

ISSUER PURCHASES OF EQUITY SECURITIES

2022	Total Number of Shares Purchased [1]	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs
July 1 through 31	7,600	$ 60.41	—	—
August 1 through 31	188	75.06	—	—
September 1 through 30	299	73.97	—	—
Total	8,087	$ 61.25	—	—

[1] The number of shares purchased consists of shares of common stock tendered by employees to the Company to satisfy the employees' minimum tax withholding obligations arising as a result of vesting of restricted stock grants under the Company’s 2016 Stock Incentive Plan, as amended, which shares were purchased by the Company based on their fair market value on the trading day immediately preceding the vesting date. None of these share purchases were part of a publicly announced program to purchase common stock of the Company.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit No.	Description
3.1	Fourth Amended and Restated Certificate of Incorporation (Incorporated by reference to Exhibit 3.1 to the Registrant's Current Report o Form 8-K filed with the Securities and Exchange Commission on June 7, 2021).
3.2	Fourth Amended and Restated By-Laws (Incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K file with the Securities and Exchange Commission on May 9, 2022).
31.1	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
31.2	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
32.1	Certification of Principal Executive Officer pursuant to 18 U.S.C. Sec. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxle Act of 2002 (furnished herewith).
32.2	Certification of Principal Financial Officer pursuant to 18 U.S.C. Sec. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxle Act of 2002 (furnished herewith).
101.INS	The following financial statements from the Company’s Quarterly Report on Form 10-Q for the quarter ended September 30, 2022, formatted in Inline XBRL: (i) Condensed Consolidated Statements of Operations; (ii) Condensed Consolidated Statements of Comprehensive Income; (iii) Condensed Consolidated Balance Sheets; (iv) Condensed Consolidated Statements of Changes in Stockholders’ Equity; (v) Condensed Consolidated Statements of Cash Flows and (vi) Notes to Condensed Consolidated Financial Statements, tagged as blocks of text and including detailed tags.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.
104	The cover page from the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2022, formatted i Inline XBRL (included as Exhibit 101).

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.

COSTAR GROUP, INC.

Date: October 26, 2022	By:	/s/ Scott T. Wheeler
		Scott T. Wheeler Chief Financial Officer (Principal Financial and Accounting Officer and Duly Authorized Officer)

EXHIBIT 31.1

CERTIFICATION

I, Andrew C. Florance, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CoStar 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(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 26, 2022 By: /s/ Andrew C. Florance

Andrew C. Florance
President and Chief Executive Officer
(Principal Executive Officer and Duly Authorized Officer)

EXHIBIT 31.2

CERTIFICATION

I, Scott T. Wheeler, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CoStar 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(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 26, 2022 By: /s/ Scott T. Wheeler

Scott T. Wheeler
Chief Financial Officer
(Principal Financial and Accounting Officer and Duly Authorized Officer)

EXHIBIT 32.1

CoStar Group, Inc.
1331 L Street, NW
Washington, DC 20005

October 26, 2022

Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

Re**: Certification Of Principal Executive Officer Pursuant To 18 U.S.C. Sec. 1350**

Dear Ladies and Gentlemen:

In connection with the accompanying Quarterly Report on Form 10-Q of CoStar Group, Inc., for the quarter ended September 30, 2022, I, Andrew C. Florance, Chief Executive Officer of CoStar Group, Inc., hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1) such Quarterly Report on Form 10-Q of CoStar Group, Inc., for the quarter ended September 30, 2022, 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 such Quarterly Report on Form 10-Q of CoStar Group, Inc., for the quarter ended September 30, 2022, fairly presents, in all material respects, the financial condition and results of operations of CoStar Group, Inc.

By: /s/ Andrew C. Florance

Andrew C. Florance
President and Chief Executive Officer
(Principal Executive Officer and Duly Authorized Officer)

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to CoStar Group, Inc. and will be retained by CoStar Group, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

In accordance with Item 601 of Regulation S-K, this certification is being “furnished” as Exhibit 32.1 to CoStar Group, Inc.'s quarterly report and shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 (the “Exchange Act”) or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, except as expressly set forth by specific reference in such a filing.

EXHIBIT 32.2

CoStar Group, Inc.
1331 L Street, NW
Washington, DC 20005

October 26, 2022

Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

Re**: Certification Of Principal Financial Officer Pursuant To 18 U.S.C. Sec. 1350**

Dear Ladies and Gentlemen:

In connection with the accompanying Quarterly Report on Form 10-Q of CoStar Group, Inc., for the quarter ended September 30, 2022, I, Scott T. Wheeler, Chief Financial Officer of CoStar Group, Inc., hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1) such Quarterly Report on Form 10-Q of CoStar Group, Inc., for the quarter ended September 30, 2022, 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 such Quarterly Report on Form 10-Q of CoStar Group, Inc., for the quarter ended September 30, 2022, fairly presents, in all material respects, the financial condition and results of operations of CoStar Group, Inc.

By: /s/ Scott T. Wheeler
Scott T. Wheeler
Chief Financial Officer
(Principal Financial and Accounting Officer and Duly Authorized Officer)

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to CoStar Group, Inc. and will be retained by CoStar Group, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

In accordance with Item 601 of Regulation S-K, this certification is being “furnished” as Exhibit 32.2 to CoStar Group, Inc.'s quarterly report and shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 (the “Exchange Act”) or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, except as expressly set forth by specific reference in such a filing.