

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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2020

or

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

For the transition period from _____ to _____

Commission File Number: 001-34846

RealPage, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

75-2788861
(I.R.S. Employer
Identification No.)

2201 Lakeside Boulevard, Richardson, Texas 75082-4305
(Address of principal executive offices)
(Zip Code)

(972) 820-3000
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.001 par value	RP	The NASDAQ Stock Market LLC

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

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

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

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

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

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

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

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes No

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

Based on the closing price of the registrant's common stock on the last business day of the registrant's most recently completed second fiscal quarter, which was June 30, 2020, the aggregate market value of its shares held by non-affiliates on that date was approximately \$5,410,580,269. On February 16, 2021, 102,091,526 shares of the registrant's Common Stock, \$0.001 par value, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive proxy statement for its 2021 Annual Meeting of Stockholders to be filed within 120 days of the Registrant's fiscal year ended December 31, 2020 are incorporated by reference into Part III of this Annual Report on Form 10-K where indicated. The discussion of historical items and year-to-year comparisons between 2019 and 2018 in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed with the SEC on March 2, 2020, is incorporated by reference into Part II of this Annual Report on Form 10-K.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

We have made forward-looking statements in this Annual Report on Form 10-K that are subject to risks and uncertainties. Forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, are subject to the "safe harbor" created by those sections. The forward-looking statements in this Annual Report on Form 10-K are based on our management's beliefs and assumptions and on information currently available to our management. Statements preceded by, followed by, or that otherwise include the words "anticipates," "aspires," "believes," "can," "continues," "could," "estimates," "expects," "intends," "may," "plans," "potential," "predicts," "projects," "seeks," "should," "will" or "would" or similar expressions and the negatives of those terms are generally forward-looking in nature and not historical facts. These forward-looking statements involve known and unknown risks, uncertainties, and other factors, which may cause our actual results, performance, time frames or achievements to be materially different from any future results, performance, time frames or achievements expressed or implied by the forward-looking statements. We discuss many of these risks, uncertainties and other factors in this document in greater detail under the heading "Risk Factors." We believe it is important to communicate our expectations to our investors. However, there may be events in the future that we are not able to predict accurately or over which we have no control. The potential impacts of the COVID-19 pandemic on our business, financial condition and results of operations, those risks described in "Risk Factors" included in this Annual Report on Form 10-K, as well as any other cautionary language in this Annual Report on Form 10-K, provide examples of risks, uncertainties and events that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Before you invest in our common stock, you should be aware that the occurrence of the events described in "Risk Factors" and elsewhere in this Annual Report on Form 10-K could harm our business.

Given these risks, uncertainties and other factors, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date of this Annual Report on Form 10-K. You should read this document completely and with the understanding that our actual future results may be materially different from what we expect. We hereby qualify our forward-looking statements by these cautionary statements. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

PART I

Item 1. Business.

Company Overview

RealPage, Inc., a Delaware corporation (together with its subsidiaries, the “Company” or “we” or “us”), is a leading global provider of software and data analytics to the real estate industry. Our platform of data analytics and software solutions enables the rental real estate industry to manage property operations (such as marketing, pricing, screening, leasing, and accounting), identify opportunities through market intelligence, and obtain data-driven insight for better operational and financial decision-making. Our integrated, on demand platform provides a single point of access and a massive repository of real-time lease transaction data, including prospect, renter, and property data. By leveraging data as well as integrating and streamlining a wide range of complex processes and interactions among the rental real estate ecosystem (owners, managers, prospects, renters, service providers, and investors), our platform helps our clients improve financial and operational performance and prudently place and harvest capital.

We sell our solutions through our direct sales organization. Our total revenues were approximately \$1,158.5 million, \$988.1 million, and \$869.5 million for the years ended December 31, 2020, 2019, and 2018, respectively. In the same periods, we had operating income of approximately \$102.8 million, \$92.4 million, and \$66.1 million, respectively, and net income of approximately \$46.3 million, \$58.2 million, and \$34.7 million, respectively.

Our company was formed in 1998 to acquire Rent Roll, Inc., which marketed and sold on premise property management systems for the conventional and affordable multifamily rental housing markets. In June 2001, we released OneSite, our first on demand property management system. Since 2002, we have expanded our platform of solutions to include property management, leasing and marketing, resident services, and asset optimization capabilities. In addition to the multifamily markets, we now serve the single family, senior living, student living, military housing, commercial, hospitality, homeowner association, short-term rental and vacation rental markets. Since July 2002, we have completed over 50 acquisitions of complementary technologies to supplement our internal product development and sales and marketing efforts and expand the scope of our solutions, the types of rental housing and vacation rental properties served by our solutions, and our client base. In connection with this expansion and these acquisitions, we have committed greater resources to developing and increasing sales of our platform of data analytics and on demand solutions. As part of our strategy, we plan to continue to pursue acquisitions of complementary businesses, products, and technologies.

Merger Agreement

On December 20, 2020, we entered into an Agreement and Plan of Merger (the “Merger Agreement”) with Mirasol Parent, LLC, a Delaware limited liability company (“Parent”), and Mirasol Merger Sub, Inc., a Delaware corporation and wholly owned subsidiary of Parent (“Merger Sub”), pursuant to which Merger Sub will merge with and into RealPage (the “Merger”), with RealPage surviving the Merger as a wholly owned subsidiary of Parent. Parent and Merger Sub are affiliates of funds advised by Thoma Bravo, L.P. (“Thoma Bravo”).

Our Board of Directors has unanimously approved the Merger Agreement and, subject to certain exceptions set forth in the Merger Agreement, resolved to recommend that our stockholders adopt the Merger Agreement. As a result of the Merger, each share of our common stock outstanding immediately prior to the effective time of the Merger (the “Effective Time”) (subject to certain exceptions, including for shares of common stock owned by stockholders of RealPage who have not voted in favor of the adoption of the Merger Agreement and have properly exercised appraisal rights in accordance with Section 262 of the General Corporation Law of the State of Delaware) will, at the Effective Time, automatically be converted into the right to receive \$88.75 in cash, subject to applicable withholding taxes (the “Merger Consideration”). Pursuant to the Merger Agreement, as of the Effective Time, each option to purchase shares of common stock will vest at closing and be converted into the right to receive an amount in cash equal to the product of Merger Consideration (less the applicable exercise price) and the number of shares of common stock covered by such option (less any applicable withholding taxes). At the Effective Time, each award of restricted common stock granted prior to the date of the Merger Agreement (subject to certain exceptions) will be exchanged for an amount in cash, less any applicable withholding taxes, equal to the product obtained by multiplying (A) the Merger Consideration by (B) the number of shares of common stock covered by such award immediately prior to the Effective Time (which shall be the maximum number of shares covered by the award in the case of any such award subject to performance based vesting conditions). If the Merger is consummated, our common stock will be delisted from the NASDAQ Global Select Market and deregistered under the Securities Exchange Act of 1934 (the “Exchange Act”).

Completion of the Merger is subject to certain closing conditions, including (1) the adoption of the Merger Agreement by the holders of a majority of the outstanding shares of common stock, (2) the expiration or early termination of the applicable waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (the “HSR Act”), and the approval of the Merger under other applicable antitrust approvals, (3) the absence of an order, injunction or law prohibiting the Merger, (4) receipt of governmental consents (or, in certain circumstances, implementation of alternative arrangements) with respect to a change of control of certain money transmitter licenses held by a subsidiary of RealPage, (5) the accuracy of the

other party's representations and warranties, subject to certain materiality standards set forth in the Merger Agreement, (6) compliance in all material respects with the other party's obligations under the Merger Agreement and (7) no Company Material Adverse Effect (as defined in the Merger Agreement) having occurred since the date of the Merger Agreement. The parties expect the transaction to close in the second quarter of 2021. RealPage and Parent made the filings required under the HSR Act on January 5, 2021, and the applicable waiting period under the HSR Act expired on February 4, 2021. A special meeting of our shareholders to consider and vote on the proposal to adopt the Merger Agreement is scheduled to be held on March 8, 2021.

Until February 3, 2021 (the "Go Shop Period"), we had the right to, among other things, (1) solicit alternative acquisition proposals and (2) provide information (including nonpublic information) to third parties in connection therewith pursuant to an acceptable confidentiality agreement. During the Go Shop Period, representatives of BofA Securities, at the direction of our Board of Directors, communicated with additional parties to gauge their interest in making an alternative acquisition proposal. No party made an alternative acquisition proposal during the Go Shop Period. From and after February 4, 2021, we must comply with customary non-solicitation restrictions. Subject to certain customary "fiduciary out" exceptions, our Board is required to recommend that our Company's stockholders adopt the Merger Agreement.

We have made customary representations, warranties and covenants in the Merger Agreement, including, among others, covenants to use commercially reasonable efforts to conduct our business in all material respects in the ordinary course during the period between the date of the Merger Agreement and the completion of the Merger. The parties have agreed to use reasonable best efforts to take all actions necessary to consummate the merger, including cooperating to obtain the regulatory approvals necessary to complete the Merger. Either we or Parent may terminate the Merger Agreement upon certain circumstances, as described in the Merger Agreement. In addition, the Merger Agreement provides for a termination fee of \$288 million payable by us to Parent, or a reverse termination fee of \$528 million payable by Parent to us, in each case under certain circumstances described in the Merger Agreement.

For additional information related to the Merger Agreement, please refer to our filings previously made with the SEC in connection with the transaction including our definitive proxy statement filed on February 5, 2021 (the "Proxy Statement") and the full text of the Merger Agreement, a copy of which was filed on December 21, 2020 as Exhibit 2.1 to our Current Report on Form 8-K.

Because the Merger is not yet complete, and except as otherwise specifically stated, the descriptions and disclosures presented elsewhere in this Annual Report on Form 10-K, including those that present forward-looking information as that term is defined elsewhere herein, assume the continuation of RealPage, Inc. as a public company. If the Merger is consummated, our actions and results may be different than those anticipated by such forward-looking statements contained in this Annual Report on Form 10-K, and such differences may be material.

Industry Overview

The real estate market is large, growing, and complex.

The real estate market is large and characterized by challenging and location-specific operating requirements, diverse industry participants, significant mobility among renters, and a variety of property types, including single family, a wide range of multifamily property types, including conventional, affordable, privatized military, student, and senior housing, associations, and vacation rental markets. We estimate that the total addressable market for our current portfolio of data analytics and on demand software solutions is approximately \$18.9 billion across approximately 64.6 million units.

According to the U.S. Census Bureau American Housing Survey for the United States, there were 44.6 million rental real estate units in the United States in 2017. Based on U.S. Census Bureau data and our own estimates, we believe that the overall size of the U.S. rental real estate market, including rent, utilities, and insurance, exceeds \$580.0 billion annually. We estimate that the total addressable market for our current data analytics and on demand software solutions is approximately \$16.1 billion per year. This estimate assumes that each of the 44.6 million rental units in the United States has the potential to generate annually a range of approximately \$310 in revenue per unit for single family units to approximately \$500 in revenue per unit for conventional multifamily units. In addition, we estimate that the student and senior markets have the potential to generate annually approximately \$510 in revenue per unit, and affordable housing markets will generate annually approximately \$300 in revenue per unit. We base this potential revenue assumption on our review of the purchasing patterns of our existing clients with respect to our data analytics and on demand software solutions, the solutions currently utilized by our existing clients, the number of units our clients manage with these solutions, and our current pricing for data analytics and on demand software solutions.

The associations market, including the homeowner's associations ("HOA") and condominium markets, is estimated to contain over 18.0 million units and we estimate that the total addressable market for our solutions is approximately \$1.8 billion per year. This estimate assumes that each of the 18.0 million units managed has the potential to generate annual revenue per unit of \$100. We estimate the potential revenue assumptions based on our review of market industry research and realistic solution penetration rates, as well as related trends affecting the associations market.

The global vacation rental market is large and generally segmented by the type of property and seasonality. Based on our industry research, we estimate the total global vacation rental market to be approximately \$130.0 billion annually. Professional vacation managers, representing roughly 2.0 million units, are responsible for approximately half of the total vacation rental transactions in the market and the other half of the total transactions relate to properties that are individually managed by the property owners. We estimate that the total addressable market for our vacation rental solutions is approximately \$1.0 billion per year. This estimate assumes that each of the 2.0 million units managed has the potential to generate annual revenue per unit of \$500. We estimate the potential revenue assumptions based on our review of market industry research and realistic solution penetration rates, as well as related trends affecting the vacation rental market, including the analysis of vacancy rates and the average number of nights booked.

We believe there is increasing demand for solutions that bring efficiency and precision to the rental real estate industry, which has historically lacked the tools available to many other investment classes. We leverage our massive pool of lease transaction data to provide our clients with analytical tools and actionable intelligence to inform the prudent allocation of capital. We believe that the use of precision data analytics and price optimization solutions represent a significant opportunity to increase yield from the approximately \$3.7 trillion of apartment stock in the U.S., turning over at a rate of approximately \$180.0 billion per year.

Rental real estate management spans both the renter life cycle and the operations of a property.

The renter life cycle can be separated into four key stages: prospect, applicant, residency or stay, and post-residency or post-stay. Each stage has unique requirements, and a property owner's or manager's ability to effectively address these requirements can significantly impact revenue and profitability.

In addition to managing the renter life cycle, property owners and managers must also manage the operations of their properties. Critical components of property operations include materials and service provider procurement; insurance and risk mitigation; utility and energy management; yield management; information technology and telecommunications management; accounting; expense tracking and management; document management; security; staff hiring and training; staff performance measurement and management; and marketing.

Managing the renter life cycle and the operations of a property involves several different constituents, including property owners and managers, prospects, renters, service providers, and investors. Property owners can include single-property owners, multi-property owners, national residential apartment syndicates that may own thousands of units through a variety of investment funds, and real estate investment trusts ("REITs"). Property managers often are responsible for a large number of properties that can range from single family units to multifamily apartment communities. Property owners and managers also need to manage a variety of service providers, including utilities, insurance providers, video, voice and data providers, and maintenance and capital goods suppliers. Managing these diverse relationships, combined with renter turnover, property turnover, as well as regulatory and compliance requirements, can make the operations of even a small portfolio of rental properties complex. Challenges are compounded for real estate portfolio managers responsible for a large number of geographically dispersed properties, which require overseeing potentially hundreds of thousands of individual rental processes.

Legacy information technology solutions designed to manage the rental real estate management process are inadequate.

During the 1970's and 1980's, the rental real estate industry was highly fragmented and regionally organized. During this period, the first property management systems and software solutions emerged to help property owners and managers with basic accounting and record keeping functions. These solutions provided limited functionality and scalability and often were not tailored to the specific needs of the rental real estate industry.

Beginning in the mid 1990's, the rental real estate market began to consolidate and large, nationally focused and publicly financed companies emerged, which aggregated significant numbers of units. The rise of national real estate portfolio managers, many of them accountable to public shareholders, created a need for more sophisticated and scalable property management systems that included a centralized database and were designed to optimize and automate multiple business processes within the renter life cycle and property operations. Despite increasing market demands, the available solutions continued to be insufficient to fully address the complex requirements of the rental real estate industry, which moved beyond basic accounting and record keeping functions to also include value-added services, such as Internet marketing, applicant screening, billing solutions and analytics for pricing, and yield optimization. Additionally, the rise of national syndicates and REITs fueled the need for tools that provide increased visibility into the operational performance of portfolio properties and market analysis resources to maximize return on investment.

To address its complex and evolving requirements, the rental real estate industry has historically implemented a myriad of single point solutions; general purpose applications, such as Microsoft Excel; and/or internally developed solutions to manage their properties. These solutions can be expensive to implement and maintain; often lack integrated functionality to help rental real estate owners, managers, and investors maximize operational yields; and do not have dynamic reporting and analysis tools necessary to optimize investment returns or support capital allocation decisions. In addition, many professionals

in the rental real estate industry still rely on paper or spreadsheet-based approaches, which are typically time-intensive and prone to human error or internal mismanagement.

The rental real estate industry has relied upon print and Internet listing firms to attract leads required to fill available vacancies.

We believe these historical solutions are inadequate because they:

- require significant customization to implement, which frequently inhibits upgrading to new versions or platforms in a timely manner;
- require information technology (“IT”) resources to support integration points between property management systems and disparate value-added services;
- require IT resources to implement and maintain data security, data integrity, performance, and business continuity solutions;
- lack scalability and flexibility to account for the expansion or contraction of a property portfolio;
- lack material organic lease generation capability and do not track the cost of leads generated by each source;
- lack effective spend management capabilities for controlling property management costs;
- lack comprehensive analytics for pricing and yield optimization;
- lack workflow level integration;
- do not provide owners, managers, and investors with visibility into overall property performance; and
- cannot be easily updated to meet new regulations and compliance requirements.

On demand software solutions are well suited to meet the rental real estate market’s needs.

The ubiquitous nature of the Internet, widespread broadband adoption, and improved network reliability and security have enabled the deployment and delivery of business-critical applications online. The on demand delivery model is substantially more economical than traditional on premise software solutions that generally have higher deployment and support costs and require the client to purchase and maintain the associated servers, storage, networks, security, and disaster recovery solutions.

The RealPage Solution

We provide a technology platform of data analytics and on demand software solutions that integrates and streamlines rental real estate management and property operations. Our platform provides the analytical and software solutions necessary to optimize operational yields and returns on investment, and contributes to a more efficient property management process and an improved experience for all of the constituents involved in the rental real estate ecosystem.

Benefits to our Clients

We believe the benefits of our solutions for our clients include the following:

Increased revenues: Our data analytics and on demand software solutions enable our clients to increase their revenues and optimize operational yields by improving their sales and marketing effectiveness; pricing and occupancy; and collection of rental payments, utility expenses, late fees, and other charges. Additionally, our solutions enable our clients to realize new sources of revenue from complementary solutions and services.

Reduced operating costs: Our data analytics and on demand software solutions help our clients reduce costs and optimize operational yields by streamlining and automating many ongoing property management functions; centralizing and controlling purchasing by on-site personnel; and transferring costs from the site to more efficient, centrally managed operations. Our on demand delivery model also reduces a rental property’s operating costs by eliminating the need to own and support the applications or associated hardware infrastructure. In addition, our integrated solutions consolidate the initial implementation and training costs and ongoing support associated with multiple applications. This is particularly important for rental real estate professionals who want to reduce enterprise-class IT infrastructure, support, and staff training.

Improved quality of service for renters and prospects: Our solutions improve the level of service that rental real estate properties provide to renters and prospects by enabling certain types of transactions to be completed online; expediting the processing of rental applications, maintenance service requests, and payments; and increasing the frequency and quality of communication with their renters and prospects. This provides higher renter satisfaction and increased differentiation from competing properties that do not use our solutions while optimizing operational yields.

Streamlined and simplified property management business processes: Our platform provides integrated solutions for managing a wide variety of property management processes that have traditionally been managed by separate manual or

disaggregated applications. Our on demand software solutions utilize common authentication that enables data sharing and workflow automation of certain business processes, thereby eliminating redundant data entry and simplifying many recurring tasks. The efficiency of our solutions allows for optimization of operational yields.

Greater visibility into real estate investment portfolio: Our portfolio management solutions are designed specifically for general partners, limited partners, property management professionals, and other real estate investment firms. These solutions allow stakeholders to quickly combine financial and operating metrics based upon portfolio attributes to evaluate performance, trends, and operations across a portfolio, as well as facilitate the assessment of potential asset management strategies. These solutions provide an unprecedented level of visibility into a real estate portfolio, including information down to the property level, and are designed to work with any property management system. Our portfolio management solutions provide stakeholders the critical information necessary to maximize investment returns and prudently allocate and harvest capital investment.

Ability to integrate third-party products and services: Our open architecture and application framework facilitate the integration of third-party applications and services into our solutions. This enables our clients to conduct these business functions through the same system that they already use for many of their other tasks and to leverage the same repository of lease transaction data, including prospect, renter, and property data, which supports our solutions.

Increased visibility into property performance: Our platform of data analytics and on demand software solutions enable rental real estate owners, managers, and investors to gain a comprehensive view of the operational and financial performance of each of their properties. Our solutions provide a library of standard reports, dashboards, scorecards, and alerts, and we also provide interfaces to several widely used report writers and business intelligence tools. We maintain a massive repository of real-time lease transaction data, subsets of which can be utilized to factor rental payment history into applicant screening processes and to create more accurate supply and demand models and statistically-based price elasticity models to improve price optimization. This enables our clients to optimize both operational yields and investment returns.

Simple implementation and support: Our platform of solutions includes pre-configured extensions that meet the specific needs of a variety of property types and can be easily tailored by our clients to meet more specific requirements of their properties and business processes. We strive to minimize the need for professional consulting services to implement our solutions and train personnel.

Improved scalability: We host our solutions for our clients, thereby reducing or eliminating our clients' costs associated with expanding or contracting IT infrastructure as their property portfolios evolve. We also bear the risk of technological obsolescence because we own and manage our data center infrastructure and are continually upgrading it to newer generations of technology without incremental cost to our clients.

Competitive Strengths of our Solutions

The competitive strengths of our solutions are as follows:

Integrated on demand software platform based on a repository of real-time lease transaction data Our solutions are delivered through an integrated on demand software platform that provides a single point of access via the Internet with a common repository of lease transaction data, including prospect, renter, and property data, which permits our solutions to access requested data through offline data transfer or in real-time.

Large and growing apartment real estate ecosystem: At December 31, 2020, our client base of over 31,700 clients used one or more of our integrated data analytics or on demand software solutions to help manage the operations of approximately 19.7 million rental real estate units. Our solutions automate and streamline many of the recurring transactions and interactions among this large and expanding apartment real estate ecosystem, including prospect inquiries, applications, monthly rent payments, and service requests. As the number of constituents of the apartment real estate ecosystem increases, the volume of lease transaction data in our repository and its value to the constituents of the ecosystem grows.

Comprehensive platform of data analytics and on demand software solutions and services for the rental real estate industry: Our platform of solutions and services provides a broad range of analytical and on demand capabilities for managing the renter life cycle and core operational processes for property management. This integrated, on demand platform enables our clients to optimize operational yields and investment returns.

Precision data analytics and price optimization tools based on in-depth lease transaction data The combination of our massive pool of lease transaction data, our expertise in apartment marketing dynamics, our data science team that can extract actionable insights, and our forecasting abilities creates a unique competitive advantage. Our statistical-based modeling and forecasting solutions provide our clients with granular, market-specific intelligence which facilitates the optimization of operational yields and returns on investment.

Open cloud computing architecture: Our cloud computing architecture enables our solutions to interface with our clients' existing systems and allows our clients to outsource the management of third-party business applications. This open

architecture enables our clients to buy our solutions incrementally while continuing to use existing third-party solutions, allowing us to shorten sales cycles and increase adoption of our solutions within our target markets.

Deep rental real estate industry expertise. We have been serving the rental real estate industry exclusively for over 20 years, and the members of our senior management team have extensive experience in the rental real estate industry. We design our solutions based on our extensive expertise, insight into industry trends and developments, and property management best practices that help our clients simplify the challenges of owning and managing rental properties.

Experienced management team with strong integrating and operating track record. We have a highly seasoned and effective management team with extensive expertise in the rental real estate industry. By leveraging this expertise and knowledge, we have developed, and continue to improve, data analytics and on demand software solutions which help our clients simplify the challenges of owning and managing rental properties, increase operational yields, and make better capital placement and harvesting decisions. Our management team has a proven ability to acquire and integrate complementary businesses and technologies, as demonstrated by the over 50 acquisitions we have completed since July 2002. We continue to attract and retain experienced management talent to support our growth.

Our Strategy

We plan to continue to leverage our platform of solutions and industry presence to maintain our position as a leading provider of technology solutions to the real estate industry. The key elements of our strategy to accomplish this objective are as follows:

Acquire new clients. We intend to actively pursue new client relationships with property management professionals and investors that do not currently use our solutions. In addition to marketing our property management solutions, we will seek to sell our software-enabled, value-added services to clients of other third-party property management systems by utilizing our open architecture to facilitate integration of our solutions with those systems.

Increase the adoption of the RealPage platform. Many of our clients rely on our platform to manage their daily operations and track all of their critical prospect, renter, and property information. Additionally, some of our clients utilize our software-enabled, value-added services to complement third-party Enterprise Resource Planning ("ERP") systems. We have continually introduced new software-enabled, value-added services to complement our platform of solutions and marketed our on demand solutions to our clients who are utilizing third-party ERP systems. We believe that the penetration of our on demand software solutions to date has been modest, and significant potential exists for additional on demand revenue from sales of these solutions to our client base. We have significant opportunities to further leverage the critical role that our solutions play in our clients' operations by increasing the adoption of our platform of solutions and value-added services within our existing client base, and we intend to actively focus on up-selling and cross-selling our solutions to our clients.

Add new features and functionality to our real estate industry platform. We believe that we offer the most comprehensive platform of data analytics and on demand software solutions for the rental real estate industry. Our platform enables our clients to control many aspects of the residential rental property management process. We are able to add new capabilities that further enhance our platform, and we intend to continue developing and introducing new solutions to sell to both new and existing clients. These solutions may include localized solutions to support our clients as they grow their international operations. We also intend to develop new relationships with third-party application providers that can use our open architecture to offer additional product and service capabilities to their clients through our platform.

Pursue acquisitions of complementary businesses, products, and technologies. Since July 2002, we have completed over 50 acquisitions that have enabled us to expand our platform, enter into new rental property markets, and expand our client base. We intend to continue to pursue acquisitions of complementary businesses, products, and technologies. We continue to selectively evaluate our capital allocation strategy to focus on the most efficient sources of capital available to us for the acquisition of businesses and technologies that may help us accomplish these and other strategic objectives.

Solutions and Services

Our platform is designed to serve as a single system of record for all of the constituents of the rental real estate ecosystem; to support the entire renter life cycle, from prospect to applicant to residency or guest to post-residency or post-stay; and to optimize operational yields and returns on investment. Common authentication, workflow, and user experience across solution categories enables each of these constituents to access different applications as appropriate for their roles.

Our platform consists of four primary categories of solutions: Property Management, Resident Services, Leasing and Marketing, and Asset Optimization. These solutions provide complementary asset performance and investment decision support; risk mitigation, billing and utility management; resident engagement, spend management, operations and facilities management; and lead generation and lease management capabilities that collectively enable our clients to manage all the stages of the renter life cycle. Each of our solution categories includes multiple product centers that provide distinct capabilities that can be bundled as a package or licensed separately. Each product center integrates with a central repository of lease transaction

data including prospect, renter, and property data. In addition, our open architecture allows third-party applications to access our solutions using our RealPage Exchange platform.

We offer different versions of our platform for different types of properties in different real estate markets. For example, our platform supports the specific and distinct requirements of:

- conventional single family properties
- conventional multifamily properties
- affordable Housing and Urban Development (“HUD”) properties
- affordable tax credit properties
- rural housing properties
- privatized military housing
- commercial properties
- student housing
- senior living
- homeowner association properties
- short-term rentals
- vacation rentals



Property Management

Our property management solutions are referred to as ERP systems. These solutions manage core property management business processes, including leasing, accounting, budgeting, purchasing, facilities management, document management, and support and advisory services. The solutions include a central database of prospect, applicant, renter, and property information that is accessible in real time by our other solutions. Our property management solutions also interface with most popular general ledger accounting systems through our RealPage Exchange platform. This makes it possible for clients to deploy our solutions using our accounting system or a third-party accounting system. Our property management solution category consists of the following primary solutions: OneSite, Propertyware, Buildium, CommunityConnect, RealPage Financial Services, Kigo, Spend Management Solutions, SmartSource IT, and EasyLMS.

OneSite

OneSite is our flagship on demand property management solution for multifamily properties and is tailored to the specific needs of different property types (conventional multifamily, affordable properties, rural housing, privatized military housing, senior living, student living, and commercial). OneSite offers functionality that generates lease documents, manages service

requests, reports acuity of senior residents, enables senior community management, and manages procurement activities.

Propertyware

Propertyware is our on demand property management system for single-family properties and small, centrally managed multifamily properties. Propertyware functionality includes accounting, maintenance and work order management, marketing, spend management, and portal services. In addition, we offer our screening and payment solutions through our Propertyware brand to single family and small, centrally managed multifamily properties.

Buildium

Buildium is our on demand property management solution for the small and medium-size (“SMB”) market segment, which includes small multifamily, single-family, associations (HOA and condo) and commercial real estate market segments. Buildium provides easy-to-use customer support and rapid self-provisioning. We acquired Buildium in 2019 to expand this platform, incorporating “click-on” capabilities that (i) improve the renter leasing and living experience, (ii) improve the recovery of utility fees, (iii) enhance payment processing capabilities, (iv) enhance risk management through resident screening capabilities, and (v) expand insurance offerings.

CommunityConnect

CommunityConnect is our smart building suite that enables Smart Access, Smart Wi-Fi, and Smart Apartments, allowing residents to experience easier living and working from the latest generation of connected apartment buildings. Capabilities have been developed from product functionalities gained via several acquisitions during 2020: Stratis, Chirp, and WhiteSky. CommunityConnect provides single-source, mobile-credentialed Smart Access to the entire community, including building entry, amenities, elevators, garages, storage, and resident units for staff, maintenance, visitors, guests and residents. CommunityConnect also provides gigabit speed Wi-Fi specifically designed for the density of multifamily and student housing.

RealPage Financial Services

RealPage Financial Services is an on demand offering of products and services for all back office accounting. The RealPage Financial Suite includes budgeting, property accounting, corporate accounting, job cost, and investment accounting. SmartSource Accounting provides for full outsourcing of back office accounting services.

Kigo

Kigo is our on demand vacation rental property management system. Kigo offers solutions for vacation rental property management that include vacation rental calendars, scheduling, reservations, accounting, channel management, website design, payment processing, and other tasks to aid the management of leads, revenue, resources, and lodging calendars.

Spend Management Solutions

Our spend management solutions enable property owners and managers to better control costs. Spend management functionality includes purchase order automation; automated approval workflows, including mobile approvals; eProcurement solutions and services leveraging our volume to negotiate vendor discounts; budget and spend limit controls; centralized expense reporting; invoice management; bid management for capital projects; automated vendor compliance tools, and the Vendor Marketplace hub, which connects vendors with clients.

SmartSource IT

SmartSource IT provides outsourced IT management and support services to allow property owners and managers to focus on core competencies and scale operations as portfolios adjust with lower risk and greater flexibility, enhancing end user productivity. SmartSource IT services include end user desktop support for both corporate and property employees, IT purchasing, Office 365 license management, server hosting, and resident technology services. This robust set of IT services reduces IT complexity and lowers the total cost of technology ownership while providing superior security and performance.

EasyLMS

EasyLMS is a learning management system for property management professionals and their staff. EasyLMS substantially reduces training time by compartmentalizing subject matter and disseminating lessons in 10 to 15 minute increments for easier consumption during the workday. The system also incorporates gamification and active engagement to enhance the effectiveness of the learning solution and knowledge retention.

Resident Services

Our resident services solutions provide a platform to optimize the transactional and social experience of prospects and renters, and enhance a property’s reputation. These solutions facilitate core renter management business processes including utility billing, renter payment processing, service requests, lease renewal, renter’s insurance, and consulting and advisory

services. Our resident services solution category primarily consists of the following solutions: Resident Utility Management, SimpleBills, Resident Payments, ActiveBuilding, Contact Center Maintenance, and Renter's Insurance.

Resident Utility Management

Resident Utility Management is our on demand billing and utility management platform. In 2016, we augmented our utility management solutions with the acquisition of NWP Services Corporation ("NWP"), and we further expanded the service through our acquisition of American Utility Management ("AUM") in 2017. In 2018, we acquired BluTrend, LLC ("BluTrend") to expand our utility management platform with automation technology that speeds up invoice processing by extracting invoice data directly from utility companies, thereby eliminating the time to mail invoices. Combining the complementary functionalities of these solutions with our existing platform offers our clients automated convergent billing, utility invoice processing, utility cost management, automated energy recovery, infrastructure services (e.g., accounting, community energy, media, data, and telecom), the ability to benchmark energy consumption, and cost, and sub-metering services.

SimpleBills

SimpleBills is our on demand utility management solution dedicated to the student housing market. We acquired SimpleBills in 2019 to expand our Resident Utility Management family of products. SimpleBills' solution bills and collects from residents directly, allowing students to split water, electric, gas, cable bills and other shared utilities among roommates, as well as manage their utilities easily without paying deposits, utility provider setup fees, or contacting providers. Because of SimpleBills' direct relationship with students, (i) properties can experience significant time savings, as site staff can avoid tedious billing tasks, and (ii) RealPage can deploy it independently of any student solutions companies already use, saving the time and expense of integration. Companies can then fully outsource their utility needs to RealPage.

Resident Payments

Payments is our on demand payment-processing platform that enables electronic collection of rent and other payments. Provided through our RealPage Payments subsidiaries with both operator and renter processing options for fee reduction, the platform accommodates the processing of multiple payment types including check, money order, automated clearing house ("ACH"), debit cards, and credit cards. Acceptance of check payments is facilitated by the Lockbox solution, launched in 2020. Our acquisition of ClickPay Services, Inc. ("ClickPay") in 2018 significantly expands our footprint into the HOA owner-occupied segment of real estate, broadens our presence in the New York metropolitan market and solidifies the integration of our front-end leasing platform into third-party property management systems.

ActiveBuilding

ActiveBuilding is our on demand resident portal solution for facilitating renter transactions, social engagement, and community management. The solution features an industry-specific eCommerce platform that allows residents to pay for amenities, spaces and events directly, enabling multifamily property managers to generate revenue from their existing assets and through third-party service providers. Transactions are facilitated by a mobile app, custom-branded to the property, that enables residents to make purchases and manage apartment-related needs easily and conveniently.

Contact Center Maintenance

Contact Center Maintenance is our on demand platform for service request management. Functionality from the platform includes service call, email, and chat routing technology; service request tracking; and remote agent staffing, on a permanent or overflow basis to optimize the service request process. Enhancements include automated answering services and other features that amplify the ability of multifamily property managers to communicate with their residents.

Renter's Insurance

Renter's Insurance is part of our risk mitigation platform to reduce liability and property damage risk. The platform offers liability and content protection renter's insurance under the consumer-facing brand name "eRenterPlan." Liability policies protect property owners and managers against financial loss due to renter-caused damage, while content protection provides additional coverage for a renter's personal belongings in the event of loss. We also offer insurance and security deposit alternative products that satisfy lease obligations through DepositIQ, obtained in the On-Site Manager acquisition in 2017, and LeaseTerm Solutions which we acquired in 2019.

Leasing and Marketing

Leasing and marketing solutions aim to optimize marketing spend and the leasing process. These solutions manage core leasing and marketing processes, including websites and syndication, paid lead generation, organic lead generation, lead management, automated lead closure, lead analytics, real-time unit availability, automated online apartment leasing, applicant screening, and creative content design. Our leasing and marketing solutions category consists of the following primary

solutions: Online Leasing, Contact Center, Websites & Syndication, Intelligent Lease Management, LeaseLabs, Modern Message, AI Resident Screening, and MyNewPlace.

Online Leasing

Online Leasing is our on demand leasing platform that transacts the entire leasing process online. Among other functions, the platform utilizes widgets that enable renters to confirm unit availability, generate a price quote, apply for residency, and fully execute a lease.

Contact Center

Contact Center is our 24/7 on demand lead closure and resident maintenance support solution. Contact Center provides both live agent and automated platforms. Communication channels and functionality include call, web chat, email with instant call reply, chatbot, email for leasing, as well as RealPage Live Agent calls and answer automation for maintenance support. Contact Center is a strategic service partner offering a combination of people, process, and technology to track all leads, schedule visits, and capture emergency and non-emergency maintenance requests on behalf of our clients. The solution includes an augmented intelligence based chatbot that addresses prospects' requests in a conversational manner and transfers the prospect to a live Contact Center agent when the request is outside its scope or the prospect requests a live agent.

Websites & Syndication

Websites and Syndication anchor our on demand organic lead generation platform. Functionality includes property website design and enhanced search engine optimized ("SEO") content (e.g. high-resolution photography, video tours, animated tours, 3D floor plans, and interactive site maps), mobile applications and integration with online leasing to drive traffic and lead quality. Syndication tools ensure consistency across multiple marketing channels and include classified directory campaign services, renter social referrals, reputation management, surveys, real-time reporting, and enhanced lead management.

Intelligent Lease Management ("ILM")

ILM is a leading product in the multifamily industry that scores every inbound and outbound interaction with prospective renters to enhance leasing performance. The solution also provides near-real-time metrics to deliver insight into the effectiveness of a community's marketing and advertising sources in attracting qualified prospects.

LeaseLabs

LeaseLabs provides digital marketing services and software. We acquired LeaseLabs, Inc. ("LeaseLabs") in 2018 to extend our marketing platform by adding marketing analytical services, creative content design, direct marketing through social media channels, reputation management and geo-targeting solutions. LeaseLabs combined with our other solutions provide (i) marketing content, content management, and digital rights management from PropertyPhotos.com, (ii) websites and microsites, and (iii) ILM. This combined offering will be branded as the Go Direct Marketing Suite.

Modern Message

Modern Message, acquired in 2020 and integrated into ActiveBuilding, features the resident engagement, rewards, and loyalty platform Community Rewards, which builds greater engagement that boosts leasing, retention, revenue, and reputation scores.

AI Resident Screening

Screening is part of our risk mitigation platform to reduce rental payment delinquency. RealPage AI Screening, the first AI-based screening algorithm built specifically for the multifamily industry, enables property management companies to identify high-risk renters with greater accuracy and speed that exceeds the performance of traditional scoring models in the industry. The AI Screening algorithm combines data-derived renter insights, machine learning techniques, RealPage's massive, proprietary database of renter outcomes and consumer financial data to more precisely predict a renter's financial performance over the course of a lease. The model delivers proven reduction of bad debt and financial loss to owners and operators without negative impact to occupancy or revenue.

MyNewPlace

MyNewPlace is a paid lead generation site that helps renters find rental housing options utilizing functionality that includes enhanced photography, 3D floor plans, SEO-enhanced descriptions, and neighborhood information. Our acquisition of Lease Rent Options included the Rent Jungle product, which added additional functionality to our lead generation and leasing solutions.

Asset Optimization

Our asset optimization solutions aim to optimize property financial and operational performance and provide comprehensive analytics-based decision support for optimum investment performance throughout the phases of real estate investment (e.g., acquisition, operation, renovation, and disposition). These solutions facilitate core asset management, business

intelligence, performance benchmarking and investment analysis including real-time yield management, revenue growth forecasting, key variable sensitivity forecasting, internal operating metric benchmarking and external market benchmarking. Our asset optimization solution category consists of the following primary solutions: Revenue Management, Business Intelligence, and Investment Management.

Revenue Management

Revenue Management is our on demand yield management platform. The platform includes real-time statistical models leveraging a repository of lease transaction data to calculate optimal rent for each rental unit, pricing management advisory services, and MPF Research, an apartment market research database. The data coverage and forecasting capabilities of this platform were expanded through our 2017 acquisitions of Axiometrics and Lease Rent Options. Augmenting our data science talent and modeling tools through these acquisitions allows our customers to achieve better harvesting and placement of capital in the rental housing industry.

Business Intelligence

Business Intelligence is our on demand business intelligence platform designed to enable property owners and managers to outperform their peers. In 2018, we acquired Rentlytics, Inc. (“Rentlytics”) to expand our business intelligence and performance analytics platform to provide owners and operators with normalized data across multiple third-party systems in order to resolve system incompatibility, data accuracy issues and time-to-analysis delays. Business Intelligence functionality includes easy-to-use, customized internal reporting at any aggregation level and during any time horizon, simultaneously leveraging operational, financial and marketing data. In addition, the platform includes a robust peer-benchmarking component that leverages a massive repository of lease transaction data for assessing both internal and external market performance metrics, economic tools for revenue forecasting, and key operating variable forecasting.

Investment Management

Investment Management (“IM”) is an integrated analytics and visualization platform providing stakeholders in the private and public capital markets with increased transparency into their investment portfolios. IM is the integrated platform stemming from the acquisitions of AssetEye in 2016, Hipercept and Investor Management Services (“IMS”) in 2019, as well as internal RealPage development efforts. The platform is comprised of five key capabilities, including Asset Investment Management (“AIM”), Asset Management, Asset Modeling, Business Intelligence, and Investor Reporting. These five capabilities are anchored by a common global data warehouse that leverages a unified data structure to align stakeholders in the investment ecosystem to collect, share, analyze, and report on performance of the investment, portfolio, and asset.

Professional Services

We have developed repeatable, cost-effective consulting and implementation services to assist our clients in taking advantage of our capabilities and solutions. Our consulting and implementation methodology leverages the nature of our on demand software architecture, the industry-specific expertise of our professional services employees, and the design of our platform to simplify and expedite the implementation process. Our consulting and implementation services include project and application management procedures, business process evaluation, business model development and data conversion. Our consulting teams work closely with customers to facilitate the smooth transition and operation of our solutions.

We offer training programs for training administrators and onsite property managers on the use of our solutions. Training options include regularly hosted classroom and online instruction (through our online learning courseware), as well as online webinars. Our clients can integrate their own training content with our content to deliver an integrated and customized training program for their on-site property managers.

On Demand Delivery Infrastructure

Our IT infrastructure operates four redundant 40 GBPS dedicated fiber links connecting data centers containing hundreds of servers and multiple storage area networks. This architecture makes it possible to expand the data center incrementally with little or no disruption as more users or additional applications are added. With approximately 8,500 virtual servers, 835 physical servers and 16.8 petabytes of data storage, we leverage this infrastructure and massive repository of lease transaction data to power our platform of solutions.

Our infrastructure is based on an open architecture that enables end users and third-party applications to access our suite of property management-based software-as-a-service (“SAAS”) hosted applications through our public and private web services, web applications and application program interfaces (“APIs”). Billions of web transactions are processed per business day through our SAAS offering hosted on this expandable and open architecture based interface.

As of December 31, 2020, we employed approximately 290 employees who were responsible for maintaining data security, integrity, availability, performance and business continuity in our cloud computing facilities. We annually obtain a Service Organization Controls audit performed under Statements on Standards for Attestation Engagements No. 18 on a specified set of internal controls. Certain clients conduct separate business continuity audits of their own.

In addition to our production data centers, we manage a separate development and quality assurance testing facility used to control the pre-production testing required before each new release of our on demand software. We typically deploy new releases of the software underlying our on demand software solutions on a monthly or quarterly schedule depending on the solution.

RealPage Support

Our clients can access our support professionals by phone, web, chat or email for assistance in resolving issues and general questions about our solutions. We offer two product support options: Standard and Platinum Support. Standard Support includes product support during business hours Monday through Friday. Platinum Support includes the features of Standard Support, with customized engagement that includes a designated senior product support liaison. We also sponsor the RealPage User Group to facilitate communications between us and our community of users. Our support group had a total of 615 employees at December 31, 2020. The RealPage User Group is governed by a steering committee of our clients, which consists of two positions and subcommittee chairs, each representing a RealPage product center or group of product centers.

Product Development

We devote a substantial portion of our resources to developing new solutions and enhancing existing solutions, conducting product and quality assurance testing, improving core technology, and strengthening our technological expertise in the rental real estate industry. We typically deploy new releases of the software underlying our on demand software solutions on a monthly or quarterly schedule depending on the solution. As of December 31, 2020, our product development group consisted of approximately 760 employees in the United States and 900 employees located primarily in Hyderabad, India; Manila, Philippines; and Cebu City, Philippines. Product development expense totaled \$133.7 million, \$112.2 million and \$118.5 million during the years ended December 31, 2020, 2019, and 2018, respectively.

Sales and Marketing

We sell our rental real estate software and services through our direct sales organization. We organize our sales force by geographic region, size of our prospective clients, and property type. We believe this focus provides a higher level of service and understanding of our clients' unique needs. Our typical sales cycle with a prospective client begins with the generation of a sales lead through Internet marketing, email campaigns, telemarketing efforts, trade shows, or other means of referral. The sales lead is followed by an assessment of the prospective client's requirements, sales presentations, and product demonstrations. Our sales cycle can vary substantially from client to client but typically requires three to six months for larger clients and one to six weeks for smaller clients.

In addition to new client sales, we sell additional solutions and consulting services to our existing clients to help them more efficiently and effectively manage their properties as the rental real estate market evolves and competitive conditions change.

We generate qualified client leads, accelerate sales opportunities, and build brand awareness through our marketing programs. Our marketing programs target property management company executives, technology professionals, and senior business leaders. Our marketing team focuses on the unique needs of clients within our target markets. Our marketing programs include the following activities:

- field marketing events for clients and prospects;
- participation in, and sponsorship of user conferences, trade shows, and industry events;
- client programs, including virtual client user meetings and our online client community;
- online marketing activities, including online advertising and SEO, email campaigns, web campaigns, white papers, free product trials and demos, webcasts, case studies, and the use of social media, including blogging, Facebook, LinkedIn, and Twitter;
- public relations;
- use of our website to provide product and company information, as well as learning opportunities for potential clients; and
- ongoing consumer email marketing campaigns that drive adoption of transactional products, such as online payments and renter's insurance, by residents on behalf of our property management clients.

We host an annual user conference where clients both participate in and lead various types of sessions and planned discussions designed to help accelerate business performance through the use of our integrated platform of solutions. The conference features a variety of client speakers, panelists, and presentations focused on businesses of all sizes. The event also brings together our clients, technology vendors, service providers, and other key participants in the rental real estate industry to exchange ideas and best practices for improving business performance. Attendees gain insight into our product plans and

participate in interactive sessions that give them the opportunity to provide input into new features and functionality. In 2020, we executed all aspects of the event using a virtual interactive platform.

Strategic Relationships

We maintain relationships with a variety of technology vendors and service providers to enhance the capabilities of our integrated platform of solutions. This approach allows us to expand our platform and client base and to enter new markets. We have established the following types of strategic relationships:

Technology Vendors

We have relationships with a number of leading technology companies whose products we integrate into our platform or offer to complement our solutions. The cooperative relationships with our software and hardware technology partners allow us to build, optimize, and deliver a broad range of solutions to our clients.

Service Providers

We have relationships with a number of service providers that offer complementary services that integrate into our platform and address key requirements of rental property owners and managers, including credit card and ACH services, transaction processing capabilities, and insurance underwriting services.

Clients

We are committed to developing long-term client relationships and working closely with our clients to configure our solutions to meet the evolving needs of the rental real estate industry. Our clients include REITs, leading property management companies, fee managers, regionally based owner operators, vacation property owners, and service providers. As of December 31, 2020, we had over 31,700 clients who used one or more of our on demand software solutions to help manage the operations of approximately 19.7 million rental real estate units. Our clients include each of the ten largest multifamily property management companies in the United States, ranked as of January 1, 2020 by the NMHC, based on number of units managed. For the years ended December 31, 2020, 2019 and 2018, no one client accounted for more than 10% of our revenue. Revenues for our largest client were 5.8%, 6.1%, and 5.9% of total revenues for the years ended December 31, 2020, 2019, and 2018, respectively.

Intellectual Property

We rely on a combination of copyright, trademark, and trade secret laws, as well as confidentiality procedures and contractual restrictions, to establish and protect our proprietary rights. These laws, procedures, and restrictions provide only limited protection. We currently have a limited number of patents and pending patent applications. In the future, we may file additional patent applications, but patents may not be issued with respect to these patent applications, or if patents are issued, they may not provide us with any competitive advantages, may not be issued in a manner that gives us the protection that we seek, and may be successfully challenged by third parties.

We endeavor to enter into agreements with our employees and contractors and with parties with whom we do business in order to limit access to and disclosure of our proprietary information. We cannot be certain that the steps we have taken will prevent unauthorized use or reverse engineering of our technology. Moreover, others may independently develop technologies that are competitive with ours or that infringe on our intellectual property. The enforcement of our intellectual property rights also depends on any legal actions against these infringers being successful, but these actions may not be successful, even when our rights have been infringed.

Furthermore, effective patent, trademark, trade dress, copyright, and trade secret protection may not be available in every country in which our solutions are available over the Internet. In addition, the legal standards relating to the validity, enforceability, and scope of protection of intellectual property rights are uncertain and still evolving.

Regulatory Matters

Compliance with legal and regulatory requirements is a top priority for us. We are subject to a number of US federal, state, local, and foreign laws and regulations that affect various aspects of our businesses. Although we believe that our business practices do not violate any laws, our failure to comply with applicable legal and regulatory requirements could have a negative impact on our financial condition or overall operations. See "Item 1A - Risk Factors" for additional discussion of the potential risks associated with future changes in laws or regulations.

Set forth below is a brief summary of some of the significant laws and regulations that apply to us. These descriptions are not exhaustive, and these laws, regulations and rules frequently change.

The Fair Credit Reporting Act (the "FCRA"): The FCRA applies to consumer credit reporting agencies, data furnishers and users of consumer reports. The FCRA promotes the accuracy, fairness and privacy of information in the files of consumer reporting agencies that engage in the practice of assembling or evaluating information relating to consumers for certain specified purposes. The FCRA limits what information may be reported by consumer reporting agencies, limits the distribution

and use of consumer reports, establishes consumer rights to access and dispute their own credit files, includes provisions designed to prevent identity theft and assist fraud victims, requires consumer reporting agencies to make a free annual credit report available to consumers and imposes many other requirements on consumer reporting agencies, data furnishers and users of consumer report information. Violation of the FCRA can result in civil and criminal penalties. Regulatory enforcement of the FCRA is under the purview of the Federal Trade Commission (the "FTC"), the Consumer Financial Protection Bureau (the "CFPB") and state attorneys general, acting alone or in concert with one another.

Privacy Laws in various jurisdictions: The Gramm-Leach Bliley Act (the "GLBA") regulates, among other things, the receipt, use and disclosure of non-public personal information of consumers held by financial institutions. Portions of our business are subject to GLBA provisions, including limitations on the use or disclosure of the underlying data and rules relating to the technological, physical and administrative safeguarding of non-public personal information. Violation of the GLBA can result in civil and criminal liability. Regulatory enforcement of the GLBA is under the purview of the FTC, the CFPB, the federal prudential banking regulators, the SEC and state attorneys general, acting alone or in concert with each other. The General Data Protection Regulation (the "GDPR") became effective in May 2018 in the European Union and United Kingdom and imposed new requirements and restrictions upon companies that process personal data of EU and U.K. citizens. In June 2018, the State of California passed the California Consumer Privacy Act (the "CCPA"), which created new requirements and restrictions for processing personal data of California citizens beginning January 1, 2020.

The Fair Housing Act (the "FHA"): The FHA and the regulations promulgated by the U.S. Department of Housing and Urban Development and various state agencies, prohibit discrimination in housing on the basis of race or color, national origin, religion, sex, familial status (including children under the age of 18 living with parents or legal custodians, pregnant women and people securing custody of children under 18) or handicap (disability) and, in some states, financial capability or other bases. A failure to comply with these laws in our operations could result in litigation, fines, penalties or other adverse claims.

The Americans with Disabilities Act (the "ADA"): The ADA requires all public accommodations and commercial facilities to meet certain federal requirements related to access and use by disabled persons. The ADA may require, for example, removal of structural barriers to access by persons with disabilities in certain public areas where such removal is readily achievable. Noncompliance with the ADA could result in imposition of fines or an award of damages to private litigants.

Payments Regulation: Various laws and regulatory requirements, including laws governing money transmission and payment processing/settlement services, apply to payment processing. These requirements vary throughout the markets in which we operate, and have increased over time as the geographic scope and complexity of our products and services have expanded. In order to maintain flexibility in the growth and expansion of our payments operations, we have obtained money transmitter licenses (or their equivalents) in several states, the District of Columbia and Puerto Rico. As a licensed money transmitter, we are subject to, among other requirements, restrictions with respect to the investment of customer funds, reporting requirements, bonding requirements, and inspection by state regulatory agencies.

Human Capital

As of December 31, 2020, we had approximately 7,600 employees, an increase of approximately 9% compared to the year ended 2019. Domestic employees represented approximately 53% of our total headcount, with the remainder primarily located in the Philippines and India.

We believe that our success is attributable in large part to our employees and an experienced management team, many members of which have years of industry experience in building, implementing, marketing, and selling property management solutions critical to business operations. Our continued success will depend upon our ability to provide employees with the resources they need to perform their roles and to develop and excel in their careers, and upon our continued focus on identifying and retaining highly qualified and motivated employees. Facilitation of these initiatives starts with our core values and philosophies, referred to as the *RealPage Promise*, which prioritizes treating all our employees with respect and dignity through an inclusive and diverse work environment that leverages the talents of each of our employees for the success of our organization and people.

We provide competitive compensation and benefits for our employees globally. Our current compensation packages include some or all of the following elements based upon an employee's role within the organization: base compensation, commissions or annual incentive bonus, and long-term incentive compensation. We also offer general employee medical and dental plans, life and disability insurance, and post-retirement benefits. Our human resource department oversees these programs to ensure our benefits and compensation are competitive and support our strategic initiatives to identify, develop, and retain exceptional employees.

We consider our current relationship with our employees to be good. Our employees are not represented by a labor union and are not subject to a collective bargaining agreement.

Available Information

We maintain an Internet website at www.realpage.com. We make available, free of charge, on our website, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports, as soon as reasonably practicable after providing such reports to the Securities and Exchange Commission ("SEC").

We file annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements, and other documents with the SEC under the Securities Exchange Act of 1934, as amended. The SEC maintains an Internet website that contains reports, proxy, and information statements and other information regarding issuers, including RealPage, Inc., that file electronically with the SEC. The public can obtain any document we file with the SEC at www.sec.gov. Information contained on, or connected to, our website is not incorporated by reference into this Annual Report on Form 10-K and should not be considered part of this Annual Report on Form 10-K or any other filing that we make with the SEC.

Item 1A. Risk Factors.

Summary of Risk Factors

Below is a summary of the principal factors that make an investment in our common stock speculative or risky. This summary does not address all the risks we face. Additional discussion of the risks summarized in this risk factor summary and other risks that we face, can be found below under the heading "Risk Factors" and should be carefully considered, together with other information in this Annual Report and our other filings with the SEC, before making an investment decision regarding our common stock.

Financial Risks Related to Our Business

- The COVID-19 pandemic and its effects could adversely impact our business, results of operations, liquidity and financial condition, and the magnitude and timing of such impact is highly uncertain and difficult to predict.
- If we are unable to continue to manage the growth of our diverse and complex operations, our financial performance may suffer.
- Because we recognize subscription revenue over the term of the applicable client agreement, a decline in subscription renewals or new service agreements may not be reflected immediately in our operating results.
- Transactions relating to our Convertible Notes may adversely affect our financial condition and operating results.
- If we are not able to integrate past or future acquisitions successfully, our operating results and prospects could be harmed.
- Variability in our sales and activation cycles could result in fluctuations in our quarterly results of operations and cause our stock price to decline.
- Many of our clients are price sensitive, and if market dynamics require us to change our pricing model or reduce prices, our operating results will be harmed.
- Economic trends that affect the rental housing market may have a negative effect on our business.
- We may require additional capital to support business growth or acquisitions, and this capital might not be available on terms acceptable to us or at all.
- A significant decline in our cash flow could impair our ability to make payments under our debt obligations.
- We generate commission revenue from the insurance policies we sell as a registered insurance agent, and if insurance premiums decline or if the insureds experience greater than expected losses, our revenues could decline and our operating results could be harmed.

Operational Risks Related to Our Business

- The nature of our platform is complex and highly integrated, and if we fail to successfully manage releases or integrate new solutions, it could harm our revenues, operating income and reputation.
- Our business depends substantially on the renewal of our products and services for on demand units managed by our clients and the increase in the use of our on demand products and services for on demand units.
- We may not be able to continue to add new clients and retain and increase sales to our existing clients, which could adversely affect our operating results.
- If we are unable to successfully develop or acquire and sell enhancements and new solutions, our revenue growth will be harmed, and we may not be able to meet profitability expectations.
- Any disruption of service at our data centers or other facilities could interrupt or delay our clients' access to our solutions, which could harm our operating results.
- Interruptions or delays in service from our third-party data center providers could impair our ability to deliver certain of our products to our clients, resulting in client dissatisfaction, damage to our reputation, loss of clients, limited growth and reduction in revenue.
- We provide service level commitments to our clients, and our failure to meet the stated service levels could significantly harm our revenue and our reputation.
- Material defects or errors in the software we use to deliver our solutions could harm our reputation, result in significant costs to us and impair our ability to sell our solutions.
- Failure to effectively manage the development, sale and support of our solutions and data processing efforts outside the United States could harm our business.

- We rely on third-party technologies and services that may be difficult to replace or that could cause errors, failures or disruptions of our service, or introduce supply chain vulnerabilities, any of which could harm our business.
- We depend upon third-party service providers for important payment processing functions. If these third-party service providers do not fulfill their contractual obligations or choose to discontinue their services, our business and operations could be disrupted, and our operating results would be harmed.
- If our security measures are breached and unauthorized access is obtained to our software platform, service infrastructure, or our clients' or their renters' or prospects' data, we may incur significant liabilities, third parties may misappropriate our intellectual property or financial assets, our solutions may be perceived as not being secure and clients may curtail or stop using our solutions.

Legal and Regulatory Risks Related to Our Business

- We face a number of risks in our payment processing business that could result in a reduction in our revenues and profits.
- Evolution and expansion of our payment processing business may subject us to additional regulatory requirements and other risks, with respect to which failure to comply or adapt could harm our operating results.
- Because certain solutions we provide depend on access to client data, decreased access to this data or the failure to comply with the evolving laws and regulations governing privacy of data, cloud computing and cross-border data transfers, or the failure to address privacy concerns applicable to such data, could harm our business.
- Assertions by a third party that we infringe its intellectual property, whether successful or not, could subject us to costly and time-consuming litigation or expensive licenses.
- The rental housing industry, electronic commerce and many of the products and services that we offer, including background screening services, utility billing, affordable housing compliance and audit services, insurance and payments are subject to extensive and evolving governmental regulation. Changes in regulations or our failure to comply with regulations could harm our operating results.

Risks Related to Ownership of our Common Stock

- The concentration of our capital stock owned by insiders may limit your ability to influence corporate matters.
- The Capped Calls, Note Hedges and Warrant transactions may affect the value of our common stock.
- The Merger is subject to receipt of approval from our stockholders as well as the satisfaction of other closing conditions in the Merger Agreement.
- The announcement and pendency of our agreement to be acquired by funds affiliated with Thoma Bravo may have an adverse effect on our business and operating results.
- The failure to complete the Merger may adversely affect our business, financial condition, operating results, and stock price.

Financial Risks Related to Our Business

The COVID-19 pandemic and its effects could adversely impact our business, results of operations, liquidity and financial condition, and the magnitude and timing of such impact is highly uncertain and difficult to predict.

Global health concerns from the COVID-19 pandemic and related government actions have caused significant disruption to the global economic environment. The pandemic has significantly increased economic uncertainty and reduced economic activity, including consumer and business spending, and leasing velocity within the rental housing industry. In response to the pandemic, government authorities have implemented numerous measures designed to contain the spread of the disease, including travel bans and restrictions, quarantines, shelter-in-place and lockdown orders, and business limitations and shutdowns. Federal and state governments have also taken actions and provided stimulus to address the adverse economic effects of the COVID-19 pandemic on businesses and individuals, such as unemployment assistance, business loan programs and other measures. The extent to which the COVID-19 pandemic will impact our operations and financial condition will depend upon future developments which are uncertain and difficult to predict, including the scope, severity and duration of the pandemic and the success of the actions taken to contain the pandemic and mitigate its impact.

The COVID-19 pandemic is adversely impacting residents of rental properties and their ability or willingness to fully meet their obligations to our customers, which in turn may adversely impact our customers' ability or willingness to meet their obligations to us or may cause them to otherwise seek modifications to their obligations to us. Delays or failures by government entities in extending economic stimulus and support programs designed to assist individuals and businesses, or delays or failures in modifying such programs to successfully mitigate the hardships caused by the pandemic, could adversely impact residents and businesses who rely upon these programs, and their ability or willingness to meet their obligations to our customers. The impact of any such developments could result in increases in uncollectible receivables or delays in payment to us by our customers. These conditions could also adversely affect the rate of overall technology spending and influence the timing of our customers' and prospective customers' technology purchasing and implementation decisions, which could adversely affect their ability or willingness to purchase our solutions, delay purchasing decisions, reduce the value or duration of subscriptions, negatively affect our renewal rates and churn, negatively affect certain of our products associated with leasing velocity such as but not limited to screening, renters insurance, and payments, or result in a decrease in the number of end users of our solutions or the transactions performed using our solutions, any of which could adversely affect our operating results and financial condition on a short-term or longer-term basis.

To support the health and wellbeing of our employees, customers, partners and communities and in compliance with governmental restrictive orders in the locations in which we have offices, a significant majority of our employees are currently working remotely. Although such changes did not have a material adverse impact on our business and financial results for the year ended December 31, 2020 and we have been able to effectively operate and provide services and meet our obligations to our customers, if we are not able to continue to respond to and manage these impacts and related changes, our business, results of operations, liquidity and financial condition could be adversely impacted. Furthermore, remote work and the use of our business continuity plans over an extended period could impair or delay our ability to sell our solutions, adversely impact our product development and harm productivity and collaboration. We may also take further actions as may be required by government authorities or as we determine are in the best interests of our employees, customers and business partners which could adversely impact our business.

Many of our customers and vendors are also working remotely, which may delay the timing of orders, implementations, or deliveries. The disruptions to our operations caused by the COVID-19 pandemic may result in inefficiencies, delays and additional costs in our product development, sales, marketing and customer service efforts that we cannot fully mitigate due to the current economic conditions or other unpredictable aspects of the pandemic on our customers and vendors.

The pandemic also raises the possibility of an extended global economic downturn, and there has been significant volatility in the financial markets. As a result, our results and financial condition could adversely be impacted even after the pandemic is mitigated or contained and governmental restrictions are suspended or terminated. For example, our customers may continue to experience economic pressures and we may be unable to collect receivables from customers impacted by COVID-19, or such customers may request alternative payment structures that could adversely impact our results. A decrease in orders in a given period could also negatively impact our revenues in future periods because a substantial portion of our services generate revenue recognized over time. Moreover, we may experience materially adverse impacts as a result of the global economic impact, including reduced spending, lower economic activity and weakened banking and financial systems.

Other factors related to the COVID-19 pandemic that may adversely impact our business operations include:

- service interruptions or impaired system performance due to failures of or delays in our systems or resources;
- the possibility that one or more clusters of COVID-19 cases could occur at one of our locations, data centers or other third-party providers, affecting our employees or affecting the systems or employees of our customers or other third parties on which we depend; or

- challenges to our systems supporting our remote workforce, due to the higher demand on such systems and the hardware needed to support such working conditions.

There are no comparable recent events that provide guidance as to the effect the spread of COVID-19 as a global pandemic may have, and, as a result, the ultimate impact of the pandemic is highly uncertain and subject to change. We do not yet know the full extent of the impacts on our business, our operations or the global economy. The pandemic may have the effect of increasing the severity and likelihood of the risks described herein.

Our quarterly operating results have fluctuated in the past and may fluctuate in the future, which could cause our stock price to decline.

Our quarterly operating results may fluctuate as a result of a variety of factors, many of which are outside of our control. Fluctuations in our quarterly operating results may be due to a number of factors, including the risks and uncertainties discussed elsewhere in this filing. Some of the important factors that could cause our revenues and operating results to fluctuate from quarter to quarter include:

- the impact of the COVID-19 pandemic on our business, our customers, and the general economic impact of the pandemic in the short and longer term;
- general economic, industry and market conditions in the rental housing industry that impact our current and potential clients, including the impact of the COVID-19 pandemic;
- the extent to which on demand software solutions maintain market acceptance;
- fluctuations in leasing activity by our clients;
- our ability to timely introduce enhancements to our existing solutions and new solutions;
- our ability to renew the use of our on demand solutions for units managed by our existing clients and to increase the use of our on demand solutions for the management of units by our existing and new clients;
- changes in our pricing policies or those of our competitors or new competitors;
- the variable nature of our sales and implementation cycles;
- our ability to anticipate and adapt to external forces and the emergence of new technologies and products;
- our ability to enter into new markets and capture additional market share;
- our ability to integrate acquisitions in a cost-effective and timely manner;
- the timing of revenue and expenses related to recent and potential acquisitions or dispositions of businesses or technologies;
- changes in local economic, political and regulatory environments of our international operations including as a result of the COVID-19 pandemic;
- the amount and timing of our investment in research and development activities;
- technical difficulties, service interruptions, data or document losses or security breaches;
- our ability to hire and retain qualified key personnel, including particular key positions in our sales force and IT department;
- changes in the legal, regulatory or compliance environment related to the rental housing industry or the markets in which we operate, including without limitation changes related to fair credit reporting, payment processing, data protection and privacy, utility billing, insurance, the Internet and e-commerce, licensing, telemarketing, electronic communications, consumer protection, the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), the Health Information Technology Economic and Clinical Health Act ("HITECH"), and state and local laws related to rent control or regulation;
- the amount and timing of operating expenses and capital expenditures related to the expansion of our operations and infrastructure;
- increase in the number or severity of insurance claims on policies sold by us;
- litigation and settlement costs, including unforeseen costs;
- new accounting pronouncements and changes in accounting standards or practices, particularly any affecting the recognition of subscription revenue or accounting for mergers and acquisitions; and
- changes in tax policy in the United States and globally that affect the deductibility of certain expenses and how our profits are taxed.

Fluctuations in our quarterly operating results or guidance that we provide may lead analysts to change their long-term models for valuing our common stock, cause us to face short-term liquidity issues, impact our ability to retain or attract key personnel or cause other unanticipated issues, all of which could cause our stock price to decline. As a result of the potential variations in our quarterly revenue and operating results, we believe that quarter-to-quarter and year-to-date period comparisons of our revenues and operating results may not be meaningful and the results of any one quarter should not be relied upon as an indication of future performance.

If we are unable to continue to manage the growth of our diverse and complex operations, our financial performance may suffer.

The growth in the size, dispersed geographic locations, complexity and diversity of our business and the expansion of our product lines and client base has placed, and our anticipated growth may continue to place, a significant strain on our managerial, administrative, operational, financial and other resources. We had approximately 7,600 employees and over 31,700 on demand clients as of December 31, 2020. We expect to continue to experience growth, including through acquisitions. Our ability to effectively manage our anticipated future growth will depend on, among other things, the following:

- successfully supporting and maintaining a broad range of current and emerging solutions;
- identifying suitable acquisition targets and efficiently managing the closing of acquisitions and the integration of targets into our operations;
- maintaining continuity in our senior management and key personnel;
- attracting, retaining, training and motivating our employees, particularly technical, client service and sales personnel;
- enhancing our financial and accounting systems and controls;
- enhancing our information technology infrastructure, processes and controls;
- successfully completing system upgrades and enhancements; and
- managing expanded operations in geographically dispersed locations.

If we do not manage the size, complexity and diverse nature of our business effectively, we could experience product performance issues, delayed software releases and longer response times for assisting our clients with implementation of our solutions and could lack adequate resources to support our clients on an ongoing basis, any of which could adversely affect our reputation in the market and our ability to generate revenue from new or existing clients.

Because we recognize subscription revenue over the term of the applicable client agreement, a decline in subscription renewals or new service agreements may not be reflected immediately in our operating results.

We generally recognize revenue from clients ratably over the terms of their client agreements, which are typically for a period of one or more years. As a result, much of the revenue we report in each quarter is deferred revenue from client agreements entered into during previous quarters. Consequently, a decline in new or renewed client agreements in any one quarter will not be fully reflected in our revenue or our results of operations until future periods. Accordingly, this revenue recognition model also makes it difficult for us to rapidly increase our revenue through additional sales in any period, as revenue from new clients must be recognized over the applicable subscription term.

Transactions relating to our Convertible Notes may adversely affect our financial condition and operating results.

Holders of the Convertible Notes are entitled to convert the Convertible Notes under certain conditions for specified periods at their option prior to the scheduled maturities of the Convertible Notes. When holders elect to convert their Convertible Notes, unless we elect to satisfy our conversion obligations by delivering solely shares of our common stock (other than paying cash in lieu of delivering any fractional share), we are required to settle a portion or all of our conversion obligations through the payment of cash, which could adversely affect our liquidity. In addition, even if holders do not elect to convert their Convertible Notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principals of the Convertible Notes as a current rather than long-term liability, which would result in a material reduction of our net working capital.

The accounting method for convertible debt securities that may be settled in cash, such as the Convertible Notes, could have a material effect on our reported financial results.

In May 2008, the Financial Accounting Standards Board ("FASB") issued FASB Staff Position No. APB 14-1, Accounting for Convertible Debt Instruments That May Be Settled in Cash Upon Conversion (Including Partial Cash Settlement), which has subsequently been codified as Accounting Standards Codification 470-20, Debt with Conversion and Other Options, which we refer to as ASC 470-20. Under ASC 470-20, an entity must separately account for the liability and equity components of convertible debt instruments, such as the Convertible Notes, that may be settled entirely or partially in cash upon conversion in a manner that reflects the issuer's economic interest cost. The effect of ASC 470-20 on the accounting

for the Convertible Notes is that the equity components are required to be included in the additional paid-in capital section of stockholders' equity on our Consolidated Balance Sheets, and the value of the equity components are treated as original issue discounts for purposes of accounting for the debt components of the Convertible Notes. As a result, we are required to record a greater amount of non-cash interest expense in current periods presented as a result of the amortization of the discounted carrying values of the Convertible Notes to their face amounts over the terms of the Convertible Notes. This adversely affects our reported financial results and could adversely affect the trading price of our common stock.

In addition, under certain circumstances, convertible debt instruments, such as the Convertible Notes, that may be settled entirely or partly in cash are currently accounted for utilizing the treasury stock method, the effect of which is that the shares issuable upon conversion of the Convertible Notes are not included in the calculation of diluted earnings per share except to the extent that the conversion value of the Convertible Notes exceeds their principal amounts. Under the treasury stock method, for diluted earnings per share purposes, the transaction is accounted for as if the number of shares of common stock that would be necessary to settle such excess, if we elected to settle such excess in shares, are issued.

In August 2020, the FASB issued ASU 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity*. This ASU will eliminate the requirement described above to separate convertible notes into debt and equity components, instead allowing for these instruments to be accounted for as a single liability measured at its amortized cost. Furthermore, this ASU will require the use of the if-converted method when determined diluted earnings per share. These changes, once adopted, will reduce our reported interest expense and increase our reported net income when compared to our results calculated under existing accounting guidance. This standard may adversely impact our reported diluted shares outstanding and our diluted earnings per share in certain periods because of the required use of the if-converted method. ASU 2020-06 will be effective for fiscal years beginning after December 15, 2021, with early adoption permitted for interim and annual reporting periods beginning after December 15, 2020. We currently expect to adopt this ASU effective January 1, 2022 and are still assessing our method of adoption.

If we are not able to integrate past or future acquisitions successfully, our operating results and prospects could be harmed.

We have acquired new technology and domain expertise through multiple acquisitions, including our most recent acquisitions of WhiteSky, Chirp, Stratis, Modern Message, Buildium, IMS, Simple Bills, Hipercept, and LeaseTerm Solutions. We expect to continue making acquisitions in the future. The success of our future acquisition strategy will depend on our ability to identify, negotiate, complete and integrate acquisitions. Acquisitions are inherently risky, and any acquisitions we complete may not be successful. Any acquisitions we pursue involve numerous risks, including the following:

- difficulties in integrating and managing the operations and technologies of the companies we acquire;
- diversion of our management's attention from normal daily operations of our business;
- our inability to maintain the clients, the key employees, the key business relationships and the reputations of the businesses we acquire;
- our inability to generate sufficient revenue from acquisitions to offset our increased expenses associated with acquisitions;
- difficulties in predicting or achieving the synergies between acquired businesses and our own businesses;
- our responsibility for the liabilities of the businesses we acquire, including, without limitation, liabilities arising out of their failure to maintain effective data security, data integrity, disaster recovery and privacy controls prior to the acquisition, or their infringement or alleged infringement of third-party intellectual property, contract or data access rights prior to the acquisition;
- difficulties in complying with new markets or regulatory standards to which we were not previously subject;
- delays in our ability to implement internal standards, controls, procedures and policies in the businesses we acquire; and
- adverse effects of acquisition activity on the key performance indicators we use to monitor our performance.

Our current acquisition strategy includes the acquisition of complementary businesses, products, and solutions. In order to integrate and fully realize the benefits of such acquisitions, we expect to build application interfaces that enable such clients to use a wide range of our solutions while they continue to use their legacy management systems. In addition, over time we expect to migrate certain of our acquired companies' clients to our on demand property management solutions to retain them as clients and to be in a position to offer them our solutions on a cost-effective basis. These efforts may be unsuccessful or entail costs that result in losses or reduced profitability.

Unanticipated events and circumstances occurring in future periods may affect the realizability of our intangible assets obtained through acquisitions. The events and circumstances that we consider include significant under-performance relative to projected future operating results and significant changes in our overall business or product strategies. These events and

circumstances may cause us to revise our estimates and assumptions used in analyzing the value of our other intangible assets with indefinite lives, and any such revision could result in a non-cash impairment charge that could have a material impact on our financial results.

We may be unable to secure the equity or debt funding necessary to finance future acquisitions on terms that are acceptable to us, or at all. If we finance acquisitions by issuing equity or convertible debt securities, our existing stockholders will likely experience ownership dilution, and if we finance future acquisitions with debt funding, we will incur interest expense and may have to comply with additional financing covenants or secure that debt obligation with our assets.

Variability in our sales and activation cycles could result in fluctuations in our quarterly results of operations and cause our stock price to decline.

The sales and activation cycles for our solutions, from initial contact with a prospective client to contract execution and activation, vary widely by client and solution. We do not recognize revenue until the solution is activated. While most of our activations follow a set of standard procedures, a client's priorities or other factors may delay activation and our ability to recognize revenue, which could result in fluctuations in our quarterly operating results. Additionally, certain of our products are offered in suites containing multiple solutions, resulting in additional fluctuation in activations depending on each client's priorities and our own processes related to solutions included in the suite. The COVID-19 pandemic could also adversely affect the rate of technology spending and demand for our solutions, and delay or otherwise influence the timing of purchasing decisions and sales and activation cycles by our existing or prospective customers.

Many of our clients are price sensitive, and if market dynamics require us to change our pricing model or reduce prices, our operating results will be harmed.

Many of our existing and potential clients are price sensitive, and uncertain global economic conditions, as well as decreased leasing velocity, have contributed to increased price sensitivity in the multifamily housing market and the other markets that we serve. As market dynamics change, or as new and existing competitors introduce more competitive pricing or pricing models, we may be unable to renew our agreements with existing clients or clients of the businesses we acquire or attract new clients at the same price or based on the same pricing model as previously used. As a result, it is possible that we may be required to change our pricing model, offer price incentives or reduce our prices, which could harm our revenue, profitability and operating results.

Economic trends that affect the rental housing market may have a negative effect on our business.

Our clients include a range of organizations whose success is closely linked to the rental housing market. Economic trends that negatively or positively affect the rental housing market or the impact of the COVID-19 pandemic may adversely affect our business. Instability or downturns affecting the rental housing market may have a material adverse effect on our business, prospects, financial condition and results of operations by:

- decreasing demand for leasing and marketing solutions;
- reducing the number of occupied sites and units on which we earn revenue;
- preventing our clients from expanding their businesses and managing new properties;
- causing our clients to reduce spending on our solutions;
- subjecting us to increased pricing pressure in order to add new clients and retain existing clients;
- causing our clients to switch to lower-priced solutions provided by our competitors or internally developed solutions;
- delaying or preventing our collection of outstanding accounts receivable; and
- causing payment processing losses related to an increase in client insolvency.

In addition, economic trends that reduce the frequency of renter turnover or the quantity of new renters may reduce the number of rental transactions completed by our clients and may, as a result, reduce demand for our rental, leasing or marketing transaction specific services. The economic effect of the COVID-19 pandemic on the rental housing industry could provide further pressure on our customers who rely upon residents for rental and other payments and leasing activity through which they earn revenue.

We may require additional capital to support business growth or acquisitions, and this capital might not be available on terms acceptable to us or at all.

We intend to continue to make investments to support our business growth and may require additional funds to respond to business challenges or opportunities, including the need to develop new solutions or enhance our existing solutions, enhance our operating infrastructure or acquire businesses and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds. If we raise additional funds through further issuances of equity or convertible debt

securities, our existing stockholders could suffer significant ownership dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our common stock. In May 2020, we consummated an underwritten public offering of 5.85 million shares of our common stock, with total gross proceeds of \$345.0 million. We concurrently issued convertible senior notes with an aggregate principal amount of \$345.0 million. In the third quarter of 2019, we entered into an Amended and Restated Credit Agreement (the "Amended Credit Facility"), and we had also entered into an amendment to our prior credit facility in the first quarter of 2018, each of which increased our borrowing capacity. Future debt financing could increase our interest expense and could involve additional restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. In addition, we may not be able to obtain additional financing on terms favorable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges or opportunities could be significantly limited.

Our Amended Credit Facility contains restrictions that impact our business and expose us to risks that could adversely affect our liquidity and financial condition.

All of our obligations under the Amended Credit Facility are secured by substantially all of our assets. All of our existing and future domestic subsidiaries are required to guarantee our obligations under the Amended Credit Facility, other than certain immaterial subsidiaries, foreign subsidiary holding companies and our payment processing subsidiaries. Such guarantees by existing and future domestic subsidiaries are and will be secured by substantially all of the assets of such subsidiaries.

Our Amended Credit Facility contains customary covenants, subject in each case to customary exceptions and qualifications, which limit our and certain of our subsidiaries' ability to, among other things:

- incur additional indebtedness or guarantee indebtedness of others;
- create liens on our assets;
- enter into mergers or consolidations;
- dispose of assets;
- prepay certain indebtedness;
- make changes to our governing documents and certain of our agreements;
- pay dividends and make other distributions on our capital stock, and redeem and repurchase our capital stock;
- make investments, including acquisitions; and
- enter into transactions with affiliates.

Our Amended Credit Facility also contains, subject in each case to customary exceptions and qualifications, customary affirmative covenants. We are also required to comply with a maximum Consolidated Net Leverage Ratio, a maximum Consolidated Senior Secured Net Leverage Ratio, and a minimum Consolidated Interest Coverage Ratio. See additional discussion of these requirements in Note 9 to the Consolidated Financial Statements under Item 8 of this Annual Report on Form 10-K. As of December 31, 2020, we were in compliance with all of the covenants under our Amended Credit Facility.

The Amended Credit Facility contains customary events of default, subject to customary cure periods for certain defaults, that include, among others, non-payment defaults, covenant defaults, material judgment defaults, bankruptcy and insolvency defaults, cross-defaults to certain other material indebtedness, ERISA defaults, inaccuracy of representations and warranties and a change in control default.

Even if we comply with all of the applicable covenants, the restrictions on the conduct of our business could adversely affect our business by, among other things, limiting our ability to take advantage of financings, mergers, acquisitions and other corporate opportunities that may be beneficial to the business. Even if the Amended Credit Facility was terminated, additional debt we could incur in the future may subject us to similar or additional covenants.

A significant decline in our cash flow could impair our ability to make payments under our debt obligations.

If we experience a decline in cash flow due to any of the factors described in this "Risk Factors" section or otherwise, we could have difficulty paying interest and principal amounts due on our indebtedness and meeting the financial covenants set forth in our Amended Credit Facility. If we are unable to generate sufficient cash flow or otherwise obtain the funds necessary to make required payments under our Amended Credit Facility or the respective indentures from the 2022 and 2025 Convertible Notes, or if we fail to comply with the requirements of our indebtedness, we could default under our Amended Credit Facility or respective Convertible Notes indentures. Any default that is not cured or waived could result in the termination of the revolving commitments, the acceleration of the obligations under the Amended Credit Facility or respective Convertible Notes indentures, an increase in the applicable interest rate under the Amended Credit Facility and a requirement that our subsidiaries that have guaranteed the Amended Credit Facility pay the obligations in full, and would permit our lenders to exercise remedies

with respect to all of the collateral that is securing the Amended Credit Facility, including substantially all of our and our subsidiary guarantors' assets. Any such default could have a material adverse effect on our liquidity and financial condition.

If we fail to maintain proper and effective internal controls, our ability to produce accurate and timely financial statements could be impaired, which could harm our operating results, our ability to operate our business and investors' views of us.

Ensuring that we have adequate internal financial and accounting controls and procedures so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with United States generally accepted accounting principles. We are required to comply with Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, which requires annual management assessment of the effectiveness of our internal control over financial reporting and a report by our independent auditors. As of September 30, 2019, we identified a material weakness in our internal control over financial reporting which was disclosed in our Form 10-Q for the quarter ended September 30, 2019. The material weakness resulted from certain individual control deficiencies related to our information technology general controls ("ITGCs") that, when viewed in combination, aggregated to a material weakness. This material weakness was remediated during the quarter ended June 30, 2020.

If we fail to maintain proper and effective internal controls in the future, our ability to produce accurate and timely financial statements could be impaired, which could harm our operating results, harm our ability to operate our business and reduce the trading price of our stock.

We generate commission revenue from the insurance policies we sell as a registered insurance agent, and if insurance premiums decline or if the insureds experience greater than expected losses, our revenues could decline and our operating results could be harmed.

Through our wholly owned subsidiaries, we generate commission revenue from offering liability and renter's insurance. We also sell additional insurance products, including auto and other personal lines insurance, to renters that buy renter's insurance from us. These policies are ultimately underwritten by various insurance carriers. Some of the property owners and managers that participate in our programs opt to require renters to purchase rental insurance policies and agree to grant to us exclusive marketing rights at their properties. If demand for residential rental housing declines, property owners and managers may be forced to reduce their rental rates and to stop requiring the purchase of rental insurance in order to reduce the overall cost of renting. If property owners or managers cease to require renter's insurance, elect to offer policies from competing providers or insurance premiums decline, our revenues from selling insurance policies will be adversely affected.

Additionally, one type of commission paid by insurance carriers to us is contingent commission, which is affected by claims experienced at the properties for which the renters purchase insurance. In the event that the severity or frequency of claims by the insureds increase unexpectedly, the contingent commission we typically earn will be adversely affected. As a result, our quarterly, or annual, operating results could fall below the expectations of analysts or investors, in which event our stock price may decline.

Operational Risks Related to Our Business

The nature of our platform is complex and highly integrated, and if we fail to successfully manage releases or integrate new solutions, it could harm our revenues, operating income and reputation.

We manage a complex platform of solutions that consists of our property management solutions, integrated software-enabled value-added services and advertising and lease generation services. Many of our solutions include a large number of product centers that are highly integrated and require interoperability with other RealPage, Inc. products, as well as products and services of third-party service providers. Additionally, we typically deploy new releases of the software underlying our on demand software solutions on a bi-weekly, monthly or quarterly schedule, depending on the solution. Due to this complexity and the condensed development cycles under which we operate, we may experience errors in our software, corruption or loss of our data or unexpected performance issues from time to time. For example, our solutions may face interoperability difficulties with software operating systems or programs being used by our clients, or new releases, upgrades, fixes or the integration of acquired technologies may have unanticipated consequences on the operation and performance of our other solutions. If we encounter integration challenges or discover errors in our solutions late in our development cycle, it may cause us to delay our launch dates. Any major integration or interoperability issues or launch delays could have a material adverse effect on our revenues, operating income and reputation.

Our business depends substantially on the renewal of our products and services for on demand units managed by our clients and the increase in the use of our on demand products and services for on demand units.

We generally license our solutions pursuant to client agreements with a term of one year or longer. The pricing of the agreements is typically based on a price per unit basis. Our clients have no obligation to renew these agreements after their term expires, or to renew these agreements at the same or higher annual contract value. In addition, under specific circumstances, our

clients have the right to cancel their client agreements before they expire, for example, in the event of an uncured breach by us, or in some circumstances, upon the sale or transfer of a client property, by giving 30 days' notice or paying a cancellation fee. In addition, clients often purchase a higher level of professional services in the initial term than they do in renewal terms to ensure successful activation. As a result, our ability to grow is dependent in part on clients purchasing additional solutions or increasing the number of units they own or manage after the initial term of their client agreement. Though we maintain and analyze historical data with respect to rates of client renewals, upgrades and expansions, those rates may not accurately predict future trends in renewal of on demand units. Our clients' on demand unit renewal rates may decline or fluctuate for a number of reasons, including, but not limited to, their level of satisfaction with our solutions, our pricing, our competitors' pricing, reductions in our clients' spending levels or reductions in the number of on demand units managed by our clients. If our clients cancel or amend their agreements with us during their term, do not renew their agreements, renew on less favorable terms or do not purchase additional solutions or professional services in renewal periods, our revenue may grow more slowly than expected or decline and our profitability may be harmed.

Additionally, we have experienced, and expect to continue to experience, some level of on demand unit attrition as properties are sold and the new owners and managers of properties previously owned or managed by our clients do not continue to use our solutions. We cannot predict the amount of on demand unit turnover we will experience in the future. However, we have experienced higher rates of on demand unit attrition with our Propertyware property management system, primarily because it serves smaller properties than our OneSite property management system, and we may experience higher levels of on demand unit attrition to the extent Propertyware grows as a percentage of our revenues. If we experience increased on demand unit turnover, our financial performance and operating results could be adversely affected.

On demand revenue that is derived from products that help owners and managers lease and market apartments may decrease as occupancy rates rise. We have also experienced, and expect to continue to experience, some number of consolidations of our clients with other parties. In addition, if one of our clients is consolidated with another client, the acquiring client may have negotiated lower prices for our solutions or may use fewer of our solutions than the acquired client. In each case, the consolidated entity may attempt to negotiate lower prices for using our solutions as a result of the entity's increased size. These consolidations may cause us to lose on demand units or require us to reduce prices as a result of enhanced client leverage, which could cause our financial performance and operating results to be adversely affected.

We may not be able to continue to add new clients and retain and increase sales to our existing clients, which could adversely affect our operating results.

Our revenue growth is dependent on our ability to continually attract new clients while retaining and expanding our service offerings to existing clients. Growth in the demand for our solutions may be inhibited and we may be unable to sustain growth in our sales for a number of reasons, including, but not limited to:

- the economic effects of the COVID-19 pandemic upon our clients and their demand for our service offerings;
- our failure to develop new or additional solutions;
- our inability to market our solutions in a cost-effective manner to new clients or in new vertical or geographic markets;
- our inability to expand our sales to existing clients;
- our inability to build and promote our brand; and
- perceived or actual security, integrity, reliability, quality or compatibility problems with our solutions.

A substantial amount of our past revenue growth was derived from purchases of upgrades and additional solutions by existing clients. Our costs associated with increasing revenue from existing clients are generally lower than costs associated with generating revenue from new clients. Therefore, a reduction in the rate of revenue increase from our existing clients, even if offset by an increase in revenue from new clients, could reduce our profitability and have a material adverse effect on our operating results.

If we are unable to successfully develop or acquire and sell enhancements and new solutions, our revenue growth will be harmed and we may not be able to meet profitability expectations.

The industry in which we operate is characterized by rapidly changing client requirements, technological developments and evolving industry standards. Our ability to attract new clients and increase revenue from existing clients will depend in large part on our ability to successfully develop, bring to market and sell enhancements to our existing solutions and new solutions that effectively respond to the rapid changes in our industry. Any enhancements or new solutions that we develop or acquire may not be introduced to the market in a timely or cost-effective manner and may not achieve the broad market acceptance necessary to generate the revenue required to offset the operating expenses and capital expenditures related to development or acquisition. If we are unable to timely develop or acquire and sell enhancements and new solutions that keep

pace with the rapid changes in our industry, our revenue will not grow as expected and we may not be able to maintain or meet profitability expectations.

Any disruption of service at our data centers or other facilities could interrupt or delay our clients' access to our solutions, which could harm our operating results.

The ability of our clients to access our service is critical to our business. We host our products and services, support our operations and service our clients primarily from data centers in the Dallas, Texas area, but also from data centers located elsewhere in the United States and in Europe.

We may fail to provide such service as a result of numerous factors, many of which are beyond our control, including, without limitation: mechanical failure, power outage, the impact of the COVID-19 pandemic, human error, physical or electronic information security breaches, war, terrorism and related conflicts or similar events worldwide, fire, earthquake, hurricane, flood and other natural disasters, sabotage and vandalism. We attempt to mitigate these risks at our Texas-based data centers and other facilities through various business continuity efforts, including: redundant infrastructure, 24 x 7 x 365 system activity monitoring, physical security, backup and recovery procedures, use of a secure off-site storage facility for backup media, separate test systems and rotation of management and system security measures, but our precautions may not protect against all potential problems. Disaster recovery procedures are in place to facilitate the recovery of our operations, products and services within the stated service level goals. Our secondary data center is equipped with physical space, power, storage and networking infrastructure and Internet connectivity to support the solutions we provide in the event of the interruption of services at our primary data center. Even with this secondary data center, however, our operations would be interrupted during the transition process should our primary data center experience a failure. Moreover, both our primary and secondary data centers are located in the greater metropolitan Dallas area. As a result, any regional disaster could affect both data centers and result in a material disruption of our services.

Problems at one or more of our data centers, whether or not within our control, could result in service disruptions or delays or loss or corruption of data or documents. This could damage our reputation, cause us to issue credits to clients, subject us to potential liability or costs related to defending against claims, or cause clients to terminate or elect not to renew their agreements, any of which could negatively impact our revenues and harm our operating results.

Interruptions or delays in service from our third-party data center providers could impair our ability to deliver certain of our products to our clients, resulting in client dissatisfaction, damage to our reputation, loss of clients, limited growth and reduction in revenue.

Our products and services are hosted and supported from data centers, operated by third-party providers, in various geographic locations within the continental United States and Europe. Our operations depend on our third-party data center providers' abilities to protect these facilities against damage or interruption from natural disasters, power or telecommunications failures, criminal acts and similar events. In the event that any of our third-party hosting or facilities arrangements is terminated, or if there is a lapse of service or damage to a facility, we could experience interruptions in the availability of our on demand software as well as delays and additional expenses in arranging new facilities and services.

Despite precautions taken at these third party data centers, the occurrence of spikes in usage volume, a natural disaster, an act of terrorism, adverse changes in United States or foreign laws and regulations, vandalism or sabotage, a decision to close a third-party facility without adequate notice, or other unanticipated problems at a facility could result in lengthy interruptions in the availability of our on demand software. Even with current and planned disaster recovery arrangements, our business could be harmed. Also, in the event of damage or interruption, our insurance policies may not adequately compensate us for any losses that we may incur. These factors in turn could further reduce our revenue, subject us to liability and cause us to issue credits or cause clients to fail to renew their subscriptions, any of which could materially adversely affect our business.

We provide service level commitments to our clients, and our failure to meet the stated service levels could significantly harm our revenue and our reputation.

Our client agreements provide that we maintain certain service level commitments to our clients relating primarily to product functionality, network uptime, critical infrastructure availability and hardware replacement. For example, our service level agreements generally require that our solutions are available 98% of the time during coverage hours (normally 6:00 a.m. through 10:00 p.m. Central time daily) 365 days per year (other than certain permitted exceptions such as maintenance). If we are unable to meet the stated service level commitments, we may be contractually obligated to provide clients with refunds or credits. Additionally, if we fail to meet our service level commitments a specified number of times within a given time frame or for a specified duration, our clients may terminate their agreements with us or extend the term of their agreements at no additional fee. As a result, a failure to deliver services for a relatively short duration could cause us to issue credits or refunds to a large number of affected clients or result in the loss of clients. In addition, we cannot assure that our clients will accept these credits, refunds, termination or extension rights in lieu of other legal remedies that may be available to them. Our failure to meet our commitments could also result in substantial client dissatisfaction or loss. Because of the loss of future revenues through the issuance of credits or the loss of clients or other potential liabilities, our revenue could be significantly impacted if

we cannot meet our service level commitments to our clients. Although we were able to effectively service our customers and meet our service level obligations during the year ended December 31, 2020 after implementing changes to our work environments as a result of the COVID-19 pandemic, including working from home in response to governmental orders and safety considerations related to our employees and customers, if we are not able to continue to respond to and manage these impacts and related changes, our business, results of operations, liquidity and financial condition could be adversely impacted.

We face intense competitive pressures and our failure to compete successfully could harm our business and operating results.

We compete in a number of markets including accounting software, property management software for multifamily, single family and commercial solutions, vertically-integrated cloud computing services, software-enabled value-added services including applicant screening, insurance, relationship management (“CRM”), marketing and web portals, Internet listing services, utility billing and energy management, revenue management, multifamily housing and commercial real estate market research, spend management, payment processing, affordable housing compliance and audit services and vacation rentals. The markets for many of our solutions are intensely competitive, fragmented and rapidly changing. Some of these markets have relatively low barriers to entry. With the introduction of new technologies and market entrants, we expect competition to intensify in the future. Increased competition could result in pricing pressures, reduced sales and reduced margins. Often we compete to sell our solutions against existing systems that our potential clients have already made significant expenditures to install.

Our competitors vary depending on our product and service. Certain competitors compete with us in a number of areas, including Yardi, Inc., Entrata, Inc., MRI Software LLC, AppFolio, Inc., and CoStar Group, Inc. Other competitors compete with us with respect to a single product or category of products. We compete in various markets, with different competitive considerations in these various markets. In many of our markets we compete with a number of providers, including those who market specifically to multifamily, single family, and commercial real estate owners and property managers as well as other providers. In addition, many of our existing or potential clients have developed or may develop their own solutions that may be competitive with our solutions. We also may face competition for potential acquisition targets from our competitors who are seeking to expand their offerings.

With respect to all of our competitors, we compete based on a number of factors, including total cost of ownership, level of integration with property management systems, ease of implementation, product functionality and scope, performance, security, scalability and reliability of service, brand and reputation, sales and marketing capabilities and financial resources. Some of our existing competitors and new market entrants may enjoy substantial competitive advantages, such as greater name recognition, longer operating histories, larger installed client bases and larger sales and marketing budgets, as well as greater financial, technical and other resources. In addition, any number of our existing competitors or new market entrants could combine or consolidate, or obtain new financing through public or private sources, to become a more formidable competitor with greater resources. As a result of such competitive advantages, our existing and future competitors may be able to:

- develop superior products or services, gain greater market acceptance and expand their offerings more efficiently or more rapidly;
- adapt to new or emerging technologies and changes in client requirements more quickly;
- take advantage of acquisition and other opportunities more readily;
- adopt more aggressive pricing policies, such as offering discounted pricing for purchasing multiple bundled products;
- devote greater resources to the promotion of their brand and marketing and sales of their products and services; and
- devote greater resources to the research and development of their products and services.

If we are not able to compete effectively, our operating results will be harmed.

We integrate our software-enabled value-added services with competitive property management software for some of our clients. Our application infrastructure, marketed to our clients as SmartSource IT, is based on an open architecture that enables third-party applications to access and interface with applications hosted in SmartSource IT through our RealPage Exchange platform. Likewise, through this platform our SmartSource IT services are able to access and interface with other third-party applications, including third-party property management systems. We also provide services to assist in the implementation, training, support and hosting with respect to the integration of some of our competitors’ applications with our solutions. We sometimes rely on the cooperation of our competitors to implement solutions for our clients. However, frequently our reliance on the cooperation of our competitors can result in delays in integration. There is no assurance that our competitors, even if contractually obligated to do so, will continue to cooperate with us or will not prospectively alter their obligations to do so. We also occasionally develop interfaces between our software-enabled value-added services and competitor property management software without their cooperation or consent. There is no assurance that our competitors will not alter their applications in

ways that inhibit or prevent integration or assert that their intellectual property rights restrict our ability to integrate our solutions with their applications. Moreover, regardless of merit, such interface-related activity may result in costly litigation.

Material defects or errors in the software we use to deliver our solutions could harm our reputation, result in significant costs to us and impair our ability to sell our solutions.

The software applications underlying our solutions are inherently complex and may contain material defects or errors, particularly when first introduced or when new versions or enhancements are released. We have, from time to time, found defects in the software applications underlying our solutions, and new errors in our existing solutions may be detected in the future. Any errors or defects that cause performance problems or service interruptions could result in:

- a reduction in new sales or subscription renewal rates;
- unexpected sales credits or refunds to our clients, loss of clients and other potential liabilities;
- delays in client payments, increasing our collection reserve and collection cycle;
- diversion of development resources and associated costs;
- harm to our reputation and brand; and
- unanticipated litigation costs.

Additionally, the costs incurred in correcting defects or errors could be substantial and could adversely affect our operating results.

Failure to effectively manage the development, sale and support of our solutions and data processing efforts outside the United States could harm our business.

Our success depends on our ability to process high volumes of client data, enhance existing solutions and develop new solutions rapidly and cost effectively. We currently maintain offices in Hyderabad, India; Cebu, Philippines; Manila, Philippines; and Medellin, Colombia, where we employ development and data processing personnel or conduct other business functions important to our operations. We believe that performing these activities in Hyderabad, Cebu, Manila, and Medellin increases the efficiency and decreases the costs of our related operations. We maintain an office in Barcelona, Spain where certain of our vacation rental product development, sales and support operations are based. We also maintain offices in London, England and Sydney, Australia, where we provide property management, online leasing and resident software solutions. We believe our access to a multilingual employee base enhances our ability to serve vacation and other rental property managers outside the United States and in non-English speaking countries. Managing and staffing international operations requires management's attention and financial resources. The level of cost savings achieved by our international operations may not exceed the amount of investment and additional resources required to manage and operate these international operations. Our product offerings outside the United States may not be profitable or otherwise successful. Additionally, if we experience difficulties as a result of political, social, economic or environmental instability, change in applicable law, limitations of local infrastructure or problems with our workforce or facilities at our or third parties' international operations, including quarantines or other interruptions that affect our workforce as a result of an outbreak of the coronavirus in any of the locations where we operate, our business could be harmed due to delays in product release schedules or data processing services.

We rely on third-party technologies and services that may be difficult to replace or that could cause errors, failures or disruptions of our service, or introduce supply chain vulnerabilities, any of which could harm our business.

We rely on third-party providers in connection with the delivery of our solutions. Such providers include, but are not limited to, computer hardware and software vendors, database and data providers and cloud hosting providers. We utilize equipment, software and services from various third party providers. Our OneSite Accounting service relies on a software-as-a-service, or SaaS, accounting system developed and maintained by a third-party service provider. We host this application in our data centers and provide supplemental development resources to extend this accounting system to meet the unique requirements of the rental housing industry. Our shared cloud portfolio reporting service utilizes software licensed from a third party. We expect to utilize additional service providers as we expand our platform. Although the third-party technologies and services that we currently require are commercially available, such technologies and services may not continue to be available on commercially reasonable terms, or at all. Any loss of the right to use any of these technologies or services could result in delays in the provisioning of our solutions until alternative technology is either developed by us, or, if available, is identified, obtained and integrated, and such delays could harm our business. It also may be time consuming and costly to enter into new relationships. Additionally, any errors or defects in the third-party technologies we utilize or delays or interruptions in the third-party services we rely on could result in errors, failures or disruptions of our services, which also could harm our business.

We depend upon third-party service providers for important payment processing functions. If these third-party service providers do not fulfill their contractual obligations or choose to discontinue their services, our business and operations could be disrupted and our operating results would be harmed.

We rely on several large payment processing service providers to provide payment processing services to our clients. These services include electronic funds transfers, or EFT's, check services, bank card authorizations, data capture, settlement and merchant accounting services and access to various reporting tools. We and our clients also rely on third-party hardware manufacturers to manufacture check scanning hardware which is utilized to process transactions. Some service providers are our competitors who also directly or indirectly sell payment processing services to our clients in competition with us. With respect to these service providers, we have significantly less control over the systems and processes than if we were to maintain and operate those systems and processes ourselves. In some cases, functions necessary to our business are performed on proprietary third-party systems and software to which we have no access. We also generally do not have long-term contracts with these service providers. Accordingly, the failure of these organizations and service providers to renew their contracts with us or to fulfill their contractual obligations and perform satisfactorily could result in significant disruptions to our operations and adversely affect our operating results. In addition, the businesses we have acquired, or may acquire in the future, typically rely on other payment processing service providers. We may encounter difficulty converting payment processing services from these service providers to our payment processing platform. If we are required to find an alternative source for performing these functions, we may have to expend significant money, time and other resources to develop or obtain an alternative. If developing or obtaining an alternative is not accomplished in a timely manner and without significant disruption to our business, we may be unable to fulfill our responsibilities to our clients or meet their expectations, with the attendant potential for liability claims, damage to our reputation, and loss of our ability to attract or maintain clients.

If our security measures are breached and unauthorized access is obtained to our software platform, service infrastructure, or our clients' or their renters' or prospects' data, we may incur significant liabilities, third parties may misappropriate our intellectual property or financial assets, our solutions may be perceived as not being secure and clients may curtail or stop using our solutions.

Maintaining the security of our software platform and service infrastructure is of paramount importance to us and our clients, and we devote significant resources to this effort. Breaches of the security measures we take to protect our software platform and service infrastructure and our and our clients' confidential or proprietary information that is stored on and transmitted through those systems could disrupt and compromise the security of our internal systems and on demand applications, impair our ability to provide products and services to our clients and protect the privacy of their data, compromise our confidential or technical business information harming our competitive position, result in theft or misuse of our intellectual property or financial assets or otherwise adversely affect our business.

The solutions we provide involve the collection, storage and transmission of confidential personal and proprietary information regarding our clients and our clients' current and prospective renters and business partners. Specifically, we collect, store and transmit a variety of client data such as demographic information and payment histories of our clients' prospective and current renters and business partners. Additionally, we collect and transmit sensitive financial data such as credit card and bank account information. Treatment of certain types of data, such as personally identifiable information, protected health information and sensitive financial data may be subject to global, federal or state regulations requiring heightened privacy and security. If our data security or data integrity measures are breached or otherwise fail or prove to be inadequate for any reason, as a result of third-party actions or our employees' or contractors' errors or malfeasance or otherwise, and unauthorized persons obtain access to this information, or the data is otherwise compromised, we could incur significant liability to our clients and to their prospective or current renters or business partners, significant costs associated with internal regulatory investigations and litigation, or significant fines and sanctions by payment processing networks or governmental authorities. Any of these events or circumstances could result in damage to our reputation and material harm to our business.

We also rely upon our clients as users of our system to promote security of the system and the data within it, such as administration of client-side access credentialing and control of client-side display of data. On occasion, our clients have failed to perform these activities in such a manner as to prevent unauthorized access to data. To date, these breaches have not resulted in claims against us or in material harm to our business, but we cannot be certain that the failure of our clients in future periods to perform these activities will not result in claims against us, which could expose us to potential litigation, damage to our reputation and material harm to our business.

There can be no certainty that the measures we have taken to protect our software platform and service infrastructure, our confidential and proprietary information and the privacy and integrity of our clients', their current or prospective renters' and business partners' data are adequate to prevent or remedy unauthorized access to our system. Because techniques used to obtain unauthorized access to, or to sabotage, systems change frequently and generally are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventive measures. Experienced computer programmers seeking to intrude or cause harm, or hackers, have penetrated our service infrastructure in the past and are likely to attempt to do so in the future. Hackers may consist of sophisticated organizations, competitors, governments or individuals

who launch targeted attacks to gain unauthorized access to our systems and financial assets. A hacker who is able to penetrate our service infrastructure could misappropriate proprietary or confidential information or financial assets or cause interruptions in our services. For example, during May 2018, as disclosed in our Form 10-Q for the quarter ended March 31, 2018, we were the subject of a targeted email phishing campaign that led to a business email compromise, pursuant to which an unauthorized party gained access to an external third party system used by a subsidiary that we acquired in 2017. The incident resulted in the diversion of approximately \$6.0 million of funds, net of recoveries, intended for disbursement to three clients. Although we continue to vigorously pursue recovery of our losses and related expenses arising from this incident, there can be no assurance of recovery or of the timing of any such recovery.

We might be required to expend significant capital and resources to protect against, or to remedy, problems caused by intentional or unintentional threats such as hackers, and we may not have a timely remedy against a threat which is able to penetrate our service infrastructure. In addition to purposeful breaches, inadvertent actions or the transmission of computer viruses or malicious other logic could expose us to security risks. If an actual or perceived breach of our security occurs or if our clients and potential clients perceive vulnerabilities, the market perception of the effectiveness of our security measures could be harmed, we could lose sales and clients and our business could be materially harmed.

Legal and Regulatory Risks Related to Our Business

We face a number of risks in our payment processing business that could result in a reduction in our revenues and profits.

In connection with our electronic payment processing services, we process renter payments and subsequently settle these renter payments to our clients after varying clearing times. These payments are settled through our sponsor banks, and in the case of EFT, our Originating Depository Financial Institutions, or ODFIs. The renter payments that we process for our clients are identified in our Consolidated Balance Sheets as restricted cash and the corresponding liability for these renter payments is identified as client deposits. Our electronic payment processing business and related maintenance of custodial accounts subjects us to a number of risks, including, but not limited to:

- liability for client costs related to disputed or fraudulent transactions if those costs exceed the amount of the client reserves we have during the clearing period or after renter payments have been settled to our clients;
- electronic processing limits on the amount of custodial balances that any single ODFI, or collectively all of our ODFIs, will underwrite;
- reliance on sponsor banks, card payment processors and other payment service provider partners to process electronic transactions;
- failure by us or our sponsor banks to adhere to applicable laws and regulatory requirements or the standards of the electronic payments rules and regulations and other rules and regulations that may impact the provision of electronic payment services;
- continually evolving laws and regulations governing payment processing and money transmission, the application or interpretation of which is not clear in some jurisdictions;
- incidences of fraud, a security breach or our failure to comply with required external audit standards;
- our inability to increase or modify our fees at times when sponsor banks, electronic payment partners or associations increase their transaction processing fees or impose restrictions on the type, structure or amount of fees we can charge;
- repricing actions taken by card associations or payment networks or imposed as a result of governmental regulation or due to competitive pressures, which could negatively impact the prices we can charge customers for our services; and
- inconsistent and conflicting laws, regulations and card association or payment network rules that may result in fee structures that cause consumer confusion, complaints or litigation.

If any of these risks related to our electronic payment processing business were to materialize, our business or financial results could be negatively affected. Although we attempt to structure and adapt our payment processing operations to comply with these complex and evolving laws and regulations, our efforts may not guarantee compliance. In the event we are found to be in violation of regulatory or legal requirements, we may be subject to monetary fines, cease and desist orders, mandatory product changes, or other penalties that could have an adverse effect on our results of operations. Additionally, we are exposed to financial risk when payments from renters to our clients are returned or charged-back for various reasons such as insufficient funds, stop payment orders, unauthorized use or other reasons. In instances where there are returns or chargebacks, we attempt to collect these funds from our clients. However, if we are unable to collect such amounts from our clients, we bear the risk of loss for the amount of the return or chargeback. While we have not experienced material losses resulting from payment returns or chargebacks in the past, there can be no assurance that we will not experience significant losses in the future. Any increase in

returns or chargebacks that we are not able to recover our clients may adversely affect our financial condition and results of operations.

We have a service provider agreement with a financial institution under which we are a registered independent sales organization, or ISO. Under this agreement the financial institution processes credit card and debit card payments (“Card Payments”) on behalf of our clients. As an ISO, we assume the underwriting risk for the payments processed on behalf of our clients. If we experience excessive chargebacks, either we or the financial institution have the authority to cease client card processing services, and such events could result in a material adverse effect on our revenues, operating income, and reputation.

Evolution and expansion of our payment processing business may subject us to additional regulatory requirements and other risks, with respect to which failure to comply or adapt could harm our operating results.

The evolution and expansion of our payment processing business may subject us to additional risks and regulatory requirements, including laws governing money transmission and payment processing/settlement services. These requirements vary throughout the markets in which we operate, and have increased over time as the geographic scope and complexity of our product services have expanded. While we maintain a compliance program focused on applicable laws and regulations throughout the payments industry, there is no guarantee that we will not be subject to fines, criminal and civil lawsuits or other regulatory enforcement actions in one or more jurisdictions, or be required to adjust business practices to accommodate future regulatory requirements.

In order to maintain flexibility in the growth and expansion of our payments operations, we have obtained money transmitter licenses (or their equivalents) in several states, the District of Columbia and Puerto Rico. Our efforts to maintain these licenses could result in significant management time, effort, and cost, and may still not guarantee compliance given the constant state of change in these regulatory frameworks. Accordingly, costs associated with changes in compliance requirements, regulatory audits, enforcement actions, reputational harm, or other regulatory limitations may impact our ability to grow our payment processing business and could adversely affect our financial results.

Because certain solutions we provide depend on access to client data, decreased access to this data or the failure to comply with the evolving laws and regulations governing privacy of data, cloud computing and cross-border data transfers, or the failure to address privacy concerns applicable to such data, could harm our business.

Certain of our solutions depend on our continued access to our clients’ data regarding their prospective and current renters, including data compiled by other third-party service providers who collect and store data on behalf of our clients. Federal, state and foreign governments have adopted and continue to adopt new laws and regulations addressing data privacy and the collection, processing, storage, transmission, use and disclosure of personal information. Such laws and regulations are subject to differing interpretations and may be inconsistent among jurisdictions. These and other requirements could reduce demand for our solutions or restrict our ability to store and process data or, in some cases, impact our ability to offer our services and solutions in certain locations.

In addition to government activity, privacy advocacy and other industry groups have established or may establish new self-regulatory standards that may place additional burdens on us. Our clients may expect us to meet voluntary certification or other standards established by third parties. If we are unable to maintain these certifications or meet these standards, it could adversely affect our ability to provide our solutions to certain clients and could harm our business.

Any restrictions on the use of or decrease in the availability of data from our clients, or other third parties that collect and store such data on behalf of our clients, and the costs of compliance with, and other burdens imposed by, applicable legislative and regulatory initiatives may limit our ability to collect, aggregate or use this data. Any limitations on our ability to collect, aggregate or use such data could reduce demand for certain of our solutions. Additionally, any inability to adequately address privacy concerns, even if unfounded, or comply with applicable privacy laws, regulations and policies, could result in liability to us or damage to our reputation and could inhibit sales and market acceptance of our solutions and harm our business.

Assertions by a third party that we infringe its intellectual property, whether successful or not, could subject us to costly and time-consuming litigation or expensive licenses.

The software and technology industries are characterized by the existence of a large number of patents, copyrights, trademarks and trade secrets and by frequent litigation based on allegations of infringement, misappropriation, misuse and other violations of intellectual property rights. We have received in the past, and may receive in the future, communications from third parties claiming that we have infringed or otherwise misappropriated the intellectual property rights or terms of use of others. Our technologies may not be able to withstand any third-party claims against their use. Since we currently have a limited number of patents, we may not be able to use patent infringement as a defensive strategy in such litigation. Additionally, although we have licensed from other parties proprietary technology covered by patents, we cannot be certain that any such patents will not be challenged, invalidated or circumvented. If such patents are invalidated or circumvented, this may allow existing and potential competitors to develop products and services that are competitive with, or superior to, our solutions.

Many of our client agreements require us to indemnify our clients for certain third-party claims, such as intellectual property infringement claims, which could increase our costs of defending such claims and may require that we pay damages if there were an adverse ruling or settlement related to any such claims. These types of claims could harm our relationships with our clients, may deter future clients from purchasing our solutions or could expose us to litigation for these claims. Even if we are not a party to any litigation between a client and a third party, an adverse outcome in any such litigation could make it more difficult for us to defend our intellectual property in any subsequent litigation in which we are a named party.

Litigation could force us to stop selling, incorporating or using our solutions that include the challenged intellectual property or redesign those solutions that use the technology. In addition, we may have to pay damages if we are found to be in violation of a third party's rights. We may have to procure a license for the technology, which may not be available on reasonable terms, if at all, may significantly increase our operating expenses or may require us to restrict our business activities in one or more respects. As a result, we may also be required to develop alternative non-infringing technology, which could require significant effort and expense. There is no assurance that we would be able to develop alternative solutions or, if alternative solutions were developed, that they would perform as required or be accepted in the relevant markets. In some instances, if we are unable to offer non-infringing technology, or obtain a license for such technology, we may be required to refund some or the entire license fee paid for the infringing technology by our clients.

Our exposure to risks associated with the use of intellectual property may be increased as a result of acquisitions, as we have a lower level of visibility into the development process with respect to acquired technology or the care taken to safeguard against infringement risks. Such risks include, without limitation, patent infringement risks, copyright infringement risks, risks arising from the inclusion of open source software that is subject to onerous license provisions that could even require disclosure of our proprietary source code, or violations of terms of use for third party solutions that our acquisition targets use. Third parties may make infringement and similar or related claims after we have acquired technology that had not been asserted prior to our acquisition.

Any failure to protect and successfully enforce our intellectual property rights could compromise our proprietary technology and impair our brands.

Our success depends on our ability to protect our proprietary rights to the technologies we use in our solutions. If we are unable to protect our proprietary rights adequately, our competitors could use the intellectual property we have developed to enhance their own products and services, which could harm our business. We rely on a combination of copyright, service mark, trademark and trade secret laws, as well as confidentiality procedures and contractual restrictions, to establish and protect our proprietary rights, all of which provide only limited protection. We currently have a limited number of issued patents and pending patent applications, and we may be unable to obtain patent protection in the future. In addition, if any patents are issued in the future, they may not provide us with any competitive advantages, may not be issued in a manner that gives us the protection that we seek and may be successfully challenged by third parties. Unauthorized parties may attempt to copy or otherwise obtain and use the technologies underlying our solutions. Monitoring unauthorized use of our technologies is difficult, and we do not know whether the steps we have taken will prevent unauthorized use of our technology. If we are unable to protect our proprietary rights, we may find ourselves at a competitive disadvantage to others who have not incurred the substantial expense, time and effort required to create similar innovative products.

We cannot assure that any future service mark or trademark registrations will be issued for pending or future applications or that any registered service marks or trademarks will be enforceable or provide adequate protection of our proprietary rights. If we are unable to secure new marks, maintain already existing marks and enforce the rights to use such marks against unauthorized third-party use, our ability to brand, identify and promote our solutions in the marketplace could be impaired, which could harm our business.

We customarily enter into agreements with our employees, contractors and certain parties with whom we do business to limit access to, use of, and disclosure of our confidential and proprietary information. The legal and technical steps we have taken, however, may not prevent unauthorized use or the reverse engineering of our technology. Moreover, we may be required to release the source code of our software to third parties under certain circumstances. For example, some of our client agreements provide that if we cease to maintain or support a certain solution without replacing it with a successor solution, then we may be required to release the source code of the software underlying such solution. In addition, others may independently develop technologies that are competitive to ours or infringe our intellectual property. Moreover, it may be difficult or practically impossible to detect copyright infringement or theft of our software code. Enforcement of our intellectual property rights also depends on our legal actions being successful against these infringers, but these actions may not be successful, even when our rights have been infringed. Furthermore, the legal standards relating to the validity, enforceability and scope of protection of intellectual property rights in Internet-related industries are uncertain and still evolving.

Additionally, as we sell our solutions internationally, effective patent, trademark, service mark, copyright and trade secret protection may not be available or as robust in every country in which our solutions are available. As a result, we may not be able to effectively prevent competitors outside the United States from infringing or otherwise misappropriating our intellectual property rights, which could reduce our competitive position and ability to compete or otherwise harm our business.

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

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

Legal proceedings against us could be costly and time consuming to defend.

We are from time to time subject to legal proceedings and claims that arise in the ordinary course of business, including claims brought by our clients or vendors in connection with commercial disputes, claims brought by our clients' current or prospective renters, including class action lawsuits based on asserted statutory or regulatory violations, employment-based claims made by our current or former employees, and other claims brought by administrative agencies, government regulators, or insurers.

On February 23, 2015, we received from the Federal Trade Commission ("FTC") a Civil Investigative Demand consisting of interrogatories and a request to produce documents relating to our compliance with the Fair Credit Reporting Act ("FCRA"). We responded to the request and requests for additional information by the FTC. On November 2, 2017, the FTC staff informed us of its belief that there was a basis for claims that could include monetary and injunctive relief against us for failing to follow reasonable procedures to assure maximum possible accuracy of our tenant screening reports. In October 2018, we reached a settlement with the FTC resolving all issues raised by the FTC related to this matter. Under the settlement, we paid \$3.0 million to the FTC and agreed to continue to comply with the FCRA. The settlement does not require any changes to our current business practices. We believe that our business practices did not, and do not, violate the FCRA or any other laws.

In connection with the Merger Agreement, we filed with the SEC the Proxy Statement on February 5, 2021. Following the filing of the Proxy Statement, four lawsuits relating to the Merger were filed: (i) *Asp v. RealPage, Inc., et al.*, Case No: 1:21-cv-00158-LPS, filed in the United States District Court for the District of Delaware on February 5, 2021, on behalf of an individual stockholder of the Company (the "Asp Action"); (ii) *Parshall v. RealPage, Inc., et al.*, Case No. 1:21-cv-00206-LPS, filed in the United States District Court for the District of Delaware on February 16, 2021 on behalf of an individual stockholder of the Company (the "Parshall Action"); (iii) *Anderson v. RealPage, Inc., et al.*, Case No: 1:21-cv-00212-LPS, filed in the United States District Court for the District of Delaware on February 16, 2021 on behalf of an individual stockholder of the Company (the "Anderson Action"); and (iv) *Waterman v. RealPage, Inc. et al*, Case No. 1:21-cv-00230-LPS, filed in the United States District Court for the District of Delaware on February 18, 2021 on behalf of an individual stockholder of the Company (the "Waterman Action" and together with the Asp Action, the Parshall Action, and the Anderson Action, the "Actions"). In addition, the Company received a demand letter relating to the Merger on February 8, 2021 from counsel representing an individual stockholder of the Company (the "Demand Letter" and together with the Actions, the "Matters"). The Matters each allege that the defendants named therein violated Sections 14(a) and 20(a) of the Securities Exchange Act of 1934, as amended, because the Proxy Statement allegedly omits or misstates certain material information. The Actions each seek, among other things, injunctive relief preventing the consummation of the Merger, rescission of the Merger if it is consummated, damages and attorneys' fees. We believe that the claims asserted in the Matters are without merit.

Litigation, enforcement actions and other legal proceedings, regardless of their outcome, may result in substantial costs and may divert management's attention and our resources, which may harm our business, overall financial condition and operating results. In addition, legal claims that have not yet been asserted against us may be asserted in the future. Although we maintain insurance, there is no guarantee that such insurance will be available or sufficient to cover any such legal proceedings or claims. For example, insurance may not cover such legal proceedings or claims or the insurer may withhold or dispute coverage of such legal proceedings or claims on various grounds, including by alleging such coverage is beyond the scope of such policies, that we are not in compliance with the terms of such insurance policies or that such policies are not in effect, even after proceeds under such insurance policies have been received by us. A legal proceeding or claim brought against us that is uninsured or under-insured could result in unanticipated costs, thereby harming our operating results. We are currently involved in a dispute with our insurance carrier regarding coverage for a May 2018 targeted email phishing incident that led to a business email compromise and the diversion of funds totaling approximately \$6.0 million, net of recoveries, that were intended for disbursement to three of our clients. The insurance carrier made payment on a portion of our claim in January 2019, and while there can be no assurance of the final outcome, we intend to vigorously pursue repayment of the remaining losses. Insurance

may not be sufficient for one or more such legal proceedings or claims and may not continue to be available on terms acceptable to us, or at all.

We could be sued for contract, warranty or product liability claims, and such lawsuits may disrupt our business, divert management's attention and our financial resources or have an adverse effect on our financial results.

We provide warranties to clients of certain of our solutions and services relating primarily to product functionality, network uptime, critical infrastructure availability and hardware replacement. General errors, defects, inaccuracies or other performance problems in the software applications underlying our solutions or inaccuracies in or loss of the data we provide to our clients could result in financial or other damages to our clients. Additionally, errors associated with any delivery of our services, including utility billing, could result in financial or other damages to our clients. There can be no assurance that any warranty disclaimers, general disclaimers, waivers or limitations of liability set forth in our contracts would be enforceable or would otherwise protect us from liability for damages. We maintain general liability insurance coverage, including coverage for errors and omissions, in amounts and under terms that we believe are appropriate. There can be no assurance that this coverage will continue to be available on terms acceptable to us, or at all, or in sufficient amounts to cover one or more claims, or that the insurer will not deny coverage for any future claim or dispute coverage of such legal proceedings or claims even after proceeds under such insurance policies have been received by us. The successful assertion of one or more claims against us that exceeds available insurance coverage, could have a material adverse effect on our business, prospects, financial condition and results of operations.

The rental housing industry, electronic commerce and many of the products and services that we offer, including background screening services, utility billing, affordable housing compliance and audit services, insurance and payments are subject to extensive and evolving governmental regulation. Changes in regulations or our failure to comply with regulations could harm our operating results.

The rental housing industry is subject to extensive and complex federal, state and local laws and regulations. Our services and solutions must work within the extensive and evolving legal and regulatory requirements applicable to us, our clients or our third-party service providers, including, but not limited to, those under the Fair Credit Reporting Act, the Fair Housing Act, the Deceptive Trade Practices Act, the Drivers Privacy Protection Act, the Gramm-Leach-Bliley Act, the Fair and Accurate Credit Transactions Act, the United States Tax Reform Act of 1986 (TRA86), which is an IRS law governing tax credits, the Privacy Rules, Safeguards Rule and Consumer Report Information Disposal Rule promulgated by the Federal Trade Commission, or FTC, the FTC's Telemarketing Sales Rule, the Telephone Consumer Protection Act (TCPA), the CAN-SPAM Act, the Electronic Communications Privacy Act, the regulations of the United States Department of Housing and Urban Development, or HUD, HIPAA/HITECH, rules and regulations of the Consumer Financial Protection Bureau (CFPB), the Americans with Disabilities Act, and complex and divergent state and local laws and regulations related to data privacy and security, credit and consumer reporting, deceptive trade practices, discrimination in housing, telemarketing, electronic communications, call recording, utility billing and energy and gas consumption. These regulations are complex, change frequently and may become more stringent over time. Although we attempt to structure and adapt our solutions and service offerings to comply with these complex and evolving laws and regulations, we may be found to be in violation. If we are found to be in violation of any applicable laws or regulations, we could be subject to administrative and other enforcement actions as well as class action lawsuits or demands for client reimbursement. Additionally, many applicable laws and regulations provide for penalties or assessments on a per occurrence basis. Due to the nature of our business, the type of services we provide and the large number of transactions processed by our solutions, our potential liability in an enforcement action or class action lawsuit could be significant. In addition, entities such as HUD, the FTC and the CFPB have the authority to promulgate rules and regulations that may impact us, our clients and our business.

On February 23, 2015, we received from the FTC a Civil Investigative Demand consisting of interrogatories and a request to produce documents relating to our compliance with the FCRA. We responded to the request and requests for additional information by the FTC. On November 2, 2017, the FTC staff informed us of its belief that there was a basis for claims that could include monetary and injunctive relief against us for failing to follow reasonable procedures to assure maximum possible accuracy of our tenant screening reports. We believe that our business practices did not, and do not, violate the FCRA or any other law. In October 2018, we reached a settlement with the FTC resolving all issues raised by the FTC related to this matter. Under the settlement, we paid \$3.0 million to the FTC and agreed to continue to comply with the FCRA. The settlement does not require any changes to our current business practices.

We believe increased regulation is likely in the area of data privacy, and laws and regulations applying to the solicitation, collection, processing or use of personally identifiable information or consumer information could affect our and our clients' ability to use and share data, potentially reducing demand for our on demand software solutions. In October 2015, the European Court of Justice invalidated the U.S.-EU Safe Harbor framework, which had been the primary compliance mechanism for establishing data transfers outside of the European Economic Area in accordance with the European Union's Data Protection Directive 95-46 EC. In July 2016, the U.S. and European Union entered into a new compliance framework, (the "Privacy Shield"), which was intended to replace the U.S.-EU Safe Harbor framework. The Privacy Shield framework was subsequently

invalidated in July 2020, creating uncertainty regarding compliance with applicable privacy laws and regulations. While alternative compliance options exist, the long-term viability of the overall compliance framework remains in question, which could result in increased regulation, cost of compliance and limitations on data transfers for both our clients and us. In May 2018, the General Data Protection Regulation (“GDPR”) became effective in the European Union and imposed new requirements and restrictions upon companies that process personal data of EU citizens. In June 2018, the State of California passed the California Consumer Privacy Act (“CCPA”), which created new requirements and restrictions for processing personal data of California citizens beginning January 1, 2020. If we are unable to meet the requirements of applicable privacy laws and regulations, the Privacy Shield, GDPR or CCPA with respect to our services subject to these provisions, we may incur monetary or other penalties which could harm our business or financial condition.

Some of our LeaseStar products operate under the real estate brokerage laws of numerous states and require maintaining licenses in many of these states. Brokerage laws in these states could change, affecting our ability to provide some LeaseStar or, if applicable, other products in these states.

Increased regulation is also likely in states and local jurisdictions related to rent control and rent regulation. During 2019, California, New York and Oregon each adopted state legislation that regulates rent pricing, and other states and municipalities are considering similar legislation. Such legislation impacts our clients’ businesses as they determine rental rates, and could impact the supply of rental units over time in markets impacted by such regulation. The impact of restrictions on rental rates could also depress demand and pricing for certain of our products designed to enable our clients to evaluate market conditions in determining rental rates.

We deliver our on demand software solutions over the Internet and sell and market certain of our solutions over the Internet. As Internet commerce continues to evolve, increasing regulation by federal, state or foreign agencies becomes more likely. Taxation of products or services provided over the Internet or other charges imposed by government agencies or by private organizations for accessing the Internet may also be imposed. Any regulation imposing greater fees for Internet use or restricting information exchange over the Internet could result in a decline in the use of the Internet and the viability of on demand software solutions, which could harm our business and operating results.

Our insurance business is subject to governmental regulation which could reduce our profitability or limit our growth.

Through our wholly owned subsidiaries, we hold insurance agent licenses from a number of individual state departments of insurance and are subject to state governmental regulation and supervision in connection with the operation of our insurance business. In addition, we have appointed numerous sub-producing agents to generate insurance business for our products. These sub-producing agents primarily consist of property owners and managers who market insurance products to residents. The sub-producing agents are subject to the same state regulation and supervision, and we cannot ensure that these sub-producing agents will not violate these regulations, and thus expose our insurance business to sanctions by these state departments of insurance for any such violations. Furthermore, state insurance departments conduct periodic examinations, audits and investigations of the affairs of insurance agents. This state governmental supervision could reduce our profitability or limit the growth of our insurance business by increasing the costs of regulatory compliance, limiting or restricting the solutions we provide or the methods by which we provide them or subjecting us to the possibility of regulatory actions or proceedings. Our continued ability to maintain these insurance agent licenses in the jurisdictions in which we are licensed depends on our compliance with the rules and regulations promulgated from time to time by the regulatory authorities in each of these jurisdictions.

In all jurisdictions, the applicable laws and regulations are subject to amendment or interpretation by regulatory authorities. Generally, such authorities are vested with relatively broad discretion to grant, renew and revoke licenses and approvals and to implement regulations, as well as regulate rates that may be charged for premiums on policies. Accordingly, we may be precluded or temporarily suspended from carrying on some or all of the activities of our insurance business or fined or penalized in a given jurisdiction. No assurances can be given that our insurance business can continue to be conducted in any given jurisdiction as it has been conducted in the past.

We are required to maintain a 50-state general agency insurance license as well as individual insurance licenses for each sales agent involved in the solicitation of insurance products. Both the agency and individual licenses require compliance with state insurance regulations, payment of licensure fees, and continuing education programs. In the event that regulatory compliance requirements are not met, we could be subject to license suspension or revocation, state Department of Insurance audits and regulatory fines. As a result, our ability to engage in the business of insurance could be restricted, and our revenue and financial results will be adversely affected.

Risks Related to Ownership of our Common Stock

The concentration of our capital stock owned by insiders may limit your ability to influence corporate matters.

Our executive officers, directors, and entities affiliated with them together beneficially owned approximately 11.1% of our common stock as of December 31, 2020. Of such amount, Stephen T. Winn, our Chief Executive Officer and Chairman of the Board, and entities beneficially owned by Mr. Winn held an aggregate of approximately 10.1% of our common stock as of

December 31, 2020. Beneficial ownership is determined in accordance with the rules of the SEC. The number of shares of common stock deemed outstanding includes all shares of restricted stock and those shares issuable upon exercise of options that may be exercised within 60 days after December 31, 2020. This concentration of ownership may adversely affect the trading price of our common stock because investors often perceive disadvantages in owning stock in companies with large stockholders. Mr. Winn and entities beneficially owned by Mr. Winn may exert significant influence over our management and affairs and matters requiring stockholder approval, including the election of directors and the approval of significant corporate transactions, such as mergers, consolidations or the sale of substantially all of our assets. Consequently, this concentration of ownership may have the effect of delaying or preventing a change of control, including a merger, consolidation or other business combination involving us, or discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control, even if that change of control would benefit our other stockholders.

The trading price of our common stock may be volatile.

The trading price of our common stock could be subject to wide fluctuations in response to various factors, including, but not limited to, those described in this “Risk Factors” section, some of which are beyond our control. Factors affecting the trading price of our common stock include:

- variations in our operating results or in expectations regarding our operating results;
- variations in operating results of similar companies;
- changes in our financial guidance and how our actual results compare to such guidance;
- changes in the estimates of our operating results or changes in recommendations by any research analysts that elect to follow our common stock;
- announcements of technological innovations, new solutions or enhancements, acquisitions, strategic alliances or agreements by us or by our competitors;
- announcements by competitors regarding their entry into new markets, and new product, service and pricing strategies;
- marketing, advertising or other initiatives by us or our competitors;
- increases or decreases in our sales of products and services for use in the management of units by clients and increases or decreases in the number of units managed by our clients;
- threatened or actual litigation;
- changes in our board of directors or management;
- recruitment or departure of key personnel;
- market conditions in our industry and the economy as a whole;
- the overall performance of the equity markets;
- sales of our shares of common stock by existing stockholders;
- volatility in our stock price, which may lead to higher stock-based expense under applicable accounting standards; and
- adoption or modification of regulations, policies, procedures or programs applicable to our business.

In addition, the stock market in general, and the market for technology and specifically Internet-related companies, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry factors may harm the market price of our common stock regardless of our actual operating performance. In addition, in the past, following periods of volatility in the overall market and the market price of a particular company’s securities, securities class action litigation has often been instituted against these companies. This litigation, if instituted against us, could result in substantial costs and a diversion of our management’s attention and our resources, whether or not we are successful in such litigation.

Future sales of our common stock in the public market could lower the market price for our common stock.

In the future, we may sell additional shares of our common stock to raise capital. On June 5, 2018, we amended our certificate of incorporation to increase the number of authorized shares of common stock by 125,000,000 shares, bringing the total authorized shares of common stock to 250,000,000. In May 2020, we consummated an underwritten public offering of 5.85 million shares of our common stock, with total gross proceeds of \$345.0 million. A substantial number of shares of our common stock is reserved for issuance of awards under our equity plan, and upon conversion of the Convertible Notes. We cannot predict the size of future issuances or the effect, if any, that they may have on the market price for our common stock. The issuance and sale of substantial amounts of common stock, or the perception that such issuances and sales may occur, could

adversely affect the market price of our common stock and impair our ability to raise capital through the sale of additional equity.

The Capped Calls, Note Hedges and Warrant transactions may affect the value of our common stock.

In connection with the pricing of the Convertible Notes issued in May 2017 and May 2020, we entered into hedging transactions (the Capped Calls and Note Hedges, collectively referred to as the “Note Hedge Instruments”) with the option counterparties. We also entered into Warrant transactions with the May 2017 option counterparties. The Hedge Instruments are expected, subject to certain limits in the case of the Capped Calls, to reduce the potential dilution upon conversion of the Convertible Notes and/or offset any cash payments we are required to make in excess of the principal amount of Convertible Notes once converted, as the case may be. However, the Warrants could separately have a dilutive effect on our common stock to the extent that the market price per share of our common stock exceeds the strike price of the Warrants.

In connection with establishing their initial hedges of the Hedge Instruments and Warrants, the option counterparties or their respective affiliates expected to enter into various derivative transactions with respect to our common stock concurrently with or shortly after the pricing of the Convertible Notes issued in May 2017 and May 2020. The option counterparties or their respective affiliates may modify any such hedge positions by entering into or unwinding various derivatives with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions prior to the maturity of the Convertible Notes (and are likely to do so during any observation period related to a conversion of the Convertible Notes). This activity could also cause or avoid an increase or a decrease in the market price of our common stock.

Our charter documents and Delaware law could prevent a takeover that stockholders consider favorable and could also reduce the market price of our stock.

Our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could delay or prevent a change in control of our company. These provisions could also make it more difficult for stockholders to elect directors and take other corporate actions. These provisions include:

- a classified board of directors whose members serve staggered three-year terms;
- not providing for cumulative voting in the election of directors;
- authorizing our board of directors to issue, without stockholder approval, preferred stock with rights senior to those of our common stock;
- prohibiting stockholder action by written consent; and
- requiring advance notification of stockholder nominations and proposals.

These and other provisions of our amended and restated certificate of incorporation and our amended and restated bylaws and under Delaware law could discourage potential takeover attempts, reduce the price that investors might be willing to pay in the future for shares of our common stock and result in the market price of our common stock being lower than it would be without these provisions.

We do not anticipate paying any cash dividends on our common stock.

We do not anticipate paying any cash dividends on our common stock in the foreseeable future. If we do not pay cash dividends, you would receive a return on your investment in our common stock only if the market price of our common stock has increased when you sell your shares. In addition, the terms of our credit facilities currently restrict our ability to pay dividends. See additional discussion under the Dividend Policy heading of Part II, Item 5 of our Annual Report on Form 10-K.

The Merger is subject to receipt of approval from our stockholders as well as the satisfaction of other closing conditions in the Merger Agreement.

The Merger Agreement contains a number of customary conditions to complete the Merger, including, (1) the adoption of the Merger Agreement by the holders of a majority of the outstanding shares of common stock, (2) the expiration or early termination of the applicable waiting period under the HSR Act, and the approval of the Merger under other applicable antitrust approvals, (3) the absence of an order, injunction or law prohibiting the Merger, (4) receipt of governmental consents (or, in certain circumstances, implementation of alternative arrangements) with respect to a change of control of certain money transmitter licenses held by a subsidiary of RealPage, (5) the accuracy of the other party’s representations and warranties, subject to certain materiality standards set forth in the Merger Agreement, (6) compliance in all material respects with the other party’s obligations under the Merger Agreement and (7) no Company Material Adverse Effect (as defined in the Merger Agreement) having occurred since the date of the Merger Agreement. We can provide no assurance that all required approvals will be obtained or that all closing conditions will be satisfied, and, if all required approvals are obtained and the closing conditions are satisfied, we can provide no assurance as to the terms, conditions and timing of such approvals or the timing of

the completion of the Merger. Any delay in completing the Merger could cause us not to realize some or all of the benefits that we expect to achieve if the Merger is successfully completed within its expected timeframe.

The announcement and pendency of our agreement to be acquired by funds affiliated with Thoma Bravo may have an adverse effect on our business and operating results.

On December 20, 2020, we entered into the Merger Agreement with Parent and Merger Sub, pursuant to which Parent agreed to acquire us subject to the terms and conditions set forth therein. Our pending acquisition by Parent may have an adverse effect on our revenue in the near term if our customers delay, defer, or cancel purchases or orders pending completion of the Merger. In addition, the announcement and pendency of the Merger may cause reluctance by customers to begin or continue to do business with us due to potential uncertainty about the direction of our products and solutions following consummation of the Merger. We are subject to additional risks in connection with the announcement and pendency of the Merger, including:

- difficulties maintaining existing and/or establishing business relationships, including relationships with significant customers, suppliers and partners;
- disruption to our business, including increased costs and diversion of management time and resources that could otherwise have been devoted to other opportunities that may have been beneficial to us;
- the restrictions imposed on our business and operations pursuant to certain covenants set forth in the Merger Agreement, which may prevent us from pursuing certain opportunities, responding to competitive pressures and industry developments, or taking certain actions without Parent's approval;
- adverse effects on our ability to attract, recruit, retain and motivate current and prospective employees who may be uncertain about their future roles following completion of the Merger, and the possibility that our employees could lose productivity as a result of uncertainty regarding their employment following the Merger;
- the outcome of legal proceedings that have been and may be instituted against us, our directors, executive officers and others relating to the Merger; and
- the diversion of our employees' attention due to activities related to the Merger.

The failure to complete the Merger may adversely affect our business, financial condition, operating results, and stock price.

As described above, consummation of the Merger remains subject to certain customary closing conditions. There can be no assurance that these conditions to the completion of the Merger will be satisfied in a timely manner or at all. If the Merger is not completed, our stock price could fall to the extent its current price reflects an assumption that the Merger will be completed, and it is uncertain when, if ever, our stock price would return to the price at which our shares currently trade. Furthermore, if the Merger is not completed, we may suffer other consequences that could adversely affect our business, financial condition, operating results, and stock price, including the following:

- any disruptions to our business resulting from the announcement and pendency of the Merger, including adverse changes in our relationships with customers, suppliers, partners and employees, may continue or intensify in the event the Merger is not consummated or is significantly delayed;
- matters relating to the Merger require substantial commitments of management time and resources that could otherwise have been devoted to other opportunities that may have been beneficial to us;
- we would have incurred significant costs, including professional services fees and other transaction costs, in connection with the Merger that we would be unable to recover;
- we may have to pay Parent a termination fee of \$288.0 million under certain circumstances that give rise to the termination of the Merger Agreement;
- we may be subject to negative publicity or be negatively perceived by the investment or business communities;
- we have been and may be subject to legal proceedings related to the transactions contemplated by the Merger Agreement;
- we may not be able to take advantage of alternative business opportunities or effectively respond to competitive pressures; and
- we may experience a departure of employees.

Other General Risks

Changes in, or errors in our interpretations and applications of, financial accounting standards or practices may cause adverse, unexpected financial reporting fluctuations and affect our reported results of operations.

A change in accounting standards or practices can have a significant effect on our reported results and may even affect our reporting of transactions completed before the change is effective. New accounting pronouncements and varying interpretations of accounting pronouncements have occurred and may occur in the future. Changes to existing rules or the questioning of current practices or errors in our interpretations and applications of financial accounting standards or practices may adversely affect our reported financial results or the way in which we conduct our business.

For more information on recently issued accounting standards, see Note 2 to our Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

Our ability to use net operating losses to offset future taxable income may be subject to certain limitations.

In general, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Internal Revenue Code, a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change net operating losses, or NOLs, to offset future taxable income. Our ability to utilize NOLs of companies that we have acquired or may acquire in the future may be subject to limitations. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 of the Internal Revenue Code. For these reasons, we may not be able to utilize a material portion of the NOLs reflected on our balance sheet, even if we maintain profitability.

If we are required to collect sales and use taxes on the solutions we sell in additional taxing jurisdictions, we may be subject to liability for past sales and our future sales may decrease.

States and some local taxing jurisdictions have differing rules and regulations governing sales and use taxes, and these rules and regulations are subject to varying interpretations that may change over time. We review these rules and regulations periodically and currently collect and remit sales taxes in taxing jurisdictions where we believe we are required to do so. However, additional state and/or local taxing jurisdictions may seek to impose sales or other tax collection obligations on us, including for past sales. A successful assertion that we should be collecting additional sales or other taxes on our solutions could result in substantial tax liabilities for past sales, discourage clients from purchasing our solutions or otherwise harm our business and operating results. This risk may be greater with regard to solutions acquired through acquisitions because the acquired entities may not have had the same practices and procedures that we have in place.

We may also become subject to tax audits or similar procedures in jurisdictions where we already collect and remit sales taxes. A successful assertion that we have not collected and remitted taxes at the appropriate levels may also result in substantial tax liabilities for past sales. Liability for past taxes may also include very substantial interest and penalty charges. Our client contracts provide that our clients must pay all applicable sales and similar taxes. Nevertheless, clients may be reluctant to pay back taxes and may refuse responsibility for interest or penalties associated with those taxes. If we are required to collect and pay back taxes and the associated interest and penalties, and if our clients fail or refuse to reimburse us for all or a portion of these amounts, we will incur unplanned expenses that may be substantial. Moreover, imposition of such taxes on our solutions going forward will effectively increase the cost of such solutions to our clients and may adversely affect our ability to continue to sell those solutions to existing clients or to gain new clients in the areas in which such taxes are imposed.

Changes to applicable U.S. or foreign tax laws and regulations may have a material adverse effect on our business, financial condition and results of operations.

We are subject to federal and state income taxes in the United States and various foreign jurisdictions, and our domestic and international tax liabilities are subject to the allocation of expenses in differing jurisdictions. Our tax rate is affected by changes in the mix of earnings and losses in jurisdictions with differing statutory tax rates, including jurisdictions in which we have completed or may complete acquisitions and the valuation of deferred tax assets and liabilities, including our ability to utilize our net operating losses. Increases in our effective tax rate could harm our operating results.

The Tax Cuts and Jobs Act ("Tax Reform Act"), which was signed into law on December 22, 2017, contains significant changes to the U.S. federal income tax laws, including changes to the corporate tax rate, business-related deductions, and taxation of foreign earnings, among others, that are generally effective for taxable years beginning after December 31, 2017. Throughout calendar year 2018, the U.S. Treasury and certain states issued proposed and final legislation and clarifying guidance with respect to the various provisions of the Tax Reform Act. Additional legislation and guidance may still be issued in the future, which could have a material adverse impact on the value of our U.S. deferred tax assets, result in significant changes to currently computed income tax liabilities for past and current tax periods, and increase our future U.S. tax expense. The implementation by us of new practices and processes designed to comply with, and benefit from, the Tax Reform Act and its rules and regulations could require us to make substantial changes to our business practices, allocate additional resources, and increase our costs, which could negatively affect our business, results of operations and financial condition.

Our business is subject to the risks of international operations.

Compliance with complex foreign and U.S. laws and regulations that apply to our international operations increases our cost of doing business. These numerous and sometimes conflicting laws and regulations include internal control and disclosure rules, data privacy and filtering requirements, anti-corruption laws, such as the Foreign Corrupt Practices Act, and other local laws prohibiting corrupt payments to governmental officials, and antitrust and competition regulations, among others.

Violations of these laws and regulations could result in fines and penalties, criminal sanctions against us, our officers, or our employees, prohibitions on the conduct of our business and on our ability to carry on operations in one or more countries, and could also materially affect our brand, our international expansion efforts, our ability to attract and retain employees, our business and our operating results. Although we have implemented policies and procedures designed to ensure compliance with these laws and regulations, there can be no assurance that our employees, contractors, or agents will not violate our policies.

In addition, we are subject to a variety of risks inherent in doing business internationally, including:

- political, social, economic or environmental instability, terrorist attacks and security concerns in general;
- limitations of local infrastructure;
- fluctuations in currency exchange rates;
- higher levels of credit risk and payment fraud;
- reduced protection for intellectual property rights in some countries;
- difficulties in staffing and managing global operations and the increased travel, infrastructure and legal compliance costs associated with multiple international locations;
- compliance with statutory equity requirements and management of tax consequences; and
- outbreaks of highly contagious diseases.

If we are unable to manage the complexity of our international operations successfully, our financial results could be adversely affected.

We rely on our management team and need additional personnel to grow our business, and the loss of one or more key employees or our inability to attract and retain qualified personnel could harm our business.

Our success and future growth depend on the skills, working relationships and continued services of our management team. The loss of our Chief Executive Officer or other senior executives, or our inability to successfully integrate certain new members of our management, could adversely affect our business. Our future success also will depend on our ability to attract, retain and motivate highly skilled software developers, marketing and sales personnel, technical support and product development personnel in the United States and internationally. Our employees work for us on an at-will basis. Competition for these types of personnel is intense, particularly in the software industry. As a result, we may be unable to attract or retain qualified personnel. Our inability to attract and retain the necessary personnel could adversely affect our business.

If securities analysts do not continue to publish research or reports about our business or if they publish negative evaluations of our stock, the price of our stock could decline.

We expect that the trading price for our common stock may be affected by research or reports that industry or financial analysts publish about us or our business. If one or more of the analysts who cover us downgrade their evaluations of our stock, the price of our stock could decline. If one or more of these analysts cease coverage of our company, we could lose visibility in the market for our stock, which in turn could cause our stock price to decline.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

At December 31, 2020, we leased approximately 457,000 square feet of space for our corporate headquarters in Richardson, Texas under a lease agreement that expires in August 2028 (with two 5-year renewal options). We also lease office space in a variety of other areas. These locations include, among others, the following: Irvine, California; San Diego, California; Lombard, Illinois; Boston, Massachusetts; Hackensack, New Jersey; Greenville, South Carolina; Hyderabad, India; Cebu, Philippines; and Manila, Philippines. We also license data center space and employ the services of cloud service providers at multiple locations in the U.S. and internationally. We believe our current and planned office and data center facilities will be adequate for the foreseeable future.

Item 3. Legal Proceedings.

On February 23, 2015, we received from the FTC a Civil Investigative Demand consisting of interrogatories and a request to produce documents relating to our compliance with the Fair Credit Reporting Act ("FCRA"). We responded to the request and requests for additional information by the FTC. On November 2, 2017, the FTC staff informed us of its belief that there was a basis for claims that could include monetary and injunctive relief against us for failing to follow reasonable procedures to assure maximum possible accuracy of our tenant screening reports. We believe that our business practices did not, and do not, violate the FCRA or any other laws.

In October 2018, we reached a settlement with the FTC resolving all issues raised by the FTC related to this matter. Under the settlement, we paid \$3.0 million to the FTC and agreed to continue to comply with the FCRA. The settlement did not require any changes to our current business practices.

In connection with the Merger Agreement, we filed with the SEC the Proxy Statement on February 5, 2021. Following the filing of the Proxy Statement, four lawsuits relating to the Merger were filed: (i) *Asp v. RealPage, Inc., et al.*, Case No: 1:21-cv-00158-LPS, filed in the United States District Court for the District of Delaware on February 5, 2021, on behalf of an individual stockholder of the Company (the "Asp Action"); (ii) *Parshall v. RealPage, Inc., et al.*, Case No. 1:21-cv-00206-LPS, filed in the United States District Court for the District of Delaware on February 16, 2021 on behalf of an individual stockholder of the Company (the "Parshall Action"); (iii) *Anderson v. RealPage, Inc., et al.*, Case No: 1:21-cv-00212-LPS, filed in the United States District Court for the District of Delaware on February 16, 2021 on behalf of an individual stockholder of the Company (the "Anderson Action"); and (iv) *Waterman v. RealPage, Inc. et al*, Case No. 1:21-cv-00230-LPS, filed in the United States District Court for the District of Delaware on February 18, 2021 on behalf of an individual stockholder of the Company (the "Waterman Action" and together with the Asp Action, the Parshall Action, and the Anderson Action, the "Actions"). In addition, the Company received a demand letter relating to the Merger on February 8, 2021 from counsel representing an individual stockholder of the Company (the "Demand Letter" and together with the Actions, the "Matters"). The Matters each allege that the defendants named therein violated Sections 14(a) and 20(a) of the Securities Exchange Act of 1934, as amended, because the Proxy Statement allegedly omits or misstates certain material information. The Actions each seek, among other things, injunctive relief preventing the consummation of the Merger, rescission of the Merger if it is consummated, damages and attorneys' fees. We believe that the claims asserted in the Matters are without merit.

We are subject to legal proceedings and claims arising in the ordinary course of business. We are involved in litigation and other legal proceedings and claims, including purported class action lawsuits, that have not been fully resolved. At this time, we believe that any reasonably possible adverse outcome of such matters would not be material either individually or in the aggregate. Our view of these matters may change in the future as litigation and events related thereto unfold. See the risk factors "***Assertions by a third party that we infringe its intellectual property, whether successful or not, could subject us to costly and time-consuming litigation or expensive licenses,***" "***The rental housing industry, electronic commerce and many of the products and services that we offer, including background screening services, utility billing, affordable housing compliance and audit services, insurance and payments are subject to extensive and evolving governmental regulation. Changes in regulations or our failure to comply with regulations could harm our operating results,***" and "***Legal proceedings against us could be costly and time consuming to defend***" in Part I, Item 1A of this Form 10-K under the heading "Risk Factors."

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

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

Market Information and Holders

Our common stock is traded on the NASDAQ Global Select Market under the symbol “RP.” As of February 16, 2021, there were approximately 310 holders of record of our common stock. Restricted shares granted under our stock-based expense plans which have not yet vested are considered to be held by one holder. Because many of our shares of common stock are held by brokers and other institutions on behalf of stockholders, the number of record holders of our shares is not indicative of the total number of stockholders.

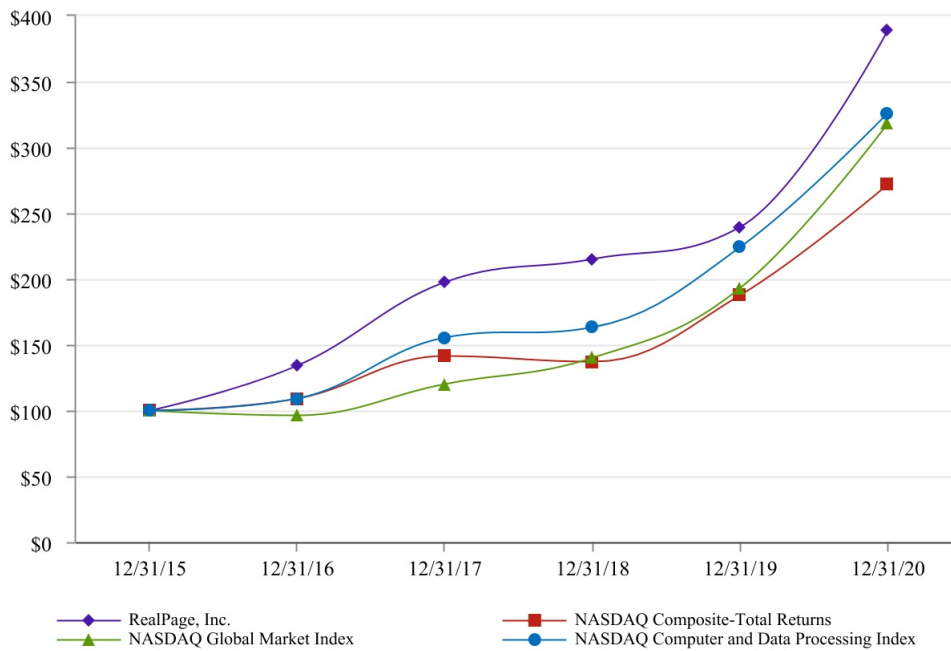
Dividend Policy

We have neither declared nor paid any cash dividends on our common stock in recent fiscal years. We do not expect to pay cash dividends on our common stock for the foreseeable future. Instead, we anticipate that all of our earnings will be used for the operation and growth of the business. Any future determination to declare cash dividends would be subject to the discretion of our board of directors and would depend upon various factors, including our results of operations; financial condition and liquidity requirements; restrictions that may be imposed by applicable law and our contracts; and other factors deemed relevant by our board of directors.

Performance Graph

The following graph compares the relative performance of our common stock, the NASDAQ Global Market Index, NASDAQ Composite, and the NASDAQ Computer and Data Processing Index. This graph covers the annual periods ending December 31, 2015 through December 31, 2020. In each case, this graph assumes a \$100 investment on the last trading day of the fiscal year ended December 31, 2015 (and reinvestment of all dividends, if any), in each of our common stock, the NASDAQ Global Market Index, NASDAQ Composite, and the NASDAQ Computer and Data Processing Index.

**Comparison of 5 Year Cumulative Total Return
Assumes Initial Investment of \$100
December 31, 2020**



	December 31, 2015	December 31, 2016	December 31, 2017	December 31, 2018	December 31, 2019	December 31, 2020
RealPage, Inc.	\$ 100.00	\$ 133.63	\$ 197.33	\$ 214.66	\$ 239.43	\$ 388.61
NASDAQ Composite—Total Returns	\$ 100.00	\$ 108.87	\$ 141.14	\$ 137.13	\$ 187.45	\$ 271.64
NASDAQ Global Market Index	\$ 100.00	\$ 96.14	\$ 119.97	\$ 139.78	\$ 192.71	\$ 317.75
NASDAQ Computer and Data Processing Index	\$ 100.00	\$ 108.83	\$ 154.96	\$ 163.40	\$ 223.96	\$ 325.94

Issuer Purchases of Equity Securities

In October 2018, our board of directors approved a share repurchase program authorizing the repurchase of up to \$100.0 million of our outstanding common stock. The share repurchase program expired on October 25, 2019. In November 2019, our board of directors approved a new share repurchase program authorizing the repurchase of up to \$100.0 million of our outstanding common stock through November 7, 2020. In October 2020, our board of directors approved a one year extension of this program authorizing the repurchase of up to \$100.0 million of our outstanding common stock through November 7, 2021. No shares of our common stock were repurchased under our share repurchase program during the year ended December 31, 2020 by RealPage, Inc. or any “affiliated purchaser” of RealPage, Inc. as defined in Rule 10b-18(a)(3) under the Exchange Act.

Item 6. Selected Financial Data.

Not applicable. We have applied the amendment to Regulation S-K Item 301 which became effective on February 10, 2021.

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

The following discussion and analysis of our financial condition and results of operations should be read together with our audited Consolidated Financial Statements and accompanying notes included elsewhere in this filing. This discussion contains forward-looking statements based on current expectations and related to our plans, estimates, beliefs, and anticipated future financial performance. These statements involve risks and uncertainties, and our actual results may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those set forth under "Risk Factors," "Special Note Regarding Forward-Looking Statements," and elsewhere in this filing.

Overview

We are a leading global provider of software and data analytics to the real estate industry. Clients use our platform of solutions to improve operating performance and increase capital returns. By leveraging data as well as integrating and streamlining a wide range of complex processes and interactions among the rental real estate ecosystem, our platform helps our clients improve financial and operational performance and prudently place and harvest capital.

The substantial majority of our revenue is derived from sales of our on demand software solutions, representing 97.2%, 96.5%, and 95.9% of our total revenue during 2020, 2019, and 2018, respectively. We also derive revenue from our professional and other services, and a small percentage of our revenue is derived from sales of our on premise software solutions. Our on demand software solutions are sold pursuant to subscription license agreements, and our on premise software solutions are sold pursuant to term or perpetual licenses and associated maintenance agreements. For our insurance-based solutions, we earn revenue based on a commission rate that considers earned premiums, agent commission, incurred losses, and profit retained by our underwriting partner. Our transaction-based solutions are priced based on a fixed rate per transaction. We sell our solutions through our direct sales organization and derive substantially all of our revenue from sales in the United States. Our revenue has increased from \$988.1 million in 2019 to \$1,158.5 million in 2020. The increase in revenue was driven by growth in the sales of our on demand software solutions and incremental revenue from our recent acquisitions.

We believe there is increasing demand for solutions that bring efficiency and precision to the rental real estate industry, which has historically lacked the tools available to many other investment classes. While the use of, and transition to, data analytics and on demand software solutions in the rental real estate industry is growing rapidly, we believe it remains at a relatively early stage of adoption. Additionally, there is a modest level of penetration of our on demand software solutions in our existing client base. These factors present us with significant opportunities to generate revenue through sales of additional data analytics and on demand software solutions.

Our company was formed in 1998 to acquire Rent Roll, Inc., which marketed and sold on premise property management systems for the conventional and affordable multifamily rental housing markets. In June 2001, we released OneSite, our first on demand property management system. Since 2002, we have expanded our platform of solutions to include property management, leasing and marketing, resident services, and asset optimization capabilities. In addition to the multifamily markets, we now serve the single family, senior living, student living, military housing, commercial, hospitality, homeowner association, short-term rental and vacation rental markets. Since July 2002, we have completed over 50 acquisitions of complementary technologies to supplement our internal product development and sales and marketing efforts and expand the scope of our solutions, the types of rental housing and vacation rental properties served by our solutions, and our client base. In connection with this expansion and these acquisitions, we have committed greater resources to developing and increasing sales of our platform of data analytics and on demand solutions. As of December 31, 2020, we had approximately 7,600 employees.

COVID-19 Pandemic

During the year ended December 31, 2020, we responded to the challenges that the evolving COVID-19 ("COVID-19") pandemic created for us and our customers. We transitioned a large percentage of our workforce to a work-from-home environment while continuing to support our customers as they used our software services to sustain their operations while reducing in-person interactions with their customers. Portions of our business, including our electronic payment processing services, experienced accelerated growth as a result of the pandemic. Certain of our other services experienced lower transactional volumes at the onset of COVID-19, before beginning a return to more normalized levels in the second half of the year.

Recent Developments

Thoma Bravo Acquisition

On December 21, 2020, we entered into the Merger Agreement to be acquired by Thoma Bravo, a leading private equity investment firm focused on the software and technology-enabled services sector, in an all-cash transaction that values RealPage at approximately \$10.2 billion, including net debt. Subject to the terms, conditions and certain exceptions set forth in the Merger Agreement, RealPage stockholders will receive \$88.75 per share in cash, less any applicable withholding taxes, upon

completion of the Merger. The Merger is expected to be completed in the second calendar quarter of 2021.

Because the Merger is not yet complete, and except as otherwise specifically stated, the descriptions and disclosures presented elsewhere in this Annual Report on Form 10-K, including those that present forward-looking information as that term is defined elsewhere herein assume the continuation of RealPage, Inc. as a public company. If the Merger is consummated, our actions and results may be different than those anticipated by such forward-looking statements contained in this Annual Report on Form 10-K, and such differences may be material.

2021 Winter Storm

We offer risk mitigation services to our clients by acting as an insurance agent whereby we derive commission revenue from the sale of insurance products to our clients' residents. These agent commissions are based upon a percentage of the premium that the insurance companies charge the policyholders.

We also receive contingent commissions from the insurance companies that are based on the profitability of the policies over a defined time period. We record contingent commissions based on estimates that consider historical and projected claims loss rates.

In mid-February 2021, a major winter storm affected large portions of the United States including several states that do not normally experience such severe weather. Policy holders in the impacted areas suffered property damage and related expenses caused by the severe weather and by accompanying power and water outages that occurred during and following the storms. As a result, we expect that a substantially higher than normal volume of insurance claims will be filed in the impacted areas.

As insurance claims continue to develop, we are assessing the impact of these claims on our consolidated financial statements. Based on preliminary information, we believe our contingent commission revenue for 2021 could be adversely impacted by as much as \$5 million to \$15 million.

Acquisition Activity

WhiteSky

On December 31, 2020, we entered into a Purchase Agreement by which we acquired all the outstanding equity interests of WhiteSky Communications, LLC ("WhiteSky"), a provider of managed communications services, enabling multifamily, student and other properties to provide managed bulk Internet, video, voice-over-internet protocol (VOIP) phone, and Wi-Fi services. Aggregate purchase consideration was \$64.9 million, including deferred cash obligations of up to \$6.5 million, which are subject to working capital adjustments and indemnification claims. The acquisition was financed with cash on hand.

Chirp

On September 21, 2020, we entered into an Agreement and Plan of Merger by which we acquired all the outstanding stock of Chirp Systems, Inc. ("Chirp"), a provider of smart access software and technology solutions to the multifamily housing industry. Aggregate purchase consideration was \$16.8 million, including contingent consideration of up to \$10.0 million that is tied to operational performance targets through 2022, and deferred cash obligations of up to \$1.3 million, which are subject to working capital adjustments and indemnification claims. The acquisition was financed with cash on hand. The parent company of one of the significant selling shareholders of Chirp is a customer of RealPage. In addition, a member of the board of directors of that customer is also a member of our board of directors.

Stratis

On August 31, 2020, we entered into an Agreement and Plan of Merger by which we acquired all the outstanding stock of Stratis IoT, Inc. ("Stratis"), a provider of software, technology and services that enable smart apartments and intelligent buildings, including a software-as-a-service ("SaaS") platform specifically built for the complexities of the multifamily and student housing industries. Aggregate purchase consideration was \$64.8 million, including deferred cash obligations of up to \$6.0 million, subject to working capital adjustments and indemnification claims. The acquisition was financed with cash on hand.

Modern Message

On January 22, 2020, we entered into an Agreement and Plan of Merger by which we acquired all the outstanding stock of Modern Message Inc. ("Modern Message"), a provider of resident engagement solutions to the multifamily housing industry. Aggregate purchase consideration was \$64.7 million, including deferred cash obligations of up to \$2.0 million, which are subject to working capital adjustments and indemnification claims. The acquisition was financed with cash on hand.

Refer to Note 3 of the accompanying Consolidated Financial Statements for further discussion of these acquisitions.

Key Business Metrics

In addition to traditional financial measures, we monitor our operating performance using a number of financially and non-financially derived metrics that are not included in our consolidated financial statements. We monitor the key performance indicators reflected in the following table:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands, except dollar per unit data)		
Revenue:			
Total revenue	\$ 1,158,484	\$ 988,136	\$ 869,480
On demand revenue	\$ 1,125,838	\$ 953,576	\$ 833,709
On demand revenue as a percentage of total revenue	97.2 %	96.5 %	95.9 %
Non-GAAP total revenue	\$ 1,159,986	\$ 989,004	\$ 871,370
Non-GAAP on demand revenue	\$ 1,127,340	\$ 954,444	\$ 835,599
Adjusted EBITDA	\$ 322,476	\$ 281,685	\$ 231,176
Ending on demand units	19,709	18,475	16,219
Average on demand units	19,070	16,758	14,847
On demand annual client value	\$ 1,161,648	\$ 1,039,588	\$ 876,637
On demand revenue per ending on demand unit	\$ 58.94	\$ 56.27	\$ 54.05

On demand revenue. This metric represents the GAAP revenue derived from license and subscription fees relating to our on demand software solutions, typically licensed over one year terms; commission income from sales of renter's insurance policies; and transaction fees for certain of our on demand software solutions. We consider on demand revenue to be a key business metric because we believe the market for our on demand software solutions represents the largest growth opportunity for our business.

On demand revenue as a percentage of total revenue. This metric represents on demand revenue for the period presented divided by total revenue for the same period. We use on demand revenue as a percentage of total revenue to measure our success executing our strategy to increase the penetration of our on demand software solutions and expand our recurring revenue streams attributable to these solutions. We expect our on demand revenue to remain a significant percentage of our total revenue although the actual percentage may vary from period to period due to a number of factors, including the timing of acquisitions, professional and other revenues, and on premise perpetual license sales and maintenance fees.

Non-GAAP total revenue. This metric is calculated by adding acquisition-related deferred revenue to total revenue. We believe it is useful to include deferred revenue written down for GAAP purposes under purchase accounting rules in order to appropriately measure the underlying performance of our business operations in the period of activity and associated expense. Further, we believe this measure is useful to investors as a way to evaluate our ongoing performance because it provides a more accurate depiction of revenue arising from our strategic acquisitions.

The following provides a reconciliation of GAAP to non-GAAP total revenue:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Total revenue	\$ 1,158,484	\$ 988,136	\$ 869,480
Acquisition-related deferred revenue	1,502	868	1,890
Non-GAAP total revenue	\$ 1,159,986	\$ 989,004	\$ 871,370

Non-GAAP on demand revenue. This metric reflects total on demand revenue plus acquisition-related deferred revenue, as described above. We believe inclusion of these items provides a useful measure of the underlying performance of our on demand business operations in the period of activity and associated expense. Further, we believe that investors and financial analysts find this measure to be useful in evaluating our ongoing performance because it provides a more accurate depiction of on demand revenue arising from our strategic acquisitions.

The following provides a reconciliation of GAAP to non-GAAP on demand revenue:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
On demand revenue	\$ 1,125,838	\$ 953,576	\$ 833,709
Acquisition-related deferred revenue	1,502	868	1,890
Non-GAAP on demand revenue	<u>\$ 1,127,340</u>	<u>\$ 954,444</u>	<u>\$ 835,599</u>

Adjusted EBITDA: We define Adjusted EBITDA as net income, plus (1) acquisition-related deferred revenue, (2) depreciation, asset impairment, and loss on disposal of assets, (3) amortization of product technologies and intangible assets, (4) change in fair value of equity investment, (5) loss due to cyber incident, net of recoveries, (6) acquisition-related expense, (7) organizational realignment costs, (8) regulatory and legal matters, (9) stock-based expense, (10) interest expense, net, and (11) income tax expense (benefit). We believe that investors and financial analysts find this non-GAAP financial measure to be useful in analyzing our financial and operational performance, comparing this performance to our peers and competitors, and understanding our ability to generate income from ongoing business operations.

The following provides a reconciliation of net income to Adjusted EBITDA:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Net income	\$ 46,314	\$ 58,208	\$ 34,725
Acquisition-related deferred revenue	1,502	868	1,890
Depreciation, asset impairment, and loss on disposal of assets	36,817	36,724	35,211
Amortization of product technologies and intangible assets	103,002	80,764	71,708
Change in fair value of equity investment	—	(2,600)	—
Loss due to cyber incident, net of recoveries	—	—	4,952
Acquisition-related expense	9,728	4,754	2,437
Organizational realignment	2,431	1,533	—
Regulatory and legal matters	5,969	1,465	78
Stock-based expense	59,274	62,563	50,641
Interest expense, net	52,446	35,056	29,959
Income tax expense (benefit)	4,993	2,350	(425)
Adjusted EBITDA	<u>\$ 322,476</u>	<u>\$ 281,685</u>	<u>\$ 231,176</u>

Ending on demand units: This metric represents the number of units managed by our clients with one or more of our on demand software solutions at the end of the period. We use ending on demand units to measure the success of our strategy of increasing the number of units managed with our on demand software solutions. Property unit counts are provided to us by our clients as new sales orders are processed. Property unit counts may be adjusted periodically as information related to our clients' properties is updated or supplemented, which could result in adjustments to the number of units previously reported.

Average on demand units: We calculate average on demand units as the average of the beginning and ending on demand units for each quarter in the period presented. This metric is a measure of our success increasing the number of on demand software solutions utilized by our clients to manage their property units, our overall revenue, and profitability.

On demand annual client value ("ACV") ACV represents our estimate of the annual value of our on demand revenue contracts at a point in time. We monitor this metric to measure our success in increasing the number of on demand units, and the amount of software solutions utilized by our clients to manage their property units.

On demand revenue per ending on demand unit ("RPU") We define RPU as ACV divided by ending on demand units. We monitor this metric to measure our success in increasing the penetration of on demand software solutions utilized by our clients to manage their property units.

Non-GAAP Financial Measures

We report our financial results in accordance with GAAP; however, we believe that, in order to properly understand our short-term and long-term financial, operational, and strategic trends, it may be helpful for investors to exclude certain non-cash or non-recurring items when used as a supplement to financial performance measures in accordance with GAAP. These items result from facts and circumstances that vary in both frequency and impact on continuing operations. We also use results of operations excluding such items to evaluate our operating performance compared against prior periods, make operating decisions, determine executive compensation, and serve as a basis for long-term strategic planning. These non-GAAP financial measures provide us with additional means to understand and evaluate the operating results and trends in our ongoing business by eliminating certain non-cash expenses and other items that we believe might otherwise make comparisons of our ongoing business with prior periods more difficult, obscure trends in ongoing operations, reduce our ability to make useful forecasts, or obscure the ability to evaluate the effectiveness of certain business strategies and management incentive structures. In addition, we also believe that investors and financial analysts find this information helpful in analyzing our financial and operational performance and comparing this performance to our peers and competitors. These non-GAAP financial measures are used in conjunction with traditional GAAP financial measures as part of our overall assessment of our performance.

We do not place undue reliance on non-GAAP financial measures as measures of operating performance. Non-GAAP financial measures should not be considered substitutes for other measures of financial performance or liquidity reported in accordance with GAAP. There are limitations to using non-GAAP financial measures, including that other companies may calculate these measures differently than we do; that they do not reflect changes in, or cash requirements for, our working capital; and that they do not reflect our capital expenditures or future requirements for capital expenditures. We compensate for the inherent limitations associated with using non-GAAP financial measures through disclosure of these limitations, presentation of our financial statements in accordance with GAAP, and reconciliation of non-GAAP financial measures to the most directly comparable GAAP financial measures.

We exclude or adjust each of the items identified below from the applicable non-GAAP financial measure referenced above for the reasons set forth with respect to each excluded item:

Acquisition-related deferred revenue: This item is included to reflect deferred revenue written down for GAAP purposes under purchase accounting in order to appropriately measure the underlying performance of our business operations in the period of activity and associated expense.

Asset impairment and loss on disposal of assets: This item comprises losses on the disposal and impairment of long-lived assets, and impairment of intangible assets, which are not reflective of our ongoing operations. We believe exclusion of this item facilitates a more accurate comparison of our results of operations between periods.

Depreciation of long-lived assets: Long-lived assets are depreciated over their estimated useful lives in a manner reflecting the pattern in which the economic benefit is consumed. Management is limited in its ability to change or influence these charges after the asset has been acquired and placed in service. We do not believe that depreciation expense accurately reflects the performance of our ongoing operations for the period in which the charges are incurred, and it is therefore not considered by management in making operating decisions.

Amortization of product technologies and intangible assets: Intangible assets are amortized over their estimated useful lives and generally cannot be changed or influenced by management after initial capitalization. Accordingly, this item is not considered by us in making operating decisions. We do not believe such charges accurately reflect the performance of our ongoing operations for the period in which such charges are incurred.

Change in fair value of equity investment: This item represents changes in fair value of our equity investment based on observable price changes in orderly transactions for an identical or similar investment of the same issuer. We believe exclusion of this item facilitates a more accurate comparison of our results of operations between periods as this item is not reflective of our ongoing operations.

Loss due to cyber incident, net of recoveries: This item relates to losses, net of recoveries, arising from the May 2018 incident in which we were the subject of a targeted email phishing campaign. We believe this loss is not reflective of our ongoing operations and that exclusion of this item facilitates a more accurate comparison of our results of operations between periods.

Acquisition-related expense: This item consists of direct costs incurred in our business acquisition transactions and expenses related to integration activities, costs associated with our pending acquisition by Thoma Bravo, and the impact of changes in the fair value of acquisition-related contingent consideration obligations. Examples of these direct costs include transaction fees, due diligence costs, acquisition retention bonuses and severance, and third-party consultants to assist with integration. We believe exclusion of this item facilitates a more accurate comparison of the results of our ongoing operations across periods and eliminates volatility related to changes in the fair value of acquisition-related contingent consideration obligations.

Organizational realignment: This item consists of direct costs associated with the alignment of our business strategies. In connection with these actions, we recognize costs related to termination benefits, exit costs associated with closure of facilities, certain asset impairments, cancellation of certain contracts, and other professional and consulting fees associated with these initiatives. We believe exclusion of this item facilitates a more accurate comparison of our ongoing results of operations between periods.

Regulatory and legal matters: This item is comprised of certain regulatory and similar costs and certain legal settlement costs, such as costs related to the company's Hart-Scott-Rodino Antitrust Improvements Act review process incurred in connection with our acquisitions or the settlement of certain legal matters. These costs are excluded as they are irregular in timing and scope, and may not be indicative of our past and future performance. We believe exclusion of this item facilitates a more accurate comparison of the company's results of operations between periods.

Stock-based expense: This item is excluded because it is a non-cash expenditure that we do not consider part of ongoing operating results when assessing the performance of our business, and also because the total amount of the expenditure is partially outside of management's control because it is based on factors such as stock price, volatility, and interest rates, which may be unrelated to our performance during the period in which the expenses are incurred.

Key Components of Our Results of Operations

Revenue

We derive our revenue from two primary sources: our on demand software solutions and our professional and other services.

On demand revenue: Revenue from our on demand software solutions is comprised of license and subscription fees relating to our on demand software solutions, typically licensed for one year terms; commission income from sales of renter's insurance policies; and transaction fees for certain on demand software solutions, such as payment processing, spend management, and billing services. For our insurance based solutions, our agreements provide for a fixed commission on earned premiums related to the policies sold by us. The agreements also provide for a contingent commission to be paid to us in accordance with the agreements. Our transaction-based solutions are priced based on a fixed rate per transaction.

Professional and other revenue: Revenue from professional and other services consists of consulting and implementation services; training; and other ancillary services. We complement our solutions with professional and other services for our clients willing to invest in enhancing the value or decreasing the implementation time of our solutions. Our professional and other services are typically priced as time and materials engagements. Professional and other revenue also includes revenues generated from sub-meter installation services under our resident utility management solutions, and our on premise solutions.

Cost of Revenue

Cost of revenue consists primarily of personnel costs related to our operations; support services; training and implementation services; expenses related to the operation of our data centers; transaction processing fees; and fees paid to third-party service providers. Personnel costs include salaries, bonuses, stock-based expense, and employee benefits. Cost of revenue also includes an allocation of facilities costs, overhead costs, and depreciation, which are allocated based on headcount.

Amortization of Product Technologies

Amortization of product technologies includes amortization of developed product technologies related to strategic acquisitions and amortization of capitalized development costs.

Operating Expenses

We classify our operating expenses into four primary categories: product development, sales and marketing, general and administrative, and amortization of intangible assets. Our operating expenses primarily consist of personnel costs, costs for third-party contracted development, marketing, legal, accounting and consulting services, and other professional service fees. Personnel costs for each category of operating expenses include salaries, bonuses, stock-based expense, and employee benefits for employees in that category. Our operating expenses also include an allocation of facilities costs, overhead costs, and depreciation based on headcount for the product development, sales and marketing, and general and administrative categories.

Product development: Product development expense consists primarily of personnel costs for our product development employees and executives, information technology and facilities, and fees to contract development vendors. Our product development efforts are focused primarily on increasing the functionality and enhancing the ease of use of our platform of solutions and expanding our suite of data analytics and on demand software solutions. In addition to our locations in the United States, we maintain product development and service centers in Hyderabad, India; Manila, Philippines; Medellin, Colombia; and Cebu City, Philippines.

Sales and marketing: Sales and marketing expense consists primarily of personnel costs for our sales, marketing, and business development employees and executives, information technology, travel and entertainment, and marketing programs. Marketing programs consist of amounts paid for product marketing, renter's insurance, other advertising, trade shows, user conferences, public relations, and industry sponsorships and affiliations.

General and administrative: General and administrative expense consists of personnel costs for our executives, finance and accounting, human resources, management information systems, and legal personnel. In addition, general and administrative expense includes fees for professional services, including legal, accounting, and other consulting services; information technology and facilities costs; and acquisition-related costs, including direct costs incurred to complete our acquisitions and changes in the fair value of our acquisition-related contingent consideration obligations.

Amortization of intangible assets: Amortization of intangible assets consist of amortization of purchased intangible assets, including client relationships, key vendor and supplier relationships, finite-lived trade names, and non-compete agreements, obtained in connection with our acquisitions.

Interest Expense and Other, Net

Interest expense and other, net, consists primarily of interest expense, interest income, gains and losses from changes in fair value of our equity investment based on observable price changes for identical or similar investments, and impairments on investments. Interest income represents earnings from our cash and cash equivalents. Interest expense is associated with amounts borrowed under the Amended Credit Facility, Convertible Notes, finance lease obligations, and certain acquisition-related liabilities, and includes expense from the amortization of related discounts and debt issuance costs. We participate in interest rate swap agreements, the purpose of which is to eliminate variability in interest rate payments on a portion of the Term Loans. For that portion, the swap agreements replace the Term Loan's variable rate with a fixed rate.

Critical Accounting Policies and Estimates

Our Consolidated Financial Statements are prepared in accordance with GAAP. In many cases, the accounting treatment of a particular transaction is specifically dictated by GAAP and does not require management's judgment in its application, while in other cases, management's significant judgment is required to make estimates, assumptions, and judgments that affect the reported amount of assets, liabilities, revenue, expenses, and related disclosures. We base our estimates and assumptions on historical experience and other factors that we believe to be reasonable under the circumstances. In some instances, we could reasonably use different accounting estimates, and in other instances, results could differ significantly from our estimates. We evaluate our estimates and assumptions on an ongoing basis. To the extent that there are differences between our estimates and actual results, our future financial statement presentation, financial condition, results of operations, and cash flows will be affected.

While our significant accounting policies are more fully described in Note 2 "Summary of Significant Accounting Policies" to our Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K, we believe that the following accounting policies are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving our management's judgments, assumptions and estimates.

Revenue Recognition

Revenues are derived from on demand software solutions, professional services and other goods and services. We recognize revenue as we satisfy one or more service obligations under the terms of a contract, generally as control of goods and services are transferred to our clients. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. We include estimated variable consideration in revenue to the extent that it is probable that a significant reversal of cumulative revenue will not occur. We estimate and accrue a reserve for credit accommodations and other adjustments as a reduction to revenue based on several factors, including past history.

On Demand Revenue

Our on demand revenue consists of license and subscription fees, transaction and payment processing fees related to certain of our software-enabled value-added services, and commissions derived from our selling certain risk mitigation services.

We generally recognize revenue from subscription fees on a straight-line basis over the access period beginning on the date that we make our service available to the client. Our subscription agreements generally are non-cancellable, have an initial term of one year or longer and are billed either monthly, quarterly or annually in advance. Non-refundable up-front fees billed at the initial order date that are not associated with an up-front service obligation are recognized as revenue on a straight-line basis over the period in which the client is expected to benefit, which we consider to be three years.

We recognize revenue from transaction fees in the month the related services are performed based on the amount we have the right to invoice.

We offer risk mitigation services to our clients by acting as an insurance agent and derive commission revenue from the sale of insurance products to our clients' residents. The commissions are based upon a percentage of the premium that the insurance company charges to the policyholder and are subject to forfeiture in instances where a policyholder cancels prior to the end of the policy. Our contracts with our underwriting partners provide for contingent commissions to be paid to us in accordance with the agreements. Our estimate of contingent commission revenue considers the variable factors identified in the terms of the applicable agreement. We recognize commissions related to these services as earned ratably over the policy term and insurance commission receivable in "Accounts receivable, less allowances" in the accompanying Consolidated Balance Sheets.

Professional and Other Revenue

Professional services and other revenues generally consist of the fees we receive for providing implementation and consulting services, submeter and other equipment and ongoing maintenance of our existing on premise licenses.

Professional services are billed either on a time and materials basis or on a fixed price basis, and revenue is recognized over time as we perform the obligation or at completion. Professional services are typically sold in a combined contract with other on demand solutions but may be sold separately. Professional service contracts sold separately generally have terms of one year or less.

Other revenues consist primarily of submeter equipment sales that include related installation services. Such sales are considered bundled, and revenue from these bundled sales is recognized in proportion to the number of installed units completed to date as compared to the total contracted number of units to be provided and installed. For all other equipment sales, we generally recognize revenue when control of the hardware has transferred to our client.

Revenue recognized for on premise software sales generally consists of annual maintenance renewals on existing term or perpetual licenses, which is recognized ratably over the service period.

Contracts with Multiple Performance Obligations

The majority of the contracts we enter into with clients, including multiple contracts entered into at or near the same time with the same client, require us to provide one or more on demand software solutions, professional services and may include equipment. For these contracts, we account for individual performance obligations separately: i) if they are distinct or ii) if the promised obligations represent a series of distinct services that are substantially the same and have the same pattern of transfer to the client. Once we determine the performance obligations, we determine the transaction price, which includes estimating the amount of variable consideration, if any, to be included in the transaction price. For contracts with multiple performance obligations, we allocate the transaction price to the separate performance obligations on a relative standalone selling price basis. The standalone selling prices of our service are estimated using a market assessment approach based on our overall pricing objectives taking into consideration market conditions and other factors including the number of solutions sold, client demographics and the number and types of users within our contracts.

Sales, value add, and other taxes we collect from clients and remit to governmental authorities are excluded from revenues.

Deferred Commissions

We capitalize certain commissions as incremental costs of obtaining a contract with a client if we expect to recover those costs. The commissions are capitalized and amortized over a period of benefit determined to be three years. Deferred commissions were capitalized for open contracts upon adoption of ASC 606 and were capitalized for new contracts beginning in 2018. As a result, there was a net benefit to "Operating income" in our Consolidated Statements of Operations during 2018 as capitalization of costs exceeded amortization. This accretive benefit was reduced in 2019 and normalized in 2020.

As of December 31, 2020, the current and noncurrent balance of capitalized commissions costs recorded in the lines "Other current assets" and "Other assets" in the accompanying Consolidated Balance Sheets was \$11.6 million and \$10.3 million, respectively. As of December 31, 2019, the current and noncurrent balance of capitalized commissions costs was \$9.9 million and \$8.5 million, respectively. During the years ended December 31, 2020, 2019, and 2018, we amortized commission costs totaling \$12.0 million, \$8.7 million, and \$5.4 million, respectively, which are included in "Sales and marketing" expense in the accompanying Consolidated Statements of Operations.

Stock-Based Expense

We recognize compensation expense related to awards of stock options and restricted stock granted to employees, non-employee directors, and other service providers based on the estimated fair value of the awards on the date of grant. We recognize expense for stock options and time-based restricted stock awards on a straight-line basis over the requisite service period of the awards. For market-based awards and performance-based awards, expense is recognized over the requisite service period using the graded-vesting attribution method. Compensation expense is reduced for forfeitures as they occur.

The fair value of our time-based restricted stock awards is based on the closing price of our common stock on the date of grant. The fair value of our market-based restricted stock awards is estimated using a discrete model based on multiple stock price-paths developed through the use of Monte Carlo simulation. Changes to the assumptions underlying our valuation model may have a significant impact on the underlying value of the market-based restricted stock awards, which could have a material impact on our Consolidated Financial Statements. The fair value of our performance-based awards is based on obligations denominated in fixed dollar amounts and our expectation of future operating results and the specific performance criteria within each agreement. For awards subject to performance criteria, we reassess the likelihood of the performance criteria being met at each reporting date based on our expectation of future operating results and adjust the total compensation expense to be recognized.

Income Taxes

Income taxes are recorded based on the liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in our consolidated financial statements or tax returns. Deferred tax assets and liabilities are measured using the tax rates that are expected to apply to taxable income for the years in which those tax assets and liabilities are expected to be realized or settled. We recognize the effect of tax rate changes on current and accumulated deferred income taxes in the period in which the rate changes are enacted.

Valuation allowances are provided when it is more likely than not that all or a portion of the deferred tax asset will not be realized. The factors used to assess the need for a valuation allowance include historical earnings, our latest forecast of taxable income, and available tax planning strategies that could be implemented to realize the net deferred tax assets. In projecting future taxable income, we begin with historical results and incorporate assumptions including the amount of future state, federal and foreign pretax operating income, the reversal of temporary differences, and the implementation of feasible and prudent tax planning strategies, if any. These assumptions require significant judgment about the forecasts of future taxable income and are consistent with the plans and estimates we are using to manage the underlying businesses.

We may recognize a tax benefit from uncertain tax positions only if it is at least more likely than not that the tax position will be sustained upon examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon settlement with the taxing authorities.

Business Combinations

We allocate the fair value of the purchase consideration of our acquisitions to the tangible assets acquired, liabilities assumed, and intangible assets acquired generally based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. Purchase consideration includes assets transferred, liabilities assumed, and/or equity interests issued by us, all of which are measured at their fair value as of the date of acquisition. Our business combination transactions may be structured to include a combination of up-front, deferred and contingent payments to be made at specified dates subsequent to the date of acquisition. These payments may include a combination of cash and equity and are generally settled within one to four years from the date of acquisition. Deferred and contingent payments determined to be purchase consideration are recorded at fair value as of the acquisition date. Deferred obligations are generally subject to adjustments specified in the underlying purchase agreement related to the seller's indemnification obligations, including indemnification assets that contractually can be recorded as a reduction to outstanding deferred obligations. Our contingent consideration arrangements are obligations to make future payments to sellers contingent upon the achievement of future operational or financial targets and are remeasured to fair value at the end of each reporting period until the obligations are settled.

The valuation of the net assets acquired as well as certain elements of purchase consideration requires management to make significant estimates and assumptions, especially with respect to future expected cash flows, useful lives, and discount rates. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain, and, as a result, actual results may differ from estimates. During the measurement period, we may record adjustments to the assets acquired and liabilities assumed with a corresponding offset to goodwill. Subsequent changes to the fair value of contingent consideration are reflected in "General and administrative" in the accompanying Consolidated Statements of Operations.

Acquisition costs are expensed as incurred and are included in "General and administrative" in the accompanying Consolidated Statements of Operations. We include the results of operations from acquired businesses in our consolidated financial statements from the effective date of the acquisition.

Goodwill and Indefinite-Lived Intangible Assets

We test goodwill and indefinite-lived intangible assets for impairment separately on an annual basis in the fourth quarter of each year, or more frequently if circumstances indicate that the assets may not be recoverable. For purposes of goodwill impairment testing, we have one reporting unit.

We evaluate impairment of goodwill either by assessing qualitative factors to determine whether it is more likely than not that the fair value of our reporting unit is less than its carrying amount, or by performing a quantitative assessment. Qualitative factors include industry and market considerations, overall financial performance, and other relevant events and circumstances affecting the reporting unit. If we choose to perform a qualitative assessment and after considering the totality of events or circumstances, we determine it is more likely than not that the fair value of our reporting unit is less than its carrying amount, we would perform a quantitative fair value test. Our quantitative impairment assessment utilizes a weighted combination of a discounted cash flow model (known as the income approach) and comparisons to publicly traded companies engaged in similar businesses (known as the market approach). These approaches involve judgmental assumptions, including forecasted future cash flows expected to be generated by the business over an extended period of time, long-term growth rates, the identification of comparable companies, and our discount rate based on our weighted average cost of capital. These assumptions are predominately unobservable inputs and considered Level 3 measurements. We adopted ASU 2017-04, *Intangibles - Goodwill and Other*, which simplifies the testing for goodwill impairment by eliminating the requirement to determine the fair value of individual assets and liabilities of a reporting unit to measure goodwill impairment, prospectively on January 1, 2020. To calculate any potential impairment when we perform a quantitative test, we compare the fair value of our reporting unit with its carrying amount, including goodwill. Any excess of the carrying amount of the reporting unit's goodwill over its fair value is recognized as an impairment loss, and the carrying value of goodwill is written down.

We quantitatively evaluate indefinite-lived intangible assets for impairment by estimating the fair value of those assets based on estimated future earnings derived from the assets using the income approach. Key assumptions for this assessment include forecasted future cash flows from estimated royalty rates and our discount rate based on our weighted average cost of capital. These assumptions are unobservable Level 3 measurements. Assets with indefinite lives that have been determined to be inseparable due to their interchangeable use are grouped into single units of accounting for purposes of testing for impairment. If the carrying amount of an identified intangible asset with an indefinite life exceeds its fair value, we recognize an impairment loss equal to the excess of carrying value over fair value.

Internally Developed Software

Costs incurred to develop software intended for our internal use are capitalized during the application development stage. Capitalization of such costs ceases once the project is substantially complete and ready for its intended use. We also capitalize costs related to specific upgrades and enhancements when it is probable the expenditure will result in additional functionality. Costs related to preliminary project activities and post-implementation operating activities are expensed as incurred.

Internally developed software costs are included in "Property, equipment, and software, net" in the accompanying Consolidated Balance Sheets. Amortization of internally developed software is included in "Amortization of product technologies" in the accompanying Consolidated Statements of Operations.

Convertible Notes

We account for our Convertible Notes as separate liability and equity components. The initial carrying amounts of the liability components are calculated by measuring the fair value of a similar liability that does not have an associated convertible feature. We estimate fair value using a discounted cash flow model that relies upon subjective assumptions including expected volatility and discount rates determined using observable yields for stand-alone debt instruments with comparable credit ratings and terms. The carrying amounts of the equity components representing the conversion options are determined by deducting the fair value of the liability components from the par value of the Convertible Notes. The difference represents a debt discount that is amortized to interest expense over the terms of the Convertible Notes using the effective interest method. The equity components are not remeasured as long as they continue to meet the conditions for equity classification.

Issuance costs related to our Convertible Notes are allocated to the liability and equity components based on their relative values. Costs allocated to the liability components are amortized to interest expense over the terms of the Convertible Notes using the effective interest method. Costs allocated to the equity components, and any impact of deferred taxes arising from the discount to the par value of the Convertible Notes, reduce the carrying amount of the equity component.

To the extent we receive conversion requests for our Convertible Notes prior to maturity, the settlement consideration is allocated to the liability component of the respective Convertible Note equal to the fair value of the component immediately prior to the extinguishment, with any residual consideration recorded as a reduction to the equity component. Any difference between the amount allocated to the liability component and its net carrying amount is recorded as a gain or loss on debt extinguishment.

Recent Accounting Pronouncements

Accounting Standards Update 2016-13

In June 2016, the Financial Accounting Standards Board ("FASB") issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The amendments in this ASU replaced the incurred loss impairment methodology in GAAP with a methodology that reflects expected credit losses and requires

consideration of a broader range of reasonable and supportable information to inform credit loss estimates. Our financial assets in the scope of ASU 2016-13 mainly consist of short-term trade receivables. We have also considered contract assets in our evaluation. Historically, our actual credit losses have not been material. In addition to continuing to individually assess overdue customer balances for expected credit losses, we have implemented modifications to our historical methodology that reflect the expected credit losses on receivables considering both historical experience and forward-looking assumptions. We adopted ASU 2016-13 using the modified retrospective approach on January 1, 2020, resulting in no cumulative adjustment to retained earnings. The adoption of this ASU did not have a material impact on our Consolidated Financial Statements. We will continue to actively monitor the impact of the COVID-19 pandemic on expected credit losses.

See Note 2 “Summary of Significant Accounting Policies” to our Consolidated Financial Statements for additional discussion about new accounting pronouncements adopted and those pending.

Results of Operations

The following tables set forth our results of operations for the specified periods. The following generally discusses 2020 and 2019 items and year-to-year comparisons between 2020 and 2019. The discussion of historical items and year-to-year comparisons between 2019 and 2018 can be found in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed with the SEC on March 2, 2020, and incorporated by reference herein. The period-to-period comparison of financial results is not necessarily indicative of future results.

Consolidated Statements of Operations Data

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Revenue:			
On demand	\$ 1,125,838	\$ 953,576	\$ 833,709
Professional and other	32,646	34,560	35,771
Total revenue	1,158,484	988,136	869,480
Cost of revenue ⁽¹⁾	442,965	385,712	328,382
Amortization of product technologies	58,313	40,461	35,797
Gross profit	657,206	561,963	505,301
Operating expenses:			
Product development ⁽¹⁾	133,661	112,222	118,525
Sales and marketing ⁽¹⁾	218,481	193,962	166,607
General and administrative ⁽¹⁾	157,608	123,056	118,208
Amortization of intangible assets	44,689	40,303	35,911
Total operating expenses	554,439	469,543	439,251
Operating income	102,767	92,420	66,050
Interest expense and other, net	(51,460)	(31,862)	(31,750)
Income before income taxes	51,307	60,558	34,300
Income tax expense (benefit)	4,993	2,350	(425)
Net income	\$ 46,314	\$ 58,208	\$ 34,725

⁽¹⁾ Includes stock-based expense as follows:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Cost of revenue	\$ 7,937	\$ 5,604	\$ 4,403
Product development	\$ 9,216	\$ 8,159	\$ 9,923
Sales and marketing	\$ 20,908	\$ 23,978	\$ 16,573
General and administrative	\$ 21,213	\$ 24,822	\$ 19,742

The following table sets forth our results of operations for the specified periods as a percentage of our revenue for those periods (percentages in the table may not foot due to rounding). The period-to-period comparison of financial results is not necessarily indicative of future results.

	Year Ended December 31,		
	2020	2019	2018
	(as a percentage of total revenue)		
Revenue:			
On demand	97.2 %	96.5 %	95.9 %
Professional and other	2.8	3.5	4.1
Total revenue	100.0	100.0	100.0
Cost of revenue	38.2	39.0	37.8
Amortization of product technologies	5.0	4.1	4.1
Gross profit	56.7	56.9	58.1
Operating expenses:			
Product development	11.5	11.4	13.6
Sales and marketing	18.9	19.6	19.2
General and administrative	13.6	12.5	13.6
Amortization of intangible assets	3.9	4.1	4.1
Total operating expenses	47.9	47.5	50.5
Operating income	8.9	9.4	7.6
Interest expense and other, net	(4.4)	(3.2)	(3.7)
Income before income taxes	4.5	6.1	3.9
Income tax expense (benefit)	0.4	0.2	0.0
Net income	4.0 %	5.9 %	4.0 %

Comparison of the years ended December 31, 2020 and 2019

Revenue

	Year Ended December 31,			
	2020	2019	Change	% Change
	(in thousands, except dollar per average on demand unit data)			
Revenue:				
On demand	\$ 1,125,838	\$ 953,576	\$ 172,262	18.1 %
Professional and other	32,646	34,560	(1,914)	(5.5)
Total revenue	<u>\$ 1,158,484</u>	<u>\$ 988,136</u>	<u>\$ 170,348</u>	17.2
Non-GAAP on demand revenue	\$ 1,127,340	\$ 954,444	\$ 172,896	18.1
Ending on demand units	19,709	18,475	1,234	6.7
Average on demand units	19,070	16,758	2,312	13.8
On demand annual client value	\$ 1,161,648	\$ 1,039,588	\$ 122,060	11.7
On demand revenue per ending on demand unit	\$ 58.94	\$ 56.27	\$ 2.67	4.7 %

Our on demand products and services facilitate our customers' abilities to operate cost-effectively and to respond to certain of the challenges presented by the COVID-19 pandemic. Many of our products facilitate leasing-related and other transactional services with current or potential residents without person-to-person contact, benefiting both residents and our customers who are operating with significantly reduced numbers of on-site employees. Certain of our revenue streams experienced challenges at the onset of COVID-19, including our leasing and marketing solutions due to lower transactional volumes, and our vacation rental business due to concerns about safety of travel, before beginning a return to more normalized levels in the second half of the year.

On demand revenue: During the year ended December 31, 2020, on demand revenue increased \$172.3 million, or 18.1%, as compared to the same period in 2019. This increase was attributable to growth across our platform, primarily in resident services and property management. This includes organic growth and acquired revenue from our 2019 and 2020 acquisitions.

On demand revenue generated by our property management solutions increased \$43.9 million, or 21.3%. This increase was primarily attributable to incremental revenues from our 2019 acquisitions and organic growth within certain of the property management solutions.

On demand revenue from our resident services solutions continued to experience significant growth, increasing by \$99.7 million, or 23.7%. Resident services increased primarily from continued growth in our payments solutions, incremental revenues from our 2019 acquisitions of Buildium, Simple Bills and Lease Term Solutions, and organic growth in our renter's insurance solutions. Our payments business benefited from increased transactional volumes as residents and our clients moved towards payment mechanisms that allow for reduced personal contact.

On demand revenue from our leasing and marketing solutions increased \$11.1 million, or 6.2%. During 2020, we recognized incremental revenues from our recent acquisitions of \$18.3 million that were partially offset by a reduction in leasing velocity associated with COVID-19.

On demand revenue from our asset optimization solutions increased \$17.6 million, or 12.0%. This increase was largely attributable to incremental revenue from our 2019 acquisition of IMS and organic growth across our revenue management and business intelligence solutions.

On demand unit metrics: As of December 31, 2020, one or more of our on demand solutions was utilized in the management of approximately 19.7 million rental property units, representing a year-over-year net increase of 1.2 million units, or 6.7%. This growth is primarily attributable to our 2020 acquisitions, which accounted for approximately 3.3% of total ending on demand units, as well as organic unit growth. On demand revenue per ending on demand unit increased 4.7% year-over-year, driven by expansion and adoption of our products, offset by the impact of acquired units. On demand units managed by our clients renewed at an average rate of 96.6% over a trailing twelve-month period ended December 31, 2020.

Cost of Revenue

	Year Ended December 31,			
	2020	2019	Change	% Change
	(in thousands)			
Cost of revenue	\$ 419,260	\$ 364,443	\$ 54,817	15.0 %
Stock-based expense	7,937	5,604	2,333	41.6
Depreciation expense	15,768	15,665	103	0.7
Total cost of revenue	<u>\$ 442,965</u>	<u>\$ 385,712</u>	<u>\$ 57,253</u>	14.8 %

Cost of revenue, excluding stock-based expense and depreciation expense, increased \$54.8 million, or 15.0%. Direct costs increased \$35.3 million, driven by higher transaction volume from our payment processing solutions and incremental costs from our recent acquisitions. Personnel expense increased \$21.8 million, primarily attributable to incremental headcount from our recent acquisitions and investments to accelerate implementations of our product offerings. These increases were partially offset by a decline in travel expenses due to travel restrictions we implemented in response to the COVID-19 pandemic.

Amortization of Product Technologies

	Year Ended December 31,			
	2020	2019	Change	% Change
	(in thousands)			
Amortization of product technologies	\$ 58,313	\$ 40,461	\$ 17,852	44.1 %

Amortization of product technologies increased \$17.9 million, or 44.1%. Higher amortization expense was driven by the addition of developed product technologies in connection with our recent acquisitions and an increase in amortization of developed software related to investment in innovation and product solutions.

Gross margin as a percentage of total revenue declined from 56.9% to 56.7%. This margin compression was primarily due to the impact of higher amortization of product technologies from our acquisitions.

Operating Expenses

Product development

	Year Ended December 31,			
	2020	2019	Change	% Change
	(in thousands)			
Product development expense	\$ 117,800	\$ 97,713	\$ 20,087	20.6 %
Stock-based expense	9,216	8,159	1,057	13.0
Depreciation expense	6,645	6,350	295	4.6
Total product development expense	<u>\$ 133,661</u>	<u>\$ 112,222</u>	<u>\$ 21,439</u>	19.1 %

Product development expense, excluding stock-based expense and depreciation expense, increased \$20.1 million, or 20.6%. Personnel expense, net of capitalized software development costs, increased \$21.2 million. This increase was primarily attributable to incremental personnel costs from our recent acquisitions and increased product investment, partially offset by our efficiency initiatives implemented in 2019 to centralize our product development team and direct a greater portion of work effort towards major new development projects.

Product development expense as a percentage of total revenue increased from 11.4% to 11.5%, primarily due to increased personnel costs.

Sales and marketing

	Year Ended December 31,			
	2020	2019	Change	% Change
	(in thousands)			
Sales and marketing expense	\$ 190,414	\$ 163,767	\$ 26,647	16.3 %
Stock-based expense	20,908	23,978	(3,070)	(12.8)
Depreciation expense	7,159	6,217	942	15.2
Total sales and marketing expense	<u>\$ 218,481</u>	<u>\$ 193,962</u>	<u>\$ 24,519</u>	12.6 %

Sales and marketing expense, excluding stock-based expense and depreciation expense, increased \$26.6 million, or 16.3%. Personnel expense increased \$22.7 million, driven by incremental headcount from our recent acquisitions and our continued investments in our sales force and product marketing teams. These investments also resulted in an increase in information technology and facility related expenses of \$4.0 million. Marketing and travel expenses decreased \$4.9 million, driven by travel restrictions implemented by management during 2020 in response to the COVID-19 pandemic and partially offset by increased digital advertising.

Sales and marketing expense as a percentage of total revenue decreased from 19.6% to 18.9%. This decline was a result of the reductions in travel and marketing expenses discussed above, coupled with reduced stock compensation expense related to the reversal of market-based restricted stock award expense associated with forfeitures.

General and administrative

	Year Ended December 31,			
	2020	2019	Change	% Change
	(in thousands)			
General and administrative expense	\$ 130,190	\$ 92,278	\$ 37,912	41.1 %
Stock-based expense	21,213	24,822	(3,609)	(14.5)
Depreciation expense	6,205	5,956	249	4.2
Total general and administrative expense	<u>\$ 157,608</u>	<u>\$ 123,056</u>	<u>\$ 34,552</u>	28.1 %

General and administrative expense, excluding stock-based expense and depreciation expense, increased \$37.9 million, or 41.1%. Personnel expense increased \$20.3 million due to incremental headcount from our recent acquisitions and investments to support our continued growth. Legal and professional expenses increased \$14.5 million driven by expenses incurred with our recent acquisitions and integration activities, increases in our accruals for legal contingencies, and costs incurred in connection with the Merger Agreement and related activities, as defined in Item 1 of this Annual Report on Form 10-K. IT and facility related expenses increased \$3.8 million due primarily to incremental costs from our recent acquisitions. Favorable fair value adjustments to acquisition-related liabilities of \$6.7 million partially offset these increases.

General and administrative expense as a percentage of total revenue increased from 12.5% to 13.6%, primarily due to the incremental acquisition and legal expenses discussed above.

Amortization of intangible assets

	Year Ended December 31,			
	2020	2019	Change	% Change
	(in thousands)			
Amortization of intangible assets	\$ 44,689	\$ 40,303	\$ 4,386	10.9 %

Amortization of intangible assets increased \$4.4 million, or 10.9%, primarily from incremental amortization expense from the addition of finite-lived client relationship and trade name assets in connection with our recent acquisitions.

Stock-based expense

	Year Ended December 31,			
	2020	2019	Change	% Change
	(in thousands)			
Stock-based expense	\$ 59,274	\$ 62,563	\$ (3,289)	(5.3) %

Stock-based expense declined \$3.3 million, or 5.3%. Forfeitures of certain market-based restricted stock awards resulted in the reversal of \$4.2 million of expense during the period. These reversals, coupled with normal forfeiture activity during the year, more than offset incremental awards in connection with our 2019 and 2020 acquisitions. Stock-based expense as a percent of total revenue declined from 6.3% to 5.1% due to the activity discussed above.

Depreciation expense

	Year Ended December 31,			
	2020	2019	Change	% Change
	(in thousands)			
Depreciation expense	\$ 35,777	\$ 34,188	\$ 1,589	4.6 %

Depreciation expense increased a nominal \$1.6 million, or 4.6%. The change in depreciation expense as a percentage of total revenue was not material.

Interest Expense and Other, Net

	Year Ended December 31,			
	2020	2019	Change	% Change
	(in thousands)			
Interest expense	\$ (52,655)	\$ (37,129)	\$ (15,526)	41.8 %
Interest income	208	2,073	(1,865)	(90.0)
Change in fair value of equity investment	—	2,600	(2,600)	(100.0)
Other income	987	594	393	66.2
Total interest expense and other, net	\$ (51,460)	\$ (31,862)	\$ (19,598)	61.5 %

Interest expense and other, net increased \$19.6 million, or 61.5%. Interest expense increased \$15.5 million primarily due to increased borrowings under our Amended Credit Facility and our convertible debt offering that was completed in May 2020. Our 2019 results also benefited from a \$2.6 million increase in the fair value of our equity investment following an observable price change during 2019.

Provision for Income Taxes

Our effective tax rate was 9.7% and 3.9% for the years ended December 31, 2020 and 2019, respectively. For the year ended December 31, 2020, we recognized consolidated tax expense of \$5.0 million on income before income taxes of \$51.3 million. Our effective tax rate was lower than the statutory rate of 21% in 2020 and 2019 primarily due to higher benefits realized for excess stock compensation deductions and benefits from research and development credits.

For further discussion, including a reconciliation of our effective tax rate from the statutory federal rate, see Note 13 to the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

Liquidity and Capital Resources

Our primary sources of liquidity as of December 31, 2020, consisted of \$594.7 million of unrestricted cash and cash equivalents, \$600.0 million available under our Revolving Facility, amounts available under the Amended Credit Facility's Accordion Feature, and \$14.4 million of working capital (excluding \$594.7 million of unrestricted cash and cash equivalents, \$318.3 million of convertible notes, and \$144.0 million of deferred revenue).

Our principal uses of liquidity have been to fund our working capital requirements, capital expenditures and acquisitions, to service our debt obligations, and to repurchase shares of our common stock. We expect that working capital requirements, capital expenditures, acquisitions, and debt service will continue to be our principal needs for liquidity for at least the next year. We made capital expenditures of \$63.6 million, approximately 5% of total revenues, during the year ended December 31, 2020. We expect capital expenditures to remain at 5% of total revenues during the next few years. In addition, we have made several acquisitions in which a portion of the cash purchase consideration is payable at various times through 2022. Our gross deferred cash obligations, excluding potential reductions related to the sellers' indemnification obligations, total approximately \$30.1 million, of which approximately \$24.6 million is payable during 2021. In addition, we have contingent consideration obligations of up to \$35.3 million with a fair value of \$4.3 million as of December 31, 2020. We expect to fund these obligations from cash provided by operating activities, our existing unrestricted cash and cash equivalents, or funds available under our Amended Credit Facility.

In May 2018, we filed a shelf registration statement on Form S-3 with the SEC, which became effective upon filing. The shelf registration allows us to periodically offer and sell, in one or more future offerings, an indeterminate amount of our common stock, preferred stock, debt securities, and other securities specified therein. In May 2020, we consummated an underwritten public offering of 5.85 million shares of our common stock. The offering was priced at \$59.00 per share for total gross proceeds of \$345.0 million. The aggregate net proceeds to us were \$334.1 million, after deducting underwriting discounts and offering expenses in the aggregate amount of \$10.9 million. Net proceeds from this offering were used to repay \$230.0 million of indebtedness outstanding under our revolving facility and will be used for other general corporate purposes in the future.

In May 2020, we also issued convertible senior notes with an aggregate principal amount of \$345.0 million which will mature on May 15, 2025 (the "2025 Convertible Notes"). The 2025 Convertible Notes were issued pursuant to an Indenture dated May 22, 2020, by and between us and U.S. Bank National Association, as Trustee. We received net proceeds from the offering of approximately \$337.5 million after adjusting for debt issuance costs, including the underwriting discount.

In February 2020, we entered into an interest rate swap agreement (the "2020 Swap Agreement") to effectively convert the LIBOR-based variable interest obligation on a \$100.0 million notional portion of our variable rate debt into a fixed rate obligation at a rate of 1.89% from February 2020 to September 2024. In connection with this transaction, we terminated our previous cash flow hedge relationships, which had a blended fixed rate of 2.57%, and designated the 2020 Swap Agreement under a new cash flow hedge relationship. The fair value of the terminated swap agreement immediately prior to termination and of the 2020 Swap Agreement at inception was a liability of \$2.5 million. Due to the COVID-19 pandemic's impact on macroeconomic trends and the resulting significant declines in LIBOR rates, the fair value of this interest rate cash flow hedge at December 31, 2020 was a liability of \$6.0 million. The changes in fair value of this derivative instrument are initially recorded in accumulated other comprehensive income (loss) and are subsequently reclassified into earnings in the period that the hedged forecasted transaction affects earnings. As of December 31, 2020, we estimate that \$2.5 million of the total net loss related to our swap agreement recorded in accumulated other comprehensive loss will be reclassified into earnings within the next twelve months. Because the 2020 Swap Agreement contained an other-than-insignificant financing element at its inception, the associated cash flows are reported as a financing activity in our Consolidated Statements of Cash Flows.

For the year ended December 31, 2020, we spent \$2.9 million on computer equipment and other capital items to facilitate our shift to an almost entirely work-from-home environment. During the same period we also incurred incremental operating costs totaling approximately \$2.4 million in our response to COVID-19, including costs to support our work-from-home strategy, costs for temporary staffing, additional facilities expenses, and other expenses incurred to help ensure our ability to deliver uninterrupted services to our clients even in the event of a temporary decline in the availability of our internal labor force. We expect to continue to incur some of these costs in the future until the pandemic abates, but we currently do not expect these additional costs to be material. As allowed by the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"), we have deferred payment of \$14.4 million of employment taxes as of December 31, 2020. Under the terms of the CARES Act, we will be required to pay these deferred amounts in two installments with half of the amount to be paid by the end of 2021 and half by the end of 2022. The current and non-current portions of these deferred amounts are included in "Accrued expenses and other current liabilities" and "Other long-term liabilities", respectively, in the accompanying Consolidated Balance Sheets. We made no significant changes to customer payment terms or contracts during the period, nor did we identify significant changes in customer payment behavior as a result of the COVID-19 pandemic. Nevertheless, our future operating results and related cash flows could be adversely effected if the COVID-19 pandemic continues to negatively affect the general economy in ways that cause our customers to be unable to meet their payment obligations to us in a timely

manner, or to slow purchase or implementation decisions, or if a reduction in overall leasing velocity as a result of the pandemic leads to a significant reduction in our transactional revenues.

We believe that our existing unrestricted cash and cash equivalents, working capital (excluding unrestricted cash and cash equivalents, convertible notes, and deferred revenue), and our cash flows from operations will be sufficient to fund our working capital requirements and planned capital expenditures, and to service our debt obligations for at least the next twelve months. Our future working capital requirements will depend on many factors, including our rate of revenue growth, the timing and size of future acquisitions, the expansion of our sales and marketing activities, the timing and extent of spending to support product development efforts, the timing of introductions of new solutions and enhancements to existing solutions, and the continuing market acceptance of our solutions. We expect to enter into acquisitions of complementary businesses, applications, or technologies in the future that could require us to seek additional equity or debt financing. Additional funds may not be available on terms favorable to us, or at all.

As of December 31, 2020, our federal and state net operating loss ("NOL") carryforwards are \$246.9 million and \$88.6 million, respectively. Our federal and state NOL carryforwards may be available to offset potential payments of future income tax liabilities. If unused, the federal NOLs will begin to expire in 2026, and the state NOLs will begin to expire in 2021. Total state NOLs expiring in the next five years is approximately \$1.5 million.

The following table sets forth cash flow data for the periods indicated therein:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Net cash provided by operating activities	\$ 276,503	\$ 316,973	\$ 244,807
Net cash used in investing activities	\$ (252,176)	\$ (719,094)	\$ (331,296)
Net cash provided by financing activities	\$ 357,277	\$ 460,011	\$ 304,085

Changes in Cash and Cash Equivalents during the year ended December 31, 2020:

Net Cash Provided by Operating Activities

During 2020, net cash provided by operating activities consisted of net income of \$46.3 million, net non-cash adjustments to net income of \$231.0 million, and a net cash outflow from changes in assets and liabilities of \$0.8 million. Non-cash adjustments to net income primarily consisted of depreciation and amortization expense of \$138.8 million, stock-based expense of \$59.3 million, amortization of debt discount and issuance costs of \$20.8 million, and amortization of our right-of-use assets of \$13.6 million.

Changes in working capital during 2020 included cash outflows for customer deposits of \$19.4 million, primarily attributable to the timing of cash settlements for previously initiated resident transactions related to our payments solutions. Accounts payable declined \$1.3 million due to the timing of vendor invoice receipt and payments, and net declines in other current and long-term liabilities of \$1.1 million were a result of lease payments and changes in acquisition related liabilities, offset partially by increases in other long-term liabilities for the long-term portion of deferred employment taxes in connection with the CARES Act and unrealized losses related to our derivative instruments. These items were offset by a \$16.5 million increase in accrued compensation related expenses due to payroll related accruals, including for the current portion of deferred employment taxes in connection with the CARES Act. Net cash inflows from accounts receivable of \$3.4 million, and an increase in deferred revenue of \$1.8 million, were reflective of our growth.

Net Cash Used in Investing Activities

In 2020, we used \$252.2 million for our investing activities, which included \$188.6 million, net of cash and restricted cash acquired, for our strategic acquisitions and \$63.6 million for capital expenditures during the period. Capital expenditures during the period primarily included capitalized software development costs and expenditures to support our information technology infrastructure.

Net Cash Provided by Financing Activities

The net cash provided by our financing activities during 2020 primarily consisted of net proceeds of \$334.1 million from our May 2020 public offering of 5.85 million shares of our common stock and net proceeds of \$337.5 million from our simultaneous offering of \$345.0 million of convertible notes, partially offset by \$39.4 million paid for capped call instruments related to the convertible notes. We used \$230.0 million of the offering proceeds to retire all amounts then outstanding under our revolving credit facility. We also made principal payments on our Term Loans, payments of acquisition-related consideration, and payments of finance lease obligations of \$18.8 million, \$17.3 million and \$3.3 million, respectively, and other net payments of \$5.5 million primarily related to our stock-based compensation plans.

Changes in Cash and Cash Equivalents during the year ended December 31, 2019:

Net Cash Provided by Operating Activities

During 2019, net cash provided by operating activities consisted of net income of \$58.2 million, net non-cash adjustments to net income of \$205.9 million, and a net inflow of cash from changes in assets and liabilities of \$52.9 million. Non-cash adjustments to net income primarily consisted of depreciation and amortization expense of \$115.0 million, stock-based expense of \$62.6 million, amortization of debt discount and issuance costs of \$13.7 million, and amortization of our right-of-use assets of \$11.4 million.

Changes in working capital during 2019 included net cash inflows from customer deposits of \$82.6 million, which was primarily attributable to the timing of cash settlements for previously initiated resident transactions related to our payments solutions. Net cash inflows also included changes in accounts payable of \$9.3 million due to the timing of vendor invoice receipts and payments, and changes in deferred revenue of \$7.7 million. These items were partially offset by net cash outflows for accounts receivable of \$14.7 million, which is reflective of our revenue growth; outflows for prepaid expenses and other current assets of \$13.8 million, primarily attributable to the \$11.7 million of deferred compensation paid into escrow in connection with our acquisition of Buildium; and outflows for other current and long-term liabilities of \$12.0 million, primarily attributable to rental payments for our operating leases.

Net Cash Used in Investing Activities

In 2019, we used \$719.1 million for our investing activities, which primarily included \$665.8 million, net of cash and restricted cash acquired, for our strategic acquisitions; \$51.5 million for capital expenditures during the period; and \$1.8 million for our additional investment in CompStak. Capital expenditures during the period primarily included capitalized software development costs and expenditures to support our information technology infrastructure.

Net Cash Provided by Financing Activities

The net cash provided by our financing activities during 2019 primarily consisted of aggregate borrowings under our Amended Credit Facility of \$830.0 million. These borrowings were partially offset by payments on our term loans of \$308.7 million; payments of acquisition-related consideration of \$30.4 million; activity under our stock-based expense plans of \$15.0 million, primarily attributable to shares repurchased from employees to cover their cost of taxes upon vesting of restricted stock; and treasury stock purchases of \$8.5 million under our share repurchase program.

Contractual Obligations, Commitments, and Contingencies

The following table summarizes our contractual cash obligations as of December 31, 2020, including interest when applicable, for long-term debt and other obligations for the next five years and thereafter:

	Payments Due by Period				
	Total	Less Than 1 year	1-3 years	3-5 years	More Than 5 years
Convertible Notes ⁽¹⁾	\$ 723,633	\$ 10,350	\$ 360,520	\$ 352,763	\$ —
Term Loans ⁽²⁾	612,112	39,699	101,180	471,233	—
Operating and finance lease obligations	176,771	21,795	43,953	36,933	74,090
Acquisition-related liabilities ⁽³⁾	30,110	24,585	5,525	—	—
	<u>\$ 1,542,626</u>	<u>\$ 96,429</u>	<u>\$ 511,178</u>	<u>\$ 860,929</u>	<u>\$ 74,090</u>

(1) Represents the aggregate principal amount of \$690.0 million and anticipated coupon interest payments related to our Convertible Notes and excludes the unamortized discount and debt issuance costs reflected in our Consolidated Balance Sheets.

(2) Represents the contractually required principal payments for our Term Loan and Delayed Draw Term Loan. These amounts exclude unamortized debt issuance costs reflected in our Consolidated Balance Sheets. These amounts also include the anticipated interest obligations under our Amended Credit Facility, which were estimated using a LIBOR forward rate curve and include the related effects of our interest rate swap agreements.

(3) Represents obligations in connection with our acquisitions comprised of undiscounted amounts payable for our deferred cash obligations. These amounts exclude deferred stock obligations, contingent consideration of up to \$35.3 million with a fair value of \$4.3 million, and potential reductions related to the sellers' indemnification obligations.

Credit Facility

The Amended Credit Facility matures on September 5, 2024 (subject to early maturity provisions in certain circumstances, as described below), and includes the following:

Revolving Facility: The Amended Credit Facility provides \$600.0 million in aggregate commitments for secured revolving loans, with sublimits of \$10.0 million for the issuance of letters of credit and \$20.0 million for swingline loans ("Revolving Facility"). During the second quarter of 2020, we repaid the previous amount outstanding under the revolving facility.

Initial Term Loan: An initial term loan of \$300.0 million was borrowed on the closing date for the Amended Credit Facility (the "Term Loan"). The proceeds of the Term Loan were used to repay the term loan balances outstanding under the 2014 Credit Facility.

Delayed Draw Term Loan: In December 2019, we drew funds of \$300.0 million available under the delayed draw term loan ("Delayed Draw Term Loan").

Revolving loans under the Amended Credit Facility may be voluntarily prepaid and re-borrowed. Principal payments on the Term Loan and Delayed Draw Term Loan (collectively, the "Term Loans") are due in quarterly installments equal to an initial amount of \$3.8 million, which increased to \$7.5 million on December 31, 2020, increases to \$11.3 million beginning on December 31, 2022, and increases to \$15.0 million beginning on December 31, 2023. Once repaid or prepaid, the Term Loans may not be re-borrowed. All outstanding principal and accrued but unpaid interest is due, and the commitments for the Revolving Facility terminate, on the maturity date. The Term Loans are subject to mandatory repayment requirements in the event of certain asset sales or if certain insurance or condemnation events occur, subject to customary reinvestment provisions. We may prepay the Term Loans in whole or in part at any time without premium or penalty.

Accordion Feature: The Amended Credit Facility also allows us, subject to certain conditions, to request additional term loan commitments and/or additional revolving commitments in an aggregate principal amount of up to the greater of \$250.0 million or 100% of consolidated EBITDA (as defined within the Amended Credit Facility) for the most recent four fiscal quarters, plus an amount that would not cause our Senior Leverage Ratio (as defined in Note 9 to the Consolidated Financial Statements) to exceed 3.50 to 1.00.

All outstanding revolving loans and term loans under the Amended Credit Facility mature on September 5, 2024. If on or prior to August 16, 2022, we have failed to demonstrate to the Agent (as defined in Note 9 to the Consolidated Financial Statements) that we would be in compliance with each financial covenant after giving pro forma effect to the repayment in full of the 2022 Convertible Notes which mature on November 15, 2022, then the Amended Credit Facility will mature on August 16, 2022. In addition, if on any business day during the period beginning on August 16, 2022 until the 2022 Convertible Notes are paid in full, our available liquidity is less than an amount equal to 125% of the outstanding principal amount of the 2022 Convertible Notes, then amounts outstanding under the Amended Credit Facility are due the next business day.

Refer to Note 9 of the accompanying Consolidated Financial Statements for further discussion of the Amended Credit Facility, including its terms and conditions.

Convertible Notes

2025 Convertible Notes

In May 2020, we issued convertible senior notes with an aggregate principal amount of \$345.0 million which will mature on May 15, 2025 (the "2025 Convertible Notes"). The 2025 Convertible Notes were issued pursuant to an Indenture dated May 22, 2020, by and between us and U.S. Bank National Association, as Trustee. We received net proceeds from the offering of approximately \$337.5 million after adjusting for debt issuance costs, including the underwriting discount.

The 2025 Convertible Notes accrue interest at a rate of 1.50% per year until maturity, payable semi-annually in arrears on May 15 and November 15 of each year, beginning on November 15, 2020. On or after February 15, 2025 until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert at their option all or any portion of their 2025 Convertible Notes at the then applicable conversion rate. Prior to February 15, 2025, holders may convert their notes, and we may redeem the 2025 Convertible Notes, under certain circumstances specified in the Indenture. The 2025 Convertible Notes are convertible at an initial rate of 13.04 shares of our common stock per \$1,000 of principal amount of 2025 Convertible Notes (equivalent to an initial conversion price of approximately \$76.70 per share of our common stock). Upon conversion, we will pay or deliver, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election. Upon any conversion of the 2025 Convertible Notes, it is our current intent to settle the first \$1,000 of conversion value for each \$1,000 principal amount of the 2025 Convertible Notes through combination settlement, which involves repayment of the principal portion in cash and any excess of the conversion value over the principal amount in shares of our common stock.

In conjunction with the 2025 Convertible Notes offering, we purchased the Capped Calls initially covering approximately 4.5 million shares of our common stock at a cost of \$39.4 million. The Capped Calls are subject to anti-dilution provisions substantially similar to those of the 2025 Convertible Notes, have a strike price of approximately \$76.70 per share, are subject to a cap price of \$118 per share, are exercisable by us upon any conversion under the 2025 Convertible Notes, and expire on May 15, 2025. The Capped Calls are generally expected to reduce the potential dilution to our common stock (or, in the event

the conversion is settled in cash, to reduce our cash payment obligation) in the event that at the time of conversion our stock price exceeds the conversion price under the 2025 Convertible Notes.

2022 Convertible Notes

In May 2017, we issued convertible senior notes with an aggregate principal amount of \$345.0 million which will mature on November 15, 2022 (the "2022 Convertible Notes"). The 2022 Convertible Notes were issued pursuant to an indenture dated May 23, 2017, by and between us and Wells Fargo Bank, N.A., as Trustee. We received net proceeds from the offering of approximately \$304.2 million after adjusting for debt issuance costs, including the underwriting discount, the net cash used to purchase the Note Hedges and the proceeds from the issuance of the Warrants which are discussed below.

The 2022 Convertible Notes accrue interest at a rate of 1.50% per year until maturity, payable semi-annually in arrears on May 15 and November 15 of each year. On or after May 15, 2022 until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert at their option all or any portion of their 2022 Convertible Notes at the then applicable conversion rate. Prior to May 15, 2022, holders may convert their notes under certain circumstances specified in the indenture. The 2022 Convertible Notes are convertible at an initial rate of 23.84 shares of our common stock per \$1,000 of principal amount of 2022 Convertible Notes (equivalent to an initial conversion price of approximately \$41.95 per share of our common stock). Upon conversion, we will pay or deliver, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election. Upon any conversion of the 2022 Convertible Notes, it is our current intent to settle the first \$1,000 of conversion value for each \$1,000 principal amount of the 2022 Convertible Notes through combination settlement, which involves repayment of the principal portion in cash and any excess of the conversion value over the principal amount in shares of our common stock.

In conjunction with the 2022 Convertible Notes offering, we purchased Note Hedges and issued Warrants initially covering approximately 8.2 million shares of our common stock. We paid \$62.5 million to purchase the Note Hedges and received proceeds of \$31.5 million from the issuance of the Warrants. The Note Hedges have an exercise price of \$41.95 per share, consistent with the conversion price of the 2022 Convertible Notes, and expire in November 2022. The Note Hedges are generally expected to reduce the potential dilution to our common stock (or, in the event the conversion is settled in cash, to reduce our cash payment obligation) in the event that at the time of conversion our stock price exceeds the conversion price under the 2022 Convertible Notes. The Warrants have a strike price of \$57.58 per share and expire in ratable portions on a series of expiration dates commencing on February 15, 2023.

Refer to Note 9 of the accompanying Consolidated Financial Statements for further discussion of these transactions and their accounting implications.

Stock Repurchase Program

In October 2018, our board of directors approved a share repurchase program authorizing the repurchase of up to \$100.0 million of our outstanding common stock. The share repurchase program expired on October 25, 2019. In November 2019, our board of directors approved a new share repurchase program authorizing the repurchase of up to \$100.0 million of our outstanding common stock. In October 2020, our board of directors approved a one year extension of this program authorizing the repurchase of up to \$100.0 million of our outstanding common stock through November 7, 2021.

Shares repurchased under the stock repurchase program are retired. Repurchase activity during the years ended December 31, 2020, 2019 and 2018 was as follows:

	Year Ended December 31,		
	2020	2019	2018
Number of shares repurchased	—	158,971	599,664
Weighted-average cost per share	\$ —	\$ 53.41	\$ 46.83
Total cost of shares repurchased, in thousands	\$ —	\$ 8,491	\$ 28,082

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

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of fluctuations in interest rates and foreign currency exchange risks. We do not hold or issue financial instruments for trading purposes.

Interest Rate Risk

We had unrestricted cash and cash equivalents of \$594.7 million and \$197.2 million at December 31, 2020 and 2019, respectively. We hold cash and cash equivalents for working capital purposes. We do not have material exposure to market risk with respect to investments, as our investments consist primarily of highly liquid investments purchased with original maturities of three months or less.

We had \$577.5 million and \$596.3 million outstanding under our Term Loans at December 31, 2020 and 2019, respectively. We had \$230.0 million outstanding under our Revolving Facility at December 31, 2019. We did not have any outstanding borrowings under our Revolving Facility at December 31, 2020. At our option, amounts borrowed under the Amended Credit Facility accrue interest at a per annum rate equal to either LIBOR, plus a margin ranging from 1.00% to 2.00%, or the Base Rate, plus a margin ranging from 0.00% to 1.00% ("Applicable Margin"). The base LIBOR rate is, at our discretion, equal to either one, three, or six month LIBOR. The Base Rate is defined as the greater of Wells Fargo's prime rate, the Federal Funds Rate plus 0.50%, or one month LIBOR plus 1.00%. In each case, the Applicable Margin is determined based upon our consolidated net leverage ratio.

On December 24, 2018, we entered into two interest rate swap agreements (collectively the "2018 Swap Agreements"). The 2018 Swap Agreements covered an aggregate notional amount of \$100.0 million from December 2018 to February 2022 by replacing the obligation's variable rate with a blended fixed rate of 2.57%. We designated the 2018 Swap Agreements as cash flow hedges of interest rate risk.

On February 10, 2020, we entered into an interest rate swap agreement (the "2020 Swap Agreement") that covers an aggregate notional amount of \$100.0 million from February 2020 to September 2024 by replacing the obligation's variable rate with a blended rate of 1.89%. In connection with this transaction, we terminated the 2018 Swap Agreements cash flow hedge relationship on a prospective basis and designated the 2020 Swap Agreement under a new cash flow hedge relationship. The fair value of the 2018 Swap Agreements immediately prior to termination was a liability of \$2.5 million. Because the forecasted transactions that the 2018 Swap Agreements were designated to hedge are still probable to occur, the unrealized loss will be reclassified into earnings through September 2024. The 2020 Swap Agreement is designated as a cash flow hedge of interest rate risk.

If the applicable variable interest rates changed by 50 basis points, our interest expense for the year ended December 31, 2020, as reported in the accompanying Consolidated Statements of Operations, would have changed by approximately \$2.9 million.

Foreign Currency Exchange Risk

We have foreign currency risks related to certain of our foreign subsidiaries, primarily in the Philippines and in India. The functional currency of these foreign subsidiaries is the U.S. dollar. The local currencies of these foreign subsidiaries are the Philippine peso and India rupee. Operating expenses in these foreign subsidiaries are primarily denominated in the respective local currencies and are remeasured into our reporting currency at the average exchange rate in effect during the month. As of December 31, 2020, we entered into foreign currency exchange forward contracts with an aggregate notional amount of \$25.1 million to protect a portion of our forecasted U.S. dollar-equivalent operating expenses from adverse changes in foreign currency exchange rates. These hedging contracts reduce, but do not entirely eliminate, the impact of adverse foreign currency exchange rate movements. These contracts are designated as cash flow hedges for accounting purposes. For additional details, see Note 16 of the accompanying Consolidated Financial Statements.

We also enter into foreign currency forward contracts to hedge fluctuations associated with foreign currency denominated monetary assets and liabilities, primarily associated with our lease liabilities. These forward contracts are not designated for hedge accounting treatment. Accordingly, the change in fair value of these derivatives is recorded as a component of "General and administrative" in the accompanying Consolidated Statements of Operations and offsets the change in fair value of the foreign currency denominated assets and liabilities, which are also recorded in "General and administrative". As of December 31, 2020, the notional amounts of outstanding foreign currency contracts entered into under our balance sheet hedge program was \$2.0 million. The effect of derivatives not designated as hedge instruments for the period ending December 31, 2020 was de minimis.

Adverse changes in exchange rates of 10% would have resulted in an adverse impact on income before income taxes as reported in the accompanying Consolidated Statements of Operations of approximately \$1.0 million for the year ended December 31, 2020. These reasonably possible adverse changes in exchange rates of 10% were applied to total monetary assets and liabilities denominated in currencies other than the functional currencies of our subsidiaries at the balance sheet date to compute the impact these changes would have had on our income before income taxes in the near term.

Item 8. Financial Statements and Supplementary Data.

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Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of RealPage, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of RealPage, Inc. (the Company) as of December 31, 2020 and 2019, the related consolidated statements of operations, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2020, and the related notes and the financial statement schedule listed in the Index under Item 15(c) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 1, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

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

Capitalized internal-use software development costs

Description of the Matter

As more fully described in Note 2 to the consolidated financial statements, the Company capitalizes certain internal-use software development costs incurred during development stage activities, if direct and incremental, until the software is substantially complete and ready for its intended use. The Company capitalizes certain costs related to internal-use software upgrades and enhancements when it is probable the expenditures will result in significant additional functionality. As of December 31, 2020, the Company had capitalized internal-use software development costs of \$79 million, net of amortization.

Auditing the Company's capitalization of internal-use software development costs was an area of complexity because management's determination of which costs qualify for capitalization requires significant judgment, as only those costs incurred during development stage activities can be capitalized in accordance with the applicable accounting standards.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's internal-use software development costs process. This included testing controls over management's determination of which projects and costs qualify for capitalization in accordance with the applicable accounting standards.

Our audit procedures included, among others, inspecting underlying documentation to evaluate the nature of the costs incurred, the projects and phase of development to which the costs relate, and that the costs incurred in the development phase of software production are properly capitalized in accordance with the applicable accounting standards. We also inquired of project managers for significant projects to gather additional evidence for this evaluation.

Accounting for issuance of convertible notes

Description of the Matter

As more fully described in Note 9 to the consolidated financial statements, in May 2020, the Company issued convertible senior notes in an aggregate principal amount of \$345 million (the Convertible Notes). The Convertible Notes were classified as a liability and the conversion feature was bifurcated and classified in equity based on the respective estimated fair values of the liability and equity components. The Company concluded the fair value of the liability and equity components were \$288 million and \$57 million, respectively.

The Company applied a discounted cash flow model to determine the fair value of the debt instrument, absent the conversion feature. This model required discounting the contractual cash flows of the Convertible Notes at a risk-adjusted yield that incorporates assumptions of the time value of money corresponding to the remaining term of the Convertible Notes and the credit risk of the Company. The significant assumptions in the fair value determination included the Convertible Notes' effective yield and expected volatility. Auditing the Company's determination of fair value of the liability component of the Convertible Notes was complex due to significant estimation uncertainty in estimating the fair value of the debt instrument, absent the conversion feature.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over management's process for determining the fair value of the liability component, including management's review of the model and significant assumptions used in the fair value calculation.

Our audit procedures included utilizing a valuation specialist to assist in evaluating the fair value methodology and the significant valuation assumptions applied by the Company in estimating the fair value of the liability component. To test the Convertible Notes' effective yield and expected volatility, we evaluated completeness and accuracy of the underlying data supporting the significant assumptions and estimates, assessed whether management's assumptions were consistent with publicly available information and evaluated entity-specific adjustments made by the Company. Additionally, to test the effective yield, we performed a comparative calculation using market data and our internally developed models.

/s/ Ernst & Young LLP
We have served as the Company's auditor since 2004.
Dallas, Texas
March 1, 2021

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of RealPage, Inc.

Opinion on Internal Control Over Financial Reporting

We have audited RealPage, Inc.'s internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, RealPage, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on the COSO criteria.

As indicated in the accompanying "Management's Report on Internal Control over Financial Reporting," management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Modern Message Inc. (Modern Message), Stratis IoT, Inc. (Stratis), Chirp Systems, Inc. (Chirp), and WhiteSky Communications, LLC (WhiteSky), which are included in the 2020 consolidated financial statements of the Company.

Modern Message, Stratis, and WhiteSky each constituted approximately 2% of total assets and less than 1% of total revenues, as of and for the year ended December 31, 2020, respectively. Chirp constituted less than 1% of total assets and less than 1% of total revenues as of and for the year ended December 31, 2020. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Modern Message, Stratis, Chirp, and WhiteSky.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2020 and 2019, the related consolidated statements of operations, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2020, and the related notes and the financial statement schedule listed in the Index under Item 15(c) and our report dated March 1, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying "Management's Report on Internal Control Over Financial Reporting." Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

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

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young LLP
Dallas, Texas
March 1, 2021

RealPage, Inc.
Consolidated Balance Sheets
(in thousands, except per share and share amounts)

	December 31,	
	2020	2019
Assets		
Current assets:		
Cash and cash equivalents	\$ 594,734	\$ 197,154
Restricted cash	227,522	243,323
Accounts receivable, less allowances of \$ 14,272 and \$ 10,271 at December 31, 2020 and 2019, respectively	145,681	143,127
Prepaid expenses	29,576	24,539
Other current assets	29,559	27,387
Total current assets	1,027,072	635,530
Property, equipment, and software, net	181,211	163,282
Right-of-use assets	110,637	121,941
Goodwill	1,771,035	1,611,749
Intangible assets, net	344,879	372,996
Deferred tax assets, net	23,471	33,812
Other assets	29,710	30,507
Total assets	<u>\$ 3,488,015</u>	<u>\$ 2,969,817</u>
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 44,034	\$ 40,092
Accrued expenses and other current liabilities	116,530	89,038
Current portion of deferred revenue	143,956	134,148
Current portion of term loans	30,000	18,750
Convertible notes, net	318,281	—
Customer deposits held in restricted accounts	227,373	243,316
Total current liabilities	880,174	525,344
Deferred revenue	4,227	4,793
Revolving facility	—	230,000
Term loans, net	545,830	575,313
Convertible notes, net	288,283	305,188
Lease liabilities, net of current portion	121,127	133,313
Other long-term liabilities	33,031	22,940
Total liabilities	1,872,672	1,796,891
Commitments and contingencies (Note 11)		
Stockholders' equity:		
Preferred stock, \$0.001 par value: 10,000,000 shares authorized and zero shares issued and outstanding at December 31, 2020 and 2019, respectively	—	—
Common stock, \$0.001 par value: 250,000,000 shares authorized, 102,694,840 and 96,100,296 shares issued and 102,134,949 and 94,744,157 shares outstanding at December 31, 2020 and 2019, respectively	103	96
Additional paid-in capital	1,603,610	1,222,356
Treasury stock, at cost: 559,891 and 1,356,139 shares at December 31, 2020 and 2019, respectively	(22,070)	(39,483)
Retained earnings (deficit)	38,103	(7,695)
Accumulated other comprehensive loss	(4,403)	(2,348)
Total stockholders' equity	1,615,343	1,172,926
Total liabilities and stockholders' equity	<u>\$ 3,488,015</u>	<u>\$ 2,969,817</u>

See accompanying notes.

RealPage, Inc.

Consolidated Statements of Operations
(in thousands, except per share amounts)

	Year Ended December 31,		
	2020	2019	2018
Revenue:			
On demand	\$ 1,125,838	\$ 953,576	\$ 833,709
Professional and other	32,646	34,560	35,771
Total revenue	1,158,484	988,136	869,480
Cost of revenue	442,965	385,712	328,382
Amortization of product technologies	58,313	40,461	35,797
Gross profit	657,206	561,963	505,301
Operating expenses:			
Product development	133,661	112,222	118,525
Sales and marketing	218,481	193,962	166,607
General and administrative	157,608	123,056	118,208
Amortization of intangible assets	44,689	40,303	35,911
Total operating expenses	554,439	469,543	439,251
Operating income	102,767	92,420	66,050
Interest expense and other, net	(51,460)	(31,862)	(31,750)
Income before income taxes	51,307	60,558	34,300
Income tax expense (benefit)	4,993	2,350	(425)
Net income	\$ 46,314	\$ 58,208	\$ 34,725
Net income per share attributable to common stockholders:			
Basic	\$ 0.48	\$ 0.63	\$ 0.40
Diluted	\$ 0.46	\$ 0.60	\$ 0.38
Weighted average common shares outstanding:			
Basic	96,841	92,017	87,290
Diluted	101,365	96,282	91,531

See accompanying notes.

RealPage, Inc.
Consolidated Statements of Comprehensive Income
(in thousands)

	Year Ended December 31,		
	2020	2019	2018
Net income	\$ 46,314	\$ 58,208	\$ 34,725
Other comprehensive loss:			
Unrealized (loss) gain on derivative instruments, net of tax	(3,380)	(1,233)	61
Reclassification adjustment for losses (gains) included in earnings on derivative instruments, net of tax	1,150	(477)	(613)
Foreign currency translation adjustment	175	(171)	(183)
Other comprehensive loss, net of tax	(2,055)	(1,881)	(735)
Comprehensive income	\$ 44,259	\$ 56,327	\$ 33,990

See accompanying notes.

RealPage, Inc.
Consolidated Statements of Stockholders' Equity
(in thousands)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Retained Earnings (Deficit)	Treasury Stock		Total Stockholders' Equity
	Shares	Amount				Shares	Amount	
Balance as of January 1, 2018	87,153	\$ 87	\$ 637,851	\$ 243	\$ (75,046)	3,973	\$(61,260)	\$ 501,875
Cumulative effect of adoption of ASU 2014-09	—	—	—	—	2,221	—	—	2,221
Public offering of common stock, net	8,050	8	441,893	—	—	—	—	441,901
Issuance of common stock in connection with our acquisitions	1,361	2	75,148	—	—	—	—	75,150
Stock option exercises	27	—	2,468	—	—	(632)	10,695	13,163
Issuance of restricted stock	—	—	(14,598)	—	—	(1,807)	14,598	—
Treasury stock purchased, at cost	—	—	473	—	—	1,407	(57,585)	(57,112)
Retirement of treasury stock	(600)	(1)	(7,388)	—	(20,693)	(600)	28,082	—
Stock-based compensation	—	—	51,836	—	—	—	—	51,836
Other comprehensive income - derivative instruments	—	—	—	(552)	—	—	—	(552)
Foreign currency translation	—	—	—	(183)	—	—	—	(183)
Net income	—	—	—	—	34,725	—	—	34,725
Balance as of December 31, 2018	95,991	96	1,187,683	(492)	(58,793)	2,341	(65,470)	1,063,024
Cumulative effect of adoption of ASU 2017-12	—	—	—	25	(25)	—	—	—
Issuance of common stock in connection with our acquisitions	234	—	14,846	—	—	—	—	14,846
Stock option exercises	39	—	(2,490)	—	—	(266)	8,323	5,833
Issuance of restricted stock	7	—	(41,904)	—	—	(1,371)	42,403	499
Treasury stock purchased, at cost	—	—	4,615	—	—	823	(33,973)	(29,358)
Retirement of treasury stock	(171)	—	(2,149)	—	(7,085)	(171)	9,234	—
Stock-based compensation	—	—	61,755	—	—	—	—	61,755
Other comprehensive income - derivative instruments	—	—	—	(1,710)	—	—	—	(1,710)
Foreign currency translation	—	—	—	(171)	—	—	—	(171)
Net income	—	—	—	—	58,208	—	—	58,208
Balance as of December 31, 2019	96,100	96	1,222,356	(2,348)	(7,695)	1,356	(39,483)	1,172,926

Public offering of common stock, net	5,847	6	334,120	—	—	—	—	334,126
Stock option exercises	548	1	6,176	—	—	(250)	8,398	14,575
Issuance of restricted stock	210	—	(40,252)	—	—	(1,376)	40,752	500
Treasury stock purchased, at cost	—	—	12,870	—	—	840	(32,377)	(19,507)
Retirement of treasury stock	(10)	—	(124)	—	(516)	(10)	640	—
Stock-based compensation	—	—	56,008	—	—	—	—	56,008
Purchase of capped call instrument	—	—	(39,365)	—	—	—	—	(39,365)
Equity component of convertible senior notes, net of issuance costs and deferred tax	—	—	51,821	—	—	—	—	51,821
Other comprehensive income - derivative instruments	—	—	—	(2,230)	—	—	—	(2,230)
Foreign currency translation	—	—	—	175	—	—	—	175
Net income	—	—	—	—	46,314	—	—	46,314
Balance as of December 31, 2020	<u>102,695</u>	<u>\$ 103</u>	<u>\$1,603,610</u>	<u>\$ (4,403)</u>	<u>\$ 38,103</u>	<u>560</u>	<u>\$ (22,070)</u>	<u>\$1,615,343</u>

See accompanying notes.

RealPage, Inc.
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended December 31,		
	2020	2019	2018
Cash flows from operating activities:			
Net income	\$ 46,314	\$ 58,208	\$ 34,725
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	138,779	114,952	100,186
Amortization of debt discount and issuance costs	20,760	13,700	12,464
Amortization of right-of-use assets	13,572	11,433	—
Deferred taxes	3,446	2,276	(2,179)
Stock-based expense	59,274	62,563	50,641
Loss on disposal and impairment of long-lived assets	1,040	2,536	6,733
Change in fair value of equity investment	—	(2,600)	—
Acquisition-related consideration	(5,889)	1,006	284
Changes in assets and liabilities, net of assets acquired and liabilities assumed in business combinations:			
Accounts receivable	3,359	(14,704)	(717)
Prepaid expenses and other current assets	(2,590)	(13,786)	(11,894)
Other assets	1,983	(5,107)	(4,543)
Accounts payable	(1,327)	9,318	1,266
Accrued compensation, taxes, and benefits	16,460	(1,150)	3,288
Deferred revenue	1,794	7,696	3,478
Customer deposits	(19,393)	82,631	57,230
Other current and long-term liabilities	(1,079)	(11,999)	(6,155)
Net cash provided by operating activities	<u>276,503</u>	<u>316,973</u>	<u>244,807</u>
Cash flows from investing activities:			
Purchases of property, equipment, and software	(63,585)	(51,500)	(50,933)
Acquisition of businesses, net of cash and restricted cash acquired	(188,591)	(665,844)	(278,563)
Purchase of other investments	—	(1,750)	(1,800)
Net cash used in investing activities	<u>(252,176)</u>	<u>(719,094)</u>	<u>(331,296)</u>
Cash flows from financing activities:			
Proceeds from term loans	—	600,000	—
Payments on term loans	(18,750)	(308,744)	(14,116)
Proceeds from revolving credit facility	—	230,000	140,000
Payments on revolving credit facility	(230,000)	—	(190,000)
Proceeds from borrowings on convertible notes	345,000	—	—
Purchase of convertible senior note hedges	(39,365)	—	—
Payments of deferred financing costs	(7,535)	(3,628)	(1,136)
Payments on finance lease obligations	(3,325)	(3,651)	(227)
Payments of acquisition-related consideration	(17,344)	(30,441)	(28,388)
Proceeds from public offering, net of underwriters' discount and offering costs	334,126	—	441,901
Proceeds from exercise of stock options	14,575	5,833	13,163
Purchase of treasury stock related to stock-based compensation	(18,844)	(20,867)	(29,030)
Purchase of treasury stock under share repurchase program	—	(8,491)	(28,082)
Other financing activities, net	(1,261)	—	—
Net cash provided by financing activities	<u>357,277</u>	<u>460,011</u>	<u>304,085</u>
Net increase in cash and cash equivalents	381,604	57,890	217,596
Effect of exchange rate on cash	175	(171)	(183)
Cash, cash equivalents and restricted cash:			
Beginning of period	440,477	382,758	165,345
End of period	<u>\$ 822,256</u>	<u>\$ 440,477</u>	<u>\$ 382,758</u>

RealPage, Inc.
Consolidated Statements of Cash Flows, continued
(in thousands)

	Year Ended December 31,		
	2020	2019	2018
Supplemental cash flow information:			
Cash paid for interest	\$ 26,730	\$ 16,073	\$ 18,204
Cash (refunded) paid for income taxes, net	\$ (1,137)	\$ 2,074	\$ 3,121
Right-of-use assets obtained in exchange for operating lease obligations	\$ 5,127	\$ 23,613	\$ —
Non-cash investing and financing activities:			
Accrued property, equipment, and software	\$ 4,440	\$ 2,608	\$ 1,447
Acquisition-related liabilities settled with equity	\$ —	\$ 14,846	\$ —
Fair value of stock consideration in connection with acquisition of ClickPay	\$ —	\$ —	\$ 53,334
Redemption of noncontrolling interest in connection with acquisition of ClickPay	\$ —	\$ —	\$ 21,816

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the Consolidated Balance Sheets to that shown in the Consolidated Statements of Cash Flows:

	Year Ended December 31,		
	2020	2019	2018
Cash and cash equivalents	\$ 594,734	\$ 197,154	\$ 228,159
Restricted cash	227,522	243,323	154,599
Total cash, cash equivalents and restricted cash shown in the Consolidated Statements of Cash Flows	<u>\$ 822,256</u>	<u>\$ 440,477</u>	<u>\$ 382,758</u>

See accompanying notes.

RealPage, Inc.

Notes to Consolidated Financial Statements

1. The Company

RealPage, Inc., a Delaware corporation (together with its subsidiaries, the “Company” or “we” or “us”), is a leading global provider of software and data analytics to the real estate industry. Our platform of data analytics and software solutions enables the rental real estate industry to manage property operations (such as marketing, pricing, screening, leasing, payment processing, and accounting), identify opportunities through market intelligence, and obtain data-driven insight for better operational and financial decision-making. Our integrated, on demand platform provides a single point of access and a massive repository of real-time lease transaction data, including prospect, renter, and property data. By leveraging data as well as integrating and streamlining a wide range of complex processes and interactions among the rental real estate ecosystem (owners, managers, prospects, renters, service providers, and investors), our platform helps our clients improve financial and operational performance and prudently place and harvest capital.

COVID-19 Pandemic

During the year ended December 31, 2020, we responded to the challenges that the evolving COVID-19 virus (“COVID-19”) pandemic created for us and our customers. We transitioned a large percentage of our workforce to a work-from-home environment while continuing to support our customers as they used our software services to sustain their operations while reducing in-person interactions with their customers. Portions of our business, including our electronic payment processing services, experienced accelerated growth as a result of the pandemic. Certain of our other services experienced lower transactional volumes at the onset of COVID-19, before beginning a return to more normalized levels in the second half of the year.

Merger Agreement

On December 20, 2020, we entered into an Agreement and Plan of Merger (the “Merger Agreement”) with Mirasol Parent, LLC, a Delaware limited liability company (“Parent”), and Mirasol Merger Sub, Inc., a Delaware corporation and wholly owned subsidiary of Parent (“Merger Sub”), pursuant to which Merger Sub will merge with and into RealPage (the “Merger”), with RealPage surviving the Merger as a wholly owned subsidiary of Parent. Parent and Merger Sub are affiliates of funds advised by Thoma Bravo, L.P. (“Thoma Bravo”).

Our Board of Directors has unanimously approved the Merger Agreement and, subject to certain exceptions set forth in the Merger Agreement, resolved to recommend that our stockholders adopt the Merger Agreement. As a result of the Merger, each share of our common stock outstanding immediately prior to the effective time of the Merger (the “Effective Time”) (subject to certain exceptions, including for shares of common stock owned by stockholders of RealPage who have not voted in favor of the adoption of the Merger Agreement and have properly exercised appraisal rights in accordance with Section 262 of the General Corporation Law of the State of Delaware) will, at the Effective Time, automatically be converted into the right to receive \$88.75 in cash, subject to applicable withholding taxes (the “Merger Consideration”). Pursuant to the Merger Agreement, as of the Effective Time, each option to purchase shares of common stock will vest at closing and be converted into the right to receive an amount in cash equal to the product of Merger Consideration (less the applicable exercise price) and the number of shares of common stock covered by such option (less any applicable withholding taxes). At the Effective Time, each award of restricted common stock granted prior to the date of the Merger Agreement (subject to certain exceptions) will be exchanged for an amount in cash, less any applicable withholding taxes, equal to the product obtained by multiplying (A) the Merger Consideration by (B) the number of shares of common stock covered by such award immediately prior to the Effective Time (which shall be the maximum number of shares covered by the award in the case of any such award subject to performance based vesting conditions). If the Merger is consummated, our common stock will be delisted from the NASDAQ Global Select Market and deregistered under the Securities Exchange Act of 1934 (the “Exchange Act”).

Completion of the Merger is subject to certain closing conditions, including (1) the adoption of the Merger Agreement by the holders of a majority of the outstanding shares of common stock, (2) the expiration or early termination of the applicable waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (the “HSR Act”), and the approval of the Merger under other applicable antitrust approvals, (3) the absence of an order, injunction or law prohibiting the Merger, (4) receipt of governmental consents (or, in certain circumstances, implementation of alternative arrangements) with respect to a change of control of certain money transmitter licenses held by a subsidiary of RealPage, (5) the accuracy of the other party’s representations and warranties, subject to certain materiality standards set forth in the Merger Agreement, (6) compliance in all material respects with the other party’s obligations under the Merger Agreement and (7) no Company Material Adverse Effect (as defined in the Merger Agreement) having occurred since the date of the Merger Agreement. The parties expect the transaction to close in the second quarter of 2021. RealPage and Parent made the filings required under the HSR Act on January 5, 2021, and the applicable waiting period under the HSR Act expired on February 4, 2021. A special meeting of our shareholders to consider and vote on the proposal to adopt the Merger Agreement is scheduled to be held on March 8, 2021.

Until February 3, 2021 (the “Go Shop Period”), we had the right to, among other things, (1) solicit alternative acquisition proposals and (2) provide information (including nonpublic information) to third parties in connection therewith pursuant to an acceptable confidentiality agreement. During the Go Shop Period, representatives of BofA Securities, at the direction of our Board of Directors, communicated with additional parties to gauge their interest in making an alternative acquisition proposal. No party made an alternative acquisition proposal during the Go Shop Period. From and after February 4, 2021, we must comply with customary non-solicitation restrictions. Subject to certain customary “fiduciary out” exceptions, our Board is required to recommend that our Company’s stockholders adopt the Merger Agreement.

We have made customary representations, warranties and covenants in the Merger Agreement, including, among others, covenants to use commercially reasonable efforts to conduct our business in all material respects in the ordinary course during the period between the date of the Merger Agreement and the completion of the Merger. The parties have agreed to use reasonable best efforts to take all actions necessary to consummate the merger, including cooperating to obtain the regulatory approvals necessary to complete the Merger. Either we or Parent may terminate the Merger Agreement upon certain circumstances, as described in the Merger Agreement. In addition, the Merger Agreement provides for a termination fee of \$288 million payable by us to Parent, or a reverse termination fee of \$528 million payable by Parent to us, in each case under certain circumstances described in the Merger Agreement.

For additional information related to the Merger Agreement, please refer to our filings previously made with the SEC in connection with the transaction including our definitive proxy statement filed on February 5, 2021 (the “Proxy Statement”) and the full text of the Merger Agreement, a copy of which was filed on December 21, 2020 as Exhibit 2.1 to our Current Report on Form 8-K.

Because the Merger is not yet complete, and except as otherwise specifically stated, the descriptions and disclosures presented elsewhere in this Annual Report on Form 10-K assume the continuation of RealPage, Inc. as a public company.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements and footnotes have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission (“SEC”). The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”) and include the accounts of RealPage, Inc. and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make certain estimates and assumptions that affect the amounts reported and disclosed in the financial statements and accompanying notes. Such significant estimates include, but are not limited to, the determination of the allowances against our accounts receivable; useful lives of intangible assets; impairment assessments on long-lived assets (including goodwill and intangible assets); contingent commissions related to the sale of insurance products; fair value of acquired net assets and contingent consideration in connection with business combinations; the nature and timing of the satisfaction of performance obligations and related reserves; fair values of stock-based awards; loss contingencies; fair value of the debt component of convertible notes, and the recognition, measurement and valuation of current and deferred income taxes. Actual results could differ from these estimates. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable, the result of which forms the basis for making judgments about the carrying value of assets and liabilities.

Concentration of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk consist principally of cash and cash equivalents and accounts receivable. Our cash accounts are maintained at various high credit, quality financial institutions and may exceed federally insured limits. We have not experienced any losses in such accounts.

Substantially all of our accounts receivable are derived from clients in the residential rental housing market. Concentrations of credit risk with respect to accounts receivable and revenue are limited due to a large, diverse customer base. We do not require collateral from clients. We maintain an allowance for doubtful accounts based upon the expected collectability of accounts receivable. No single client accounted for 10% or more of our revenue or accounts receivable for the years ended December 31, 2020, 2019, or 2018.

The financial health of our customers, including their ability to generate cash flows sufficient to meet their obligations to us, is dependent on, among other things, the ability of their residents to meet their lease obligations on a consistent and timely basis. A portion of those residents have already been, or may in the future be, affected by the general business closures and limitations resulting from the COVID-19 pandemic. The degree to which our customers will be adversely affected by COVID-19 is still not yet fully known and will be affected by several factors including the severity and duration of what has

become a prolonged outbreak in the United States, the effect of the expiration of initial government subsidies, and the scope and duration of new subsidies that recently have been or may be provided to both residents, owners and managers of rental properties and other businesses in general.

We maintain an allowance for credit losses based upon the expected collectability of accounts receivable using historical loss rates adjusted for forward-looking assumptions based on management’s judgments. During the year ended December 31, 2020, our estimates include judgments which give consideration to the potential impact of COVID-19. However, our reserves may not be sufficient if the effects of COVID-19 on our customers become more severe or continue for an extended term. We continue to work closely with our customers to help them address the operational challenges they face as a result of COVID-19, and we will adjust our estimates of reserves for credit losses in future periods as appropriate.

Segment and Geographic Information

Our chief operating decision maker is our Chief Executive Officer, who reviews financial information on a consolidated basis for purposes of allocating resources and evaluating financial performance. Accordingly, we have determined we operate as a single operating segment.

Principally, all of our revenue for the years ended December 31, 2020, 2019, and 2018 was earned in the United States. Net property, equipment, and software located in the United States amounted to \$171.4 million and \$154.5 million at December 31, 2020 and 2019, respectively. Net property, equipment, and software located in our international subsidiaries amounted to \$9.8 million and \$8.8 million at December 31, 2020 and 2019, respectively. Substantially all of the net property, equipment, and software held in our international subsidiaries was located in the Philippines and India at December 31, 2020 and 2019.

Cash and Cash Equivalents and Restricted Cash

We consider all highly liquid investments with an initial maturity of three months or less at the date of purchase to be cash equivalents. The fair value of our cash and cash equivalents approximates carrying value.

Restricted cash primarily consists of cash collected from tenants that will be remitted to our clients.

Accounts Receivable

Accounts receivable primarily represent trade receivables from clients recorded at the invoiced amount, net of allowances, which are based on our historical experience, the aging of our trade receivables, and management judgment.

Trade receivables are written off against the allowance when management determines a balance is uncollectible. During the years ended December 31, 2020, 2019, and 2018, we incurred bad debt expense of \$4.2 million, \$2.9 million, and \$4.0 million, respectively.

Property, Equipment, and Software

Property, equipment, and software are recorded at cost less accumulated depreciation and amortization, which are computed using the straight-line method over the following estimated useful lives:

Data processing and communications equipment	3 - 5 years
Furniture, fixtures, and other equipment	3 - 5 years
Software	3 - 5 years
Leasehold improvements	Shorter of lease term or estimated useful life

Software includes both purchased and internally developed software. Gains and losses from asset disposals are included in the line “General and administrative” in the Consolidated Statements of Operations.

Internally Developed Software

Costs incurred to develop software intended for our internal use are capitalized during the application development stage. Capitalization of such costs ceases once the project is substantially complete and ready for its intended use. We also capitalize costs related to specific upgrades and enhancements when it is probable the expenditure will result in additional functionality. Costs related to preliminary project activities and post-implementation operating activities are expensed as incurred.

Internally developed software costs are included in “Property, equipment, and software, net” in the accompanying Consolidated Balance Sheets and are amortized on a straight-line basis over their expected useful lives. Amortization of internally developed software is included in “Amortization of product technologies” in the accompanying Consolidated Statements of Operations.

Impairment of Long-Lived Assets

Tangible long-lived assets held and used are reviewed for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important that could trigger an impairment review include, but are not limited to, significant under-performance relative to current and historical or projected future operating results, significant changes in the manner of our use of the asset, or significant changes in our overall business and/or product strategies. If circumstances require that a long-lived asset group be tested for impairment, determination of recoverability is based on an estimate of the undiscounted cash flows expected to be generated by that long-lived asset or asset group. If the carrying amount of the long-lived asset or asset group is not recoverable on an undiscounted cash flow basis, we would recognize an impairment charge equal to the excess of the carrying value over its fair value.

Business Combinations

We allocate the fair value of the purchase consideration of our acquisitions to the tangible assets acquired, liabilities assumed, and intangible assets acquired generally based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. Purchase consideration includes assets transferred, liabilities assumed, and/or equity interests issued by us, all of which are measured at their fair value as of the date of acquisition. Our business combination transactions may be structured to include a combination of up-front, deferred and contingent payments to be made at specified dates subsequent to the date of acquisition. These payments may include a combination of cash and equity and are generally settled within one to four years from the date of acquisition. Deferred and contingent payments determined to be purchase consideration are recorded at fair value as of the acquisition date. Deferred obligations are generally subject to adjustments specified in the underlying purchase agreement related to the seller's indemnification obligations, including indemnification assets that contractually can be recorded as a reduction to outstanding deferred obligations. Our contingent consideration arrangements are obligations to make future payments to sellers contingent upon the achievement of future operational or financial targets and are remeasured to fair value at the end of each reporting period until the obligations are settled.

The valuation of the net assets acquired as well as certain elements of purchase consideration requires management to make significant estimates and assumptions, especially with respect to future expected cash flows, useful lives, and discount rates. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and, as a result, actual results may differ from estimates. During the measurement period, we may record adjustments to the assets acquired and liabilities assumed with a corresponding offset to goodwill. Subsequent changes to the fair value of contingent consideration are reflected in "General and administrative" in the accompanying Consolidated Statements of Operations.

Acquisition costs are expensed as incurred and are included in "General and administrative" in the accompanying Consolidated Statements of Operations. We include the results of operations from acquired businesses in our consolidated financial statements from the effective date of the acquisition.

Goodwill and Indefinite-Lived Intangible Assets

We test goodwill and indefinite-lived intangible assets for impairment separately on an annual basis in the fourth quarter of each year, or more frequently if circumstances indicate that the assets may not be recoverable. For purposes of goodwill impairment testing, we have one reporting unit.

We evaluate impairment of goodwill either by assessing qualitative factors to determine whether it is more likely than not that the fair value of our reporting unit is less than its carrying amount, or by performing a quantitative assessment. Qualitative factors include industry and market considerations, overall financial performance, and other relevant events and circumstances affecting the reporting unit. If we choose to perform a qualitative assessment and after considering the totality of events or circumstances, we determine it is more likely than not that the fair value of our reporting unit is less than its carrying amount, we would perform a quantitative fair value test. Our quantitative impairment assessment utilizes a weighted combination of a discounted cash flow model (known as the income approach) and comparisons to publicly traded companies engaged in similar businesses (known as the market approach). These approaches involve judgmental assumptions, including forecasted future cash flows expected to be generated by the business over an extended period of time, long-term growth rates, the identification of comparable companies, and our discount rate based on our weighted average cost of capital. These assumptions are predominately unobservable inputs and considered Level 3 measurements. We adopted ASU 2017-04, *Intangibles - Goodwill and Other*, which simplifies the testing for goodwill impairment by eliminating the requirement to determine the fair value of individual assets and liabilities of a reporting unit to measure goodwill impairment, prospectively on January 1, 2020. To calculate any potential impairment when we perform a quantitative test, we compare the fair value of our reporting unit with its carrying amount, including goodwill. Any excess of the carrying amount of the reporting unit's goodwill over its fair value is recognized as an impairment loss, and the carrying value of goodwill is written down.

We quantitatively evaluate indefinite-lived intangible assets for impairment by estimating the fair value of those assets based on estimated future earnings derived from the assets using the income approach. Key assumptions for this assessment

include forecasted future cash flows from estimated royalty rates and our discount rate based on our weighted average cost of capital. These assumptions are unobservable Level 3 measurements. Assets with indefinite lives that have been determined to be inseparable due to their interchangeable use are grouped into single units of accounting for purposes of testing for impairment. If the carrying amount of an identified intangible asset with an indefinite life exceeds its fair value, we recognize an impairment loss equal to the excess of carrying value over fair value.

Intangible Assets

Intangible assets with determinable economic lives are carried at cost, less accumulated amortization. Our intangible assets are largely acquired in business combinations and include developed technologies, client relationships, vendor relationships, non-competition agreements and trade names. Intangible assets are amortized over the shorter of the contractual life or the estimated useful life. Intangible assets are amortized on a straight-line basis, except for client relationships which generally are amortized proportionately to the expected discounted cash flows derived from the asset.

Estimated useful lives for intangible assets primarily consist of the following:

Developed technologies	3 - 7 years
Client relationships	3 - 10 years
Vendor relationships	7 years
Trade names	1 - 7 years
Non-competition agreements	5 - 10 years

Amortization of acquired developed technologies is included in "Amortization of product technologies", and amortization of acquired client relationships, vendor relationships, non-competition agreements and trade names is included in "Amortization of intangible assets" in the accompanying Consolidated Statements of Operations.

Other Current and Long-Term Liabilities

Accrued expenses and other current liabilities consisted of the following at December 31, 2020 and 2019:

	December 31,	
	2020	2019
	(in thousands)	
Accrued compensation, payroll taxes, and benefits	\$ 48,465	\$ 28,444
Sales tax obligations	12,965	4,232
Current portion of liabilities related to acquisitions	17,773	23,431
Lease-related liabilities	17,880	16,127
Accrued legal and professional fees	8,513	3,405
Other current liabilities	10,934	13,399
Total accrued expenses and other current liabilities	<u>\$ 116,530</u>	<u>\$ 89,038</u>

Other long-term liabilities consisted of the following at December 31, 2020 and 2019:

	December 31,	
	2020	2019
	(in thousands)	
Liabilities related to acquisitions	\$ 9,650	\$ 14,852
Deferred tax liabilities	3,879	2,353
Long-term accrued compensation and payroll taxes	10,371	1,693
Other long-term liabilities	9,131	4,042
Total other long-term liabilities	<u>\$ 33,031</u>	<u>\$ 22,940</u>

Leases

We determine if an arrangement contains a lease at inception. Right-of-use ("ROU") assets represent our right to use an underlying asset for the lease term and the corresponding lease liabilities represent our obligation to make lease payments arising from the lease. Our ROU assets and lease liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. The ROU asset is reduced for tenant incentives and excludes any initial direct costs incurred. For our real estate contracts with lease and non-lease components, we have elected to combine the lease and non-lease components into a single lease component. The implicit rate within our leases are generally not readily determinable, and

instead we use our incremental borrowing rate at the lease commencement date to determine the present value of lease payments. The determination of our incremental borrowing rate requires judgment. We determine our incremental borrowing rate for each lease using our current borrowing rate, adjusted for various factors including collateralization and term to align with the terms of the lease. Certain of our leases include options to extend the lease. Our lease values include options to extend the lease when it is reasonably certain we will exercise such options.

Operating and finance leases are included in "Right-of-use assets", "Accrued expenses and other current liabilities", and "Lease liabilities, net of current portion" in the accompanying Consolidated Balance Sheets.

Lease expenses for minimum lease payments for operating leases are recognized on a straight-line basis over the lease term. Amortization expense of the ROU asset for finance leases is recognized on a straight-line basis over the lease term and interest expense for finance leases is recognized based on the incremental borrowing rate.

We have elected not to recognize a lease liability or ROU asset for short-term leases, defined as those which have an initial term of twelve months or less.

Convertible Notes

We account for our Convertible Notes as separate liability and equity components. The initial carrying amounts of the liability components are calculated by measuring the fair value of a similar liability that does not have an associated convertible feature. We estimate fair value using a discounted cash flow model that relies upon subjective assumptions including expected volatility and discount rates determined using observable yields for stand-alone debt instruments with comparable credit ratings and terms. The carrying amounts of the equity components representing the conversion options are determined by deducting the fair value of the liability components from the par value of the Convertible Notes. The difference represents a debt discount that is amortized to interest expense over the terms of the Convertible Notes using the effective interest method. The equity components are not remeasured as long as they continue to meet the conditions for equity classification.

Issuance costs related to our Convertible Notes are allocated to the liability and equity components based on their relative values. Costs allocated to the liability components are amortized to interest expense over the terms of the Convertible Notes using the effective interest method. Costs allocated to the equity components, and any impact of deferred taxes arising from the discount to the par value of the Convertible Notes, reduce the carrying amount of the equity component.

To the extent we receive conversion requests for our Convertible Notes prior to maturity, the settlement consideration is allocated to the liability component of the respective Convertible Note equal to the fair value of the component immediately prior to the extinguishment, with any residual consideration recorded as a reduction to the equity component. Any difference between the amount allocated to the liability component and its net carrying amount is recorded as a gain or loss on debt extinguishment.

Deferred Revenue

For several of our solutions, we invoice our clients in annual, quarterly, or monthly installments in advance of the commencement of the service period. Deferred revenue is recognized when billings are due or payments are received in advance of revenue recognition from our subscription and other services. Accordingly, the deferred revenue balance does not represent the total contract value of annual subscription agreements.

Revenue Recognition

Revenues are derived from on demand software solutions, professional services and other goods and services. We recognize revenue as we satisfy one or more service obligations under the terms of a contract, generally as control of goods and services are transferred to our clients. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. We include estimated variable consideration in revenue to the extent that it is probable that a significant reversal of cumulative revenue will not occur. We estimate and accrue a reserve for credit accommodations and other adjustments as a reduction to revenue based on several factors, including past history.

On Demand Revenue

Our on demand revenue consists of license and subscription fees, transaction and payment processing fees related to certain of our software-enabled value-added services, and commissions derived from our selling certain risk mitigation services.

We generally recognize revenue from subscription fees on a straight-line basis over the access period beginning on the date that we make our service available to the client. Our subscription agreements generally are non-cancellable, have an initial term of one year or longer and are billed either monthly, quarterly or annually in advance. Non-refundable up-front fees billed at the initial order date that are not associated with an up-front service obligation are recognized as revenue on a straight-line basis over the period in which the client is expected to benefit, which we consider to be three years.

We recognize revenue from transaction fees in the month the related services are performed based on the amount we have the right to invoice.

We offer risk mitigation services to our clients by acting as an insurance agent and derive commission revenue from the sale of insurance products to our clients' residents. The commissions are based upon a percentage of the premium that the insurance company charges to the policyholder and are subject to forfeiture in instances where a policyholder cancels prior to the end of the policy. Our contracts with our underwriting partners provide for contingent commissions to be paid to us in accordance with the agreements. Our estimate of contingent commission revenue considers the variable factors identified in the terms of the applicable agreement. We recognize commissions related to these services as earned ratably over the policy term and insurance commission receivable in "Accounts receivable, less allowances".

Professional and Other Revenue

Professional services and other revenues generally consist of the fees we receive for providing implementation and consulting services, submeter and other equipment and ongoing maintenance of our existing on premise licenses.

Professional services are billed either on a time and materials basis or on a fixed price basis, and revenue is recognized over time as we perform the obligation or at completion. Professional services are typically sold in a combined contract with other on demand solutions but may be sold separately. Professional service contracts sold separately generally have terms of one year or less.

Other revenues consist primarily of submeter equipment sales that include related installation services. Such sales are considered bundled, and revenue from these bundled sales is recognized in proportion to the number of installed units completed to date as compared to the total contracted number of units to be provided and installed. For all other equipment sales, we generally recognize revenue when control of the hardware has transferred to our client.

Revenue recognized for on premise software sales generally consists of annual maintenance renewals on existing term or perpetual licenses, which is recognized ratably over the service period.

Contracts with Multiple Performance Obligations

The majority of the contracts we enter into with clients, including multiple contracts entered into at or near the same time with the same client, require us to provide one or more on demand software solutions, professional services and may include equipment. For these contracts, we account for individual performance obligations separately: i) if they are distinct or ii) if the promised obligations represent a series of distinct services that are substantially the same and have the same pattern of transfer to the client. Once we determine the performance obligations, we determine the transaction price, which includes estimating the amount of variable consideration, if any, to be included in the transaction price. For contracts with multiple performance obligations, we allocate the transaction price to the separate performance obligations on a relative standalone selling price basis. The standalone selling prices of our service are estimated using a market assessment approach based on our overall pricing objectives taking into consideration market conditions and other factors including the number of solutions sold, client demographics and the number and types of users within our contracts.

Sales, value add, and other taxes we collect from clients and remit to governmental authorities are excluded from revenues.

Cost of Revenue

Cost of revenue consists primarily of salaries and related personnel expenses of our operations and support personnel, including training and implementation services; expenses related to the operation of our data centers; transaction processing fees; fees paid to third-party providers; allocations of facilities overhead costs; and depreciation.

Sales and Marketing Expenses and Deferred Commissions

Sales and marketing expenses consist primarily of personnel and related costs, including salaries, benefits, bonuses, commissions, travel, and stock-based compensation. Other costs included are marketing and promotional events, our annual user conference, and other online and product marketing costs. We amortize sales commissions that are directly attributable to a contract over an estimated customer benefit period of three years.

Advertising costs are expensed as incurred and totaled \$35.9 million, \$34.4 million, and \$30.0 million for the years ended December 31, 2020, 2019, and 2018, respectively.

Stock-Based Expense

We recognize compensation expense related to awards of stock options and restricted stock granted to employees, non-employee directors, and other service providers based on the estimated fair value of the awards on the date of grant. We recognize expense for stock options and time-based restricted stock awards on a straight-line basis over the requisite service period of the awards. For market-based awards and performance-based awards, expense is recognized over the requisite service period using the graded-vesting attribution method. Compensation expense is reduced for forfeitures as they occur.

The fair value of our time-based restricted stock awards is based on the closing price of our common stock on the date of grant. The fair value of our market-based restricted stock awards is estimated using a discrete model based on multiple stock

price-paths developed through the use of Monte Carlo simulation. Changes to the assumptions underlying our valuation model may have a significant impact on the underlying value of the market-based restricted stock awards, which could have a material impact on our Consolidated Financial Statements. The fair value of our performance-based awards is based on obligations denominated in fixed dollar amounts and our expectation of future operating results and the specific performance criteria within each agreement. For awards subject to performance criteria, we reassess the likelihood of the performance criteria being met at each reporting date based on our expectation of future operating results and adjust the total compensation expense to be recognized.

Income Taxes

Income taxes are recorded based on the liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in our consolidated financial statements or tax returns. Deferred tax assets and liabilities are measured using the tax rates that are expected to apply to taxable income for the years in which those tax assets and liabilities are expected to be realized or settled. We recognize the effect of tax rate changes on current and accumulated deferred income taxes in the period in which the rate changes are enacted.

Valuation allowances are provided when it is more likely than not that all or a portion of the deferred tax asset will not be realized. The factors used to assess the need for a valuation allowance include historical earnings, our latest forecast of taxable income, and available tax planning strategies that could be implemented to realize the net deferred tax assets. In projecting future taxable income, we begin with historical results and incorporate assumptions including the amount of future state, federal and foreign pretax operating income, the reversal of temporary differences, and the implementation of feasible and prudent tax planning strategies, if any. These assumptions require significant judgment about the forecasts of future taxable income and are consistent with the plans and estimates we are using to manage the underlying businesses.

We may recognize a tax benefit from uncertain tax positions only if it is at least more likely than not that the tax position will be sustained upon examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon settlement with the taxing authorities.

Fair Value Measurements

We measure our financial instruments and acquisition-related contingent consideration obligations at fair value at each reporting period using a fair value hierarchy. A financial instrument's classification within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Three levels of inputs may be used to measure fair value:

Level 1 - Inputs are quoted prices in active markets for identical assets or liabilities.

Level 2 - Inputs are quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable, and market-corroborated inputs which are derived principally from or corroborated by observable market data.

Level 3 - Inputs are derived from valuation techniques in which one or more of the significant inputs or value drivers are unobservable.

The categorization of an asset or liability is based on the inputs described above and does not necessarily correspond to our perceived risk of that asset or liability. Moreover, the methods used by us may produce a fair value calculation that is not indicative of the net realizable value or reflective of future fair values. Furthermore, although we believe our valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments and non-financial assets and liabilities could result in a different fair value measurement at the reporting date.

Certain financial instruments, which may include cash, cash equivalents, restricted cash, accounts receivable, accounts payable and accrued expenses are recorded at their carrying amounts, which approximates their fair values due to their short-term nature.

We hold an equity investment which does not have a readily determinable fair value. We measure this investment at cost less impairment, plus or minus changes resulting from observable price changes in orderly transactions for identical or similar investments of the same issuer.

Recently Adopted Accounting Standards

Accounting Standards Update 2016-13

In June 2016, the Financial Accounting Standards Board ("FASB") issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The amendments in this ASU replaced the incurred loss impairment methodology in GAAP with a methodology that reflects expected credit losses and requires

consideration of a broader range of reasonable and supportable information to inform credit loss estimates. Our financial assets in the scope of ASU 2016-13 mainly consist of short-term trade receivables. We have also considered contract assets in our evaluation. Historically, our actual credit losses have not been material. In addition to continuing to individually assess overdue customer balances for expected credit losses, we have implemented modifications to our historical methodology that reflect the expected credit losses on receivables considering both historical experience and forward-looking assumptions. We adopted ASU 2016-13 using the modified retrospective approach on January 1, 2020, resulting in no cumulative adjustment to retained earnings. The adoption of this ASU did not have a material impact on our Consolidated Financial Statements. We will continue to actively monitor the impact of the COVID-19 pandemic on expected credit losses.

The rollforward of the allowance for credit losses, a component of our allowance for accounts receivable, as of December 31, 2020 was as follows (in thousands):

Balance as of January 1, 2020	\$ 4,545
Provision for credit losses	1,097
Write-offs, net of recoveries	(527)
Balance as of March 31, 2020	5,115
Provision for credit losses	1,168
Write-offs, net of recoveries	(740)
Balance as of June 30, 2020	5,543
Provision for credit losses	800
Write-offs, net of recoveries	(682)
Balance as of September 30, 2020	5,661
Provision for credit losses	1,161
Write-offs, net of recoveries	(1,640)
Balance as of December 31, 2020	<u>\$ 5,182</u>

Accounting Standards Update 2018-15

In August 2018, the FASB issued ASU 2018-15, *Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract*. This ASU aligns the requirements for capitalizing implementation costs incurred in a cloud-based hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. We adopted ASU 2018-15 prospectively as of January 1, 2020. The impact to our financial statements will depend on the nature of our future cloud computing arrangements; however, this standard did not have a material impact on our financial statements as of December 31, 2020.

Accounting Standards Update 2020-04

In March 2020, the FASB issued ASU 2020-04, *Reference Rate Reform (Topic 848)*. ASU 2020-04 contains practical expedients for activities related to reference rate reform that impact debt, leases, derivatives and other contracts. The guidance in ASU 2020-04 is optional and may be elected over time as reference rate reform activities occur. During 2020, we elected to apply the hedge accounting expedients related to probability and the assessments of effectiveness for future LIBOR-indexed cash flows to assume that the index upon which future hedged transactions will be based matches the index on the corresponding derivatives. Application of these expedients preserves the presentation of derivatives consistent with past presentation. We continue to evaluate the impact of the guidance and may apply other elections, as applicable, as additional changes in the market occur.

Recently Issued Accounting Standards

Accounting Standards Update 2019-12

In December 2019, the FASB issued ASU 2019-12, *Simplifying the Accounting for Income Taxes*, which is intended to simplify various aspects related to accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. ASU 2019-12 will be effective for interim and annual periods beginning after December 15, 2020. The adoption of this standard will not have a material impact on our Consolidated Financial Statements.

Accounting Standards Update 2020-06

In August 2020, the FASB issued ASU 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and*

Contracts in an Entity's Own Equity. This ASU simplifies the accounting for certain convertible instruments by eliminating the requirement to separate convertible notes into debt and equity components, instead allowing for the convertible debt to be accounted for as a single liability measured at its amortized cost. These changes will reduce reported interest expense to an amount more closely aligned with the convertible debt instrument's coupon interest rate and increase reported net income for entities that have issued a convertible instrument that was bifurcated according to existing GAAP. Furthermore, this ASU amends the diluted earnings per share calculation for convertible instruments by requiring the use of the if-converted method. Once the new standard is adopted, our use of the treasury stock method will no longer be available. ASU 2020-06 will be effective for fiscal years beginning after December 15, 2021, with early adoption permitted for interim and annual reporting periods beginning after December 15, 2020. We expect to adopt this ASU effective January 1, 2022 and are still assessing our method of adoption. Once we adopt ASU 2020-06, we expect our total remaining interest expense over the contractual terms of our convertible debt to be approximately \$51.0 million less than under the existing accounting standards. We continue to evaluate the impact of the guidance on our net income, basic and dilutive earnings per share.

3. Acquisitions

Fiscal Year 2020

WhiteSky

On December 31, 2020, we entered into a Purchase Agreement by which we acquired all the outstanding equity interests of WhiteSky Communications, LLC ("WhiteSky"), a provider of managed communications services, enabling multifamily, student and other properties to provide managed bulk Internet, video, voice-over-internet protocol (VOIP) phone, and Wi-Fi services. Aggregate purchase consideration was \$64.9 million, including deferred cash obligations of up to \$6.5 million, which are subject to working capital adjustments and indemnification claims. The acquisition was financed with cash on hand.

The purchase agreement also provided for up to \$20.0 million in contingent consideration tied to both continued employment services and performance targets. Such arrangement will be treated as a separate transaction from the business combination and will be expensed as post-combination services are provided.

The acquired identified intangible assets consisted of client relationships, technology and trade names that were assigned estimated useful lives of ten, ten, and five years, respectively. Preliminary goodwill recognized of \$45.1 million is primarily comprised of expansion of our product offerings as part of our *CommunityConnect* business as well as anticipated synergies from sale of such services to our existing customers. Goodwill and the acquired intangible assets are deductible for tax purposes due to the previous LLC tax status of the acquired entity. Acquisition costs associated with this transaction of \$0.7 million were expensed as incurred.

Chirp

On September 21, 2020, we entered into an Agreement and Plan of Merger by which we acquired all the outstanding stock of Chirp Systems, Inc. ("Chirp"), a provider of smart access software and technology solutions to the multifamily housing industry. Aggregate purchase consideration was \$16.8 million, including contingent consideration of up to \$10.0 million that is tied to operational performance targets through 2022, and deferred cash obligations of up to \$1.3 million, which are subject to working capital adjustments and indemnification claims. The acquisition was financed with cash on hand. The parent company of one of the significant selling shareholders of Chirp is a customer of RealPage. In addition, a member of the board of directors of that customer is also a member of our board of directors.

Certain executives of Chirp at or near the transaction date were provided up to \$5.0 million in retention incentives tied to post acquisition employment service and the achievement of performance targets by December 31, 2023. The incentives, if achieved, will be in the form of incentive grants that may be settled in the future in stock or cash, at our option. As of December 31, 2020, we expect the executives to earn a payout of \$1.7 million under these awards, and we will update this estimate on a quarterly basis. As these awards are tied in part to employment services, we will record the estimated amount as stock-based compensation expense over the requisite service period.

The acquired identified intangible assets consist of developed technology and client relationships that were each assigned estimated useful lives of seven years. Preliminary goodwill recognized of \$12.2 million is primarily comprised of expansion of our product offerings into the smart access market as part of our *CommunityConnect* business as well as anticipated synergies from sale of such products to our existing customers. Goodwill and the acquired intangible assets are not deductible for tax purposes. Acquisition costs associated with this transaction of \$0.2 million were expensed as incurred.

Stratis

On August 31, 2020, we entered into an Agreement and Plan of Merger by which we acquired all the outstanding stock of Stratis IoT, Inc. ("Stratis"), a provider of software, technology and services that enable smart apartments and intelligent buildings, including a software-as-a-service ("SaaS") platform specifically built for the complexities of the multifamily and student housing industries. Aggregate purchase consideration was \$64.8 million, including deferred cash obligations of up to

\$6.0 million, which are subject to working capital adjustments and indemnification claims. The acquisition was financed with cash on hand.

Certain employees of Stratis at or near the transaction date were provided up to \$15.0 million in retention incentives tied to post acquisition employment service and the achievement of performance targets by June 30, 2024. The incentives, if achieved, will be in the form of incentive grants that may be settled in the future in stock or cash, at our option. As of December 31, 2020, we expect the employees to earn a payout of \$5.0 million under these awards, and we will update this estimate on a quarterly basis. As these awards are tied in part to employment services, we will record the estimated amount as stock-based compensation expense over the requisite service period.

The acquired identified intangible assets consisted of developed technology, client relationships, and trade names that were assigned estimated useful lives of seven, ten and three years, respectively. Preliminary goodwill recognized of \$50.4 million is primarily comprised of expansion of our product offerings into the smart devices and intelligent building market as part of our *CommunityConnect* business as well as anticipated synergies from sale of such products to our existing customers. Goodwill and the acquired intangible assets are not deductible for tax purposes. Acquisition costs associated with this transaction of \$0.6 million were expensed as incurred.

Modern Message

On January 22, 2020, we entered into an Agreement and Plan of Merger, by which we acquired all the outstanding stock of Modern Message Inc. ("Modern Message"), a provider of resident engagement solutions to the multifamily housing industry. Aggregate purchase consideration was \$64.7 million, including deferred cash obligations of up to \$2.0 million, which are subject to working capital adjustments and indemnification claims. In addition, the Agreement and Plan of Merger provided for retention incentives for certain executives in the form of restricted stock grants that are tied to post-acquisition employment service. These shares were granted during the first quarter of 2020, and had an aggregate grant date fair value of \$10.7 million which will be recognized as stock-based compensation over the requisite service period. The acquisition was financed with cash on hand.

The acquired identified intangible assets consisted of developed technology, client relationships, and trade names that were assigned estimated useful lives of five, nine and five years, respectively. Preliminary goodwill recognized of \$49.1 million is primarily comprised of anticipated synergies from the expansion of our resident engagement platform. Goodwill and the acquired intangible assets are not deductible for tax purposes. Acquisition costs associated with this transaction of \$0.6 million were expensed as incurred.

Purchase Consideration and Purchase Price Allocations

The estimated fair values of assets acquired and liabilities assumed for Stratis, Chirp and WhiteSky are provisional and are based primarily on the information available as of the acquisition date. We believe this information provides a reasonable basis for estimating the fair values of assets acquired and liabilities assumed, but we are awaiting additional information necessary to finalize those values including the fair value of intangible assets acquired. Therefore, the provisional measurements of fair value are subject to change, and such changes could be significant. We expect to finalize the valuations of these assets and liabilities as soon as practicable, but no later than one year from the respective acquisition closing dates. The components of the purchase consideration and the preliminary allocations of purchase price as of December 31, 2020 are as follows:

	Modern Message	Stratis	Chirp	WhiteSky
	(in thousands)			
Fair value of purchase consideration:				
Cash, net of cash acquired	\$ 62,748	\$ 58,948	\$ 11,249	\$ 58,894
Deferred obligations, net	1,998	5,802	1,201	6,016
Contingent consideration	—	—	4,300	—
Total fair value of purchase consideration	<u>\$ 64,746</u>	<u>\$ 64,750</u>	<u>\$ 16,750</u>	<u>\$ 64,910</u>
Fair value of net assets acquired:				
Restricted cash	\$ 3,248	\$ —	\$ —	\$ —
Accounts receivable	1,222	2,442	44	2,257
Other current assets	425	1,728	—	8,476
Property, equipment, and software	—	900	—	500
Deferred tax asset, net	—	—	—	1,068
Intangible assets:				
Developed product technologies	8,700	11,100	4,000	500
Client relationships	9,400	5,700	1,400	15,500
Trade names	700	150	—	1,000
Right-of-use assets	—	—	—	1,316
Goodwill	49,138	50,350	12,164	45,107
Other assets	—	—	8	1,807
Accounts payable and accrued liabilities	(886)	(2,392)	(334)	(8,129)
Client deposits held in restricted accounts	(3,451)	—	—	—
Deferred revenue	(198)	(2,612)	—	(3,489)
Other long-term liabilities	—	—	—	(1,003)
Deferred tax liability, net	(3,552)	(2,616)	(532)	—
Total fair value of net assets acquired	<u>\$ 64,746</u>	<u>\$ 64,750</u>	<u>\$ 16,750</u>	<u>\$ 64,910</u>

Acquisitions Prior to 2020

We completed nine acquisitions during fiscal years 2019 and 2018. A summary of each acquisition can be found in the table below:

	Date of Acquisition	Aggregate Purchase Price	Closing Cash Payment, Net of Cash Acquired	Net Tangible Assets Acquired (Liabilities Assumed)	Identified Intangible Assets	Goodwill Recognized
				(in thousands)		
ClickPay Services	April 2018	\$ 220,992	\$ 138,983	\$ (4,620)	\$ 52,700	\$ 172,912
Blu Trend	July 2018	\$ 8,500	\$ 8,500	\$ 343	\$ 4,270	\$ 3,887
LeaseLabs	September 2018	\$ 112,892	\$ 84,498	\$ 1,188	\$ 27,200	\$ 84,504
Rentlytics	October 2018	\$ 54,815	\$ 47,895	\$ 892	\$ 12,200	\$ 41,723
LeaseTerm Solutions	April 2019	\$ 26,512	\$ 23,417	\$ 587	\$ 7,300	\$ 18,625
Hipercept	July 2019	\$ 28,353	\$ 17,804	\$ 149	\$ 4,800	\$ 23,404
Simple Bills	July 2019	\$ 18,149	\$ 14,875	\$ (724)	\$ 9,300	\$ 9,573
IMS	December 2019	\$ 55,738	\$ 50,177	\$ 153	\$ 16,100	\$ 39,485
Buldium	December 2019	\$ 569,645	\$ 566,241	\$ (14,536)	\$ 113,000	\$ 471,181

Deferred Obligations and Contingent Consideration Activity

The following table presents changes in our deferred cash and stock obligations and contingent consideration for the fiscal years ended December 31, 2020 and 2019:

	Deferred Cash and Stock Obligations	Contingent Consideration	Total
		(in thousands)	
Balance at January 1, 2019	\$ 52,142	\$ 6,000	\$ 58,142
Additions, net of fair value discount	18,183	6,700	24,883
Cash payments	(25,215)	(5,963)	(31,178)
Settlements through common stock issued	(14,846)	—	(14,846)
Accretion expense	1,540	58	1,598
Change in fair value	—	(259)	(259)
Indemnification claims and other adjustments	(57)	—	(57)
Balance at December 31, 2019	31,747	6,536	38,283
Additions, net of fair value discount	15,017	4,300	19,317
Cash payments	(18,540)	—	(18,540)
Accretion expense	899	190	1,089
Change in fair value	—	(6,698)	(6,698)
Indemnification claims and other adjustments	(6,028)	—	(6,028)
Balance at December 31, 2020	\$ 23,095	\$ 4,328	\$ 27,423

In May 2019, in connection with our April 2018 acquisitions of NovelPay, LLC (“NovelPay”) and ClickPay Services, Inc. (collectively with NovelPay, “ClickPay”), we issued an aggregate of 154,281 shares of our common stock to the equity holders of ClickPay. These shares were subject to a holdback in respect of indemnification and post-closing purchase price adjustments pursuant to the acquisition agreements. In May 2020, these shares were settled net of holdback claims, resulting in the retirement of 9,994 previously issued shares of our common stock.

In September 2019, we settled a deferred equity obligation with regard to our September 2018 acquisition of LeaseLabs, Inc. through the issuance of 80,012 shares of our common stock.

Pro Forma Results of Acquisitions

The following table presents unaudited pro forma results of operations for the years ended December 31, 2020 and 2019, as if the aforementioned 2020 and 2019 acquisitions had occurred as of January 1, 2019 and January 1, 2018, respectively. The pro forma information includes the business combination accounting effects resulting from these acquisitions, including interest expense, tax expense or benefit, issuance of our common shares, and additional amortization resulting from the valuation of amortizable intangible assets. We prepared the pro forma financial information for the combined entities for comparative purposes only, and it is not indicative of what actual results would have been if the acquisitions had occurred at the beginning of the periods presented, or of future results.

	Year Ended December 31,	
	2020 Pro Forma	2019 Pro Forma
	(unaudited)	
	(in thousands, except per share amounts)	
Total revenue	\$ 1,194,199	\$ 1,090,140
Net income	\$ 46,851	\$ 10,548
Net income per share:		
Basic	\$ 0.48	\$ 0.11
Diluted	\$ 0.46	\$ 0.11

4. Revenue Recognition

The following table presents our revenues disaggregated by major revenue source. Sales and usage-based taxes are excluded from revenues.

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
On demand			
Property management	\$ 249,781	\$ 205,903	\$ 186,975
Resident services	520,744	421,075	350,457
Leasing and marketing	190,693	179,622	166,361
Asset optimization	164,620	146,976	129,916
Total on demand revenue	1,125,838	953,576	833,709
Professional and other	32,646	34,560	35,771
Total revenue	<u>\$ 1,158,484</u>	<u>\$ 988,136</u>	<u>\$ 869,480</u>

On Demand Revenue

We generate the majority of our on demand revenue by licensing SaaS solutions to our clients on a subscription basis. Our SaaS solutions are provided pursuant to contractual commitments that typically include a promise that we will stand ready, on a monthly basis, to deliver access to our technology platform over defined service delivery periods. These solutions represent a series of distinct services that are substantially the same and have the same pattern of transfer to the client. Revenue from our SaaS solutions is generally recognized ratably over the term of the arrangement.

Consideration for our on demand subscription services consist of fixed, variable and usage-based fees. We invoice a portion of our fees at the initial order date and then monthly or annually thereafter. Subscription fees are generally fixed based on the number of sites and the level of services selected by the client.

We sell certain usage-based services, primarily within our property management, resident services and leasing and marketing solutions, to clients based on a fixed rate per transaction. Revenues are calculated based on the number of transactions processed monthly and will vary from month to month based on actual usage of these transaction-based services over the contract term, which is typically one year in duration. The fees for usage-based services are not associated with every distinct service promised in the series of distinct services we provide our clients. As a result, we allocate variable usage-based fees only to the related transactions and recognize them in the month that usage occurs.

As part of our resident services offerings, we offer risk mitigation services to our clients by acting as an insurance agent, and we derive commission revenue from the sale of insurance products to our clients' residents. The commissions are based upon a percentage of the premium that the insurance company underwriting partners charge to the policyholder and are subject to forfeiture in instances where a policyholder cancels prior to the end of the policy. The overall insurance services we provide represent a single performance obligation that qualifies as a separate series. Our contracts with our underwriting partners also provide for contingent commissions to be paid to us in accordance with the agreements. The contingent commissions are not associated with every distinct service promised in the series of distinct insurance services we provide. We generally accrue and recognize contingent commissions monthly based on estimates of the variable factors identified in the terms of the applicable agreements.

Professional Services and Other Revenues

Professional services and other revenues generally consist of the fees we receive for providing implementation and consulting services, submeter and other equipment and ongoing maintenance of our existing on premise licenses.

Professional services revenues primarily consist of fees for implementation services, consulting services and training. Professional services are billed either on a fixed rate per hour (time) and materials basis or on a fixed price basis, and revenue is recognized over time as we perform the obligation or at completion. Professional services are typically sold in a combined contract with other on demand solutions but may be sold separately. For contracts with multiple performance obligations, we allocate the transaction price to separate services based on their relative standalone selling prices if a service is separately identifiable from other items in the bundled arrangement and if a client can benefit from it on its own or with other resources readily available to the client.

Other revenues consist of submeter equipment sales that include related installation services, sales of other equipment and on premise software sales. Submeter hardware and installation services are considered to be part of a single performance obligation due to the significance of the integration and interdependency of the installation services with the meter equipment. Our typical payment terms for submeter installations require a percentage of the overall transaction price to be paid up-front, with the remainder billed as progress payments. We recognize submeter revenue in proportion to the number of fully installed units completed to date as compared to the total contracted number of units to be provided and installed. For all other equipment sales, we generally recognize revenue when control of the hardware has transferred to our client, which occurs at a point in time, typically upon delivery to the client.

The majority of on premise revenue consists of maintenance renewals from clients who renew for an additional one-year term. Maintenance renewal revenue is recognized ratably over the service period based upon the standalone selling price of that service obligation.

Contract Balances

Contract assets generally consist of amounts recognized as revenue before they can be invoiced to clients or amounts invoiced to clients prior to the period in which the service is provided where the right to payment is subject to conditions other than just the passage of time. These contract assets are included in "Accounts receivable" in the accompanying Consolidated Financial Statements and related disclosures. Contract liabilities are comprised of billings or payments received from our clients in advance of performance under the contract. We refer to these contract liabilities as "Deferred revenue" in the accompanying Consolidated Financial Statements and related disclosures. We recognized \$131.6 million of on demand revenue during the year ended December 31, 2020, which was included in the line "Deferred revenue" in the accompanying Consolidated Balance Sheets as of the beginning of the period.

Contract Acquisition Costs

We capitalize certain commissions as incremental costs of obtaining a contract with a client if we expect to recover those costs. The commissions are capitalized and amortized over a period of benefit determined to be three years. Below is a summary of our capitalized commissions costs and their respective locations in the accompanying Consolidated Balance Sheets:

	<u>Balance Sheet Location</u>	<u>December 31,</u>	
		<u>2020</u>	<u>2019</u>
(in thousands)			
Capitalized commissions costs - current	Other current assets	\$ 11,595	\$ 9,870
Capitalized commissions costs - noncurrent	Other assets	10,319	8,463
Total capitalized commissions costs		\$ 21,914	\$ 18,333

Amortization of the capitalized commissions was \$12.0 million, \$8.7 million, and \$5.4 million for the years ended December 31, 2020, 2019, and 2018 respectively.

Remaining Performance Obligations

Certain clients commit to purchase our solutions for terms ranging from two to seven years. We expect to recognize approximately \$515.5 million of revenue in the future related to performance obligations for on demand contracts with an original duration greater than one year that were unsatisfied or partially unsatisfied as of December 31, 2020. Our estimate does not include amounts related to:

- professional and usage-based services that are billed and recognized based on services performed in a certain period;
- amounts attributable to unexercised contract renewals that represent a material right; or
- amounts attributable to unexercised client options to purchase services that do not represent a material right.

We expect to recognize revenue on approximately 70.5% of the remaining performance obligations over the next 24 months, with the remainder recognized thereafter. Revenue from remaining performance obligations for long-term professional service contracts as of December 31, 2020 was immaterial.

5. Accounts Receivable

Accounts receivable consisted of the following at December 31, 2020 and 2019:

	December 31,	
	2020	2019
	(in thousands)	
Trade receivables from clients	\$ 141,031	\$ 137,039
Insurance commissions receivable	18,922	16,359
Accounts receivable, gross	159,953	153,398
Less: Allowances	(14,272)	(10,271)
Accounts receivable, net	\$ 145,681	\$ 143,127

Trade receivables include amounts billed to our clients, primarily under our on demand subscription solutions. Trade receivables also includes amounts invoiced to clients prior to the period in which the service is provided and amounts for which we have met the requirements to recognize revenue in advance of invoicing the client. Insurance commissions receivable consists of commissions derived from the sale of insurance products to individuals and contingent commissions related to those policies. Contingent commissions are determined based on a calculation that considers earned agent commissions, a percent of premium retained by our underwriting partner, incurred losses, and profit retained by our underwriting partner during the time period. Contingent commissions receivables are recorded at their estimated net realizable value, based on estimates and considerations which include, but are not limited to, the historical and projected loss rates incurred by the underlying policies.

6. Property, Equipment, and Software

Property, equipment, and software consisted of the following at December 31, 2020 and 2019:

	December 31,	
	2020	2019
	(in thousands)	
Leasehold improvements	\$ 71,517	\$ 70,558
Data processing and communications equipment	95,502	77,358
Furniture, fixtures, and other equipment	40,673	35,856
Software	198,293	157,832
Property, equipment, and software, gross	405,985	341,604
Less: Accumulated depreciation and amortization	(224,774)	(178,322)
Property, equipment, and software, net	\$ 181,211	\$ 163,282

Depreciation and amortization expense for property, equipment, and purchased software was \$31.8 million, \$30.2 million, and \$28.5 million for the years ended December 31, 2020, 2019, and 2018, respectively.

The unamortized amount of capitalized software development costs was \$79.0 million and \$66.5 million at December 31, 2020 and 2019, respectively. Amortization expense related to capitalized software development costs totaled \$17.8 million, \$14.8 million, and \$11.9 million during the years ended December 31, 2020, 2019, and 2018, respectively.

7. Leases

We adopted ASU 2016-02 effective January 1, 2019 using the modified retrospective approach. Prior period amounts have not been adjusted and continue to be reported in accordance with our historic accounting under *Topic 840*. Our leases are primarily comprised of real estate leases of office facilities and equipment under operating leases that expire on various dates through 2033. In May 2015, we entered into a lease agreement for office space located in Richardson, Texas to serve as our corporate headquarters and data center. The lease is for a term of twelve years, beginning in 2016, and includes optional extension periods. The lease agreement contains provisions for rent escalations over the term of the lease and leasehold improvement incentives, and is currently classified as a finance lease.

The components of lease costs for the year ended December 31, 2020 were as follows:

	Year Ended December 31,	
	2020	2019
	(in thousands)	
Operating lease cost	\$ 16,842	\$ 13,949
Finance lease cost:		
Depreciation of finance lease asset	\$ 3,969	\$ 3,969
Interest on lease liabilities	4,074	4,221
Total finance lease cost	<u>\$ 8,043</u>	<u>\$ 8,190</u>

Rent expense for short-term leases for the year ended December 31, 2020 and 2019 was not material. Rent expense for operating leases for the year ended December 31, 2018 was \$15.8 million.

Supplemental balance sheet information related to leases at December 31, 2020, was as follows:

	Operating Leases	Finance Leases	Total Leases
	(in thousands, except lease term and discount rate)		
Right-of-use assets	\$ 59,312	\$ 51,325	\$ 110,637
Lease liabilities, current ⁽¹⁾	\$ 14,021	\$ 3,859	\$ 17,880
Lease liabilities, net of current portion	50,512	70,615	121,127
Total lease liabilities	<u>\$ 64,533</u>	<u>\$ 74,474</u>	<u>\$ 139,007</u>
Weighted average remaining term (in years)	5.2	12.6	
Weighted average discount rate	4.8 %	5.4 %	

⁽¹⁾ Included in the line "Accrued expenses and other current liabilities" in the accompanying Consolidated Balance Sheets.

Supplemental balance sheet information related to leases at December 31, 2019, was as follows:

	Operating Leases	Finance Leases	Total Leases
	(in thousands, except lease term and discount rate)		
Right-of-use assets	\$ 67,700	\$ 54,241	\$ 121,941
Lease liabilities, current ⁽¹⁾	\$ 12,873	\$ 3,254	\$ 16,127
Lease liabilities, net of current portion	59,822	73,491	133,313
Total lease liabilities	<u>\$ 72,695</u>	<u>\$ 76,745</u>	<u>\$ 149,440</u>
Weighted average remaining term (in years)	6.1	13.7	
Weighted average discount rate	4.8 %	5.4 %	

⁽¹⁾ Included in the line "Accrued expenses and other current liabilities" in the accompanying Consolidated Balance Sheets.

Supplemental cash flow information related to leases for the twelve months ended December 31, 2020 and 2019, was as follows, in thousands:

	Year Ended December 31,	
	2020	2019
Cash payments for lease liabilities within operating activities:		
Operating leases	\$ 17,495	\$ 14,890
Finance leases	\$ 4,074	\$ 4,221

At December 31, 2020, future maturities of lease liabilities due under these lease agreements were as follows for the years ending December 31, in thousands:

	Operating Leases	Finance Leases	Total Leases
2021	\$ 14,612	\$ 7,183	\$ 21,795
2022	14,920	7,867	22,787
2023	13,194	7,972	21,166
2024	11,097	8,077	19,174
2025	9,743	8,016	17,759
Thereafter	9,801	64,289	74,090
Total undiscounted lease payments	73,367	103,404	176,771
Present value adjustment	(8,834)	(28,930)	(37,764)
Present value of lease payments	\$ 64,533	\$ 74,474	\$ 139,007

8. Goodwill and Identified Intangible Assets

Changes in the carrying amount of goodwill during the years ended December 31, 2020 and 2019, were as follows, in thousands:

Balance at January 1, 2019	\$ 1,053,119
Goodwill acquired	558,977
Measurement period and other adjustments	(347)
Balance at December 31, 2019	1,611,749
Goodwill acquired	156,948
Measurement period and other adjustments	2,338
Balance at December 31, 2020	\$ 1,771,035

We completed our annual goodwill impairment test during the fourth quarter of the fiscal year ended December 31, 2020. Based on the results of the qualitative analysis, we concluded that there was no impairment of goodwill. No impairment of goodwill was recognized during 2019 or 2018.

Intangible assets consisted of the following at December 31, 2020 and 2019:

	December 31, 2020			December 31, 2019		
	Carrying Amount	Accumulated Amortization	Net	Carrying Amount	Accumulated Amortization	Net
(in thousands)						
Finite-lived intangible assets:						
Developed technologies	\$ 302,254	\$ (166,863)	\$ 135,391	\$ 277,030	\$ (125,537)	\$ 151,493
Client relationships	372,438	(180,647)	191,791	341,438	(140,044)	201,394
Trade names	27,407	(19,142)	8,265	25,557	(16,928)	8,629
Non-compete agreements	5,273	(3,208)	2,065	5,273	(2,186)	3,087
Total finite-lived intangible assets	707,372	(369,860)	337,512	649,298	(284,695)	364,603
Indefinite-lived intangible assets:						
Trade names	7,367	—	7,367	8,393	—	8,393
Total intangible assets	\$ 714,739	\$ (369,860)	\$ 344,879	\$ 657,691	\$ (284,695)	\$ 372,996

Amortization expense for finite-lived intangible assets totaled \$85.2 million, \$66.0 million, and \$59.8 million during the years ended December 31, 2020, 2019, and 2018, respectively.

The following table sets forth the estimated amortization of intangible assets for the years ending December 31, in thousands:

2021	\$ 80,714
2022	\$ 68,034
2023	\$ 59,645
2024	\$ 54,451
2025	\$ 21,173

For the year ended December 31, 2020, we recognized an impairment charge of \$1.0 million related to certain indefinite-lived trade names associated with a previous acquisition based on the excess of the carrying value of these assets over their estimated fair values. For the year ended December 31, 2019, we recorded an impairment charge of \$2.0 million related to certain developed technology and customer relationship intangible assets associated with our international operations based on the excess of the carrying value of these assets over their estimated fair values. Fair values were estimated using a standard valuation methodology (the income approach) incorporating management's assumptions on revenue growth rates and discount rates. There was no remaining carrying value for these intangible assets subsequent to the impairment charges in 2020 and 2019. The method utilized to estimate the fair value incorporated significant unobservable inputs, and we concluded that the measurement should be classified within Level 3 of the fair value hierarchy.

The impairment charges for the period ended December 31, 2020 are included in "Sales and marketing", and the impairment charges for the period ended 2019 are included in "Cost of revenue" and "Sales and marketing" in the accompanying Consolidated Statements of Operations.

9. Debt

On September 5, 2019, we entered into a \$1.2 billion Amended and Restated Credit Agreement (the "Amended Credit Facility") to amend and restate our previous credit facility, originally dated as of September 30, 2014 (as previously amended, the "2014 Credit Facility"). The Amended Credit Facility was entered into by and among the Company, the lenders from time to time party thereto (the "Lenders"), and Wells Fargo Bank, National Association, as administrative agent (the "Agent").

The Amended Credit Facility extends the maturity date of the 2014 Credit Facility from February 27, 2022 to September 5, 2024 (subject to early maturity provisions in certain circumstances, as described below), reduces our borrowing costs, provides additional borrowing capacity, and increases covenant flexibility. The Amended Credit Facility provides for the following:

Revolving Facility: The Amended Credit Facility provides \$600.0 million in aggregate commitments for secured revolving loans, with sublimits of \$10.0 million for the issuance of letters of credit and \$20.0 million for swingline loans ("Revolving Facility").

Initial Term Loan: An initial term loan of \$300.0 million was borrowed on the closing date for the Amended Credit Facility (the "Term Loan"). The proceeds of the Term Loan were used to repay the term loan balances outstanding under the

2014 Credit Facility.

Delayed Draw Term Loan: In December 2019, we drew funds of \$300.0 million available under the delayed draw term loan (“Delayed Draw Term Loan”).

Revolving loans under the Amended Credit Facility may be voluntarily prepaid and re-borrowed. Principal payments on the Term Loan and Delayed Draw Term Loan (collectively, the “Term Loans”) are due in quarterly installments equal to an initial amount of \$3.8 million, which increased to \$7.5 million on December 31, 2020, increases to \$11.3 million beginning on December 31, 2022, and increases to \$15.0 million beginning on December 31, 2023. Once repaid or prepaid, the Term Loans may not be re-borrowed. All outstanding principal and accrued but unpaid interest is due, and the commitments for the Revolving Facility terminate, on the maturity date. The Term Loans are subject to mandatory repayment requirements in the event of certain asset sales or if certain insurance or condemnation events occur, subject to customary reinvestment provisions. We may prepay the Term Loans in whole or in part at any time without premium or penalty.

Accordion Feature: The Amended Credit Facility also allows us, subject to certain conditions, to request additional term loan commitments and/or additional revolving commitments in an aggregate principal amount of up to the greater of \$250.0 million or 100% of consolidated EBITDA (as defined within the agreement) for the most recent four fiscal quarters, plus an amount that would not cause our Senior Leverage Ratio (as defined below) to exceed 3.50 to 1.00.

All outstanding revolving loans and term loans under the Amended Credit Facility mature on September 5, 2024. If on or prior to August 16, 2022, we have failed to demonstrate to the Agent that we would be in compliance with each financial covenant after giving pro forma effect to the repayment in full of the 2022 Convertible Notes which mature on November 15, 2022, then the Amended Credit Facility will mature on August 16, 2022. In addition, if on any business day during the period beginning on August 16, 2022 until the 2022 Convertible Notes are paid in full, our available liquidity is less than an amount equal to 125% of the outstanding principal amount of the 2022 Convertible Notes, then amounts outstanding under the Amended Credit Facility are due the next business day.

At our option, amounts outstanding under the Amended Credit Facility accrue interest at a per annum rate equal to either LIBOR, plus a margin ranging from 1.00% to 2.00%, or the Base Rate, plus a margin ranging from 0.00% to 1.00% (“Applicable Margin”). The base LIBOR is, at our discretion, equal to either one, three, or six month LIBOR. The Base Rate is defined as the greater of Wells Fargo’s prime rate, the Federal Funds Rate plus 0.50%, or one month LIBOR plus 1.00%. In each case, the Applicable Margin is determined based upon our Net Leverage Ratio, as defined below. Accrued interest on amounts outstanding under the Amended Credit Facility is due and payable quarterly, in arrears, for loans bearing interest at the Base Rate and at the end of the applicable interest period in the case of loans bearing interest at the adjusted LIBOR. Unused commitments under the Revolving Facility are subject to a commitment fee to be paid in arrears on the last day of each fiscal quarter, ranging from 0.15% to 0.35% per annum determined based on our Net Leverage Ratio, as defined below.

Certain of our existing and future material domestic subsidiaries are required to guarantee our obligations under the Amended Credit Facility, and the obligations under the Amended Credit Facility are secured by substantially all of our assets and the assets of the subsidiary guarantors. The Amended Credit Facility contains customary affirmative and negative covenants. The negative covenants limit our and our subsidiaries’ ability to, among other things, incur additional indebtedness, grant liens on our assets, make investments including acquisitions, dispose of assets, or pay dividends or distributions or repurchase our stock, subject in each case to customary exceptions and qualifications. Our covenants also include requirements that we comply with the following financial ratios:

Consolidated Net Leverage Ratio: The Consolidated Net Leverage Ratio (“Net Leverage Ratio”), defined as a ratio of consolidated funded indebtedness less qualified cash and cash equivalents, each as defined in the Amended Credit Facility, on the last day of each fiscal quarter to the sum of the four previous consecutive fiscal quarters’ consolidated EBITDA, as defined in the Amended Credit Facility, of no greater than 5.00 to 1.00 (or, at our election following certain material acquisitions, 5.50 to 1.00).

Consolidated Interest Coverage Ratio: The Consolidated Interest Coverage Ratio (“Interest Coverage Ratio”), defined as a ratio of the sum of the four previous fiscal quarters’ consolidated EBITDA to our interest expense for the same period, excluding non-cash interest attributable to the Convertible Notes, as defined below, of no less than 3.00 to 1.00.

Consolidated Senior Secured Net Leverage Ratio: The Consolidated Senior Secured Net Leverage Ratio (“Senior Leverage Ratio”), defined as a ratio of consolidated senior secured indebtedness less qualified cash and cash equivalents, each as defined in the Amended Credit Facility, on the last day of each fiscal quarter to the sum of the four previous consecutive fiscal quarters’ consolidated EBITDA, of no greater than 3.75 to 1.00 (or, at our election following certain material acquisitions, 4.25 to 1.00).

As of December 31, 2020, we were in compliance with the covenants under our Amended Credit Facility.

The Amended Credit Facility contains customary events of default, subject to customary cure periods for certain defaults. In the event of a default, the obligations under the Amended Credit Facility could be accelerated, the applicable interest rate

could be increased, the loan commitments could be terminated, our subsidiary guarantors could be required to pay the obligations in full and our lenders would be permitted to exercise remedies with respect to all of the collateral that is securing the Amended Credit Facility. Any such default that is not cured or waived could have a material adverse effect on our liquidity and financial condition.

As of December 31, 2020 and 2019 we had \$600.0 million and \$370.0 million, respectively, of available revolving credit under the credit facilities in effect at these dates. There were no outstanding revolving borrowings at December 31, 2020. Principal outstanding for the Revolving Facility was \$230.0 million at December 31, 2019. We incur commitment fees on the unused portion of the Revolving Facility. The carrying value of the Revolving Facility approximates its fair value.

Unamortized debt issuance costs for the revolving facilities in effect at December 31, 2020 and 2019 were \$2.1 million and \$2.7 million, respectively, and are included in the line "Other assets" in the Consolidated Balance Sheets.

Principal outstanding and unamortized debt issuance costs for the term loans were as follows at December 31, 2020 and 2019:

	December 31, 2020	December 31, 2019
	Term Loans	
	(in thousands)	
Principal outstanding	\$ 577,500	\$ 596,250
Unamortized issuance costs	(719)	(942)
Unamortized discount	(951)	(1,245)
Carrying value	<u>\$ 575,830</u>	<u>\$ 594,063</u>

The fair value of the term loans on December 31, 2020 and 2019 was \$516.3 million and \$582.7 million, respectively. The fair value was estimated by discounting future cash flows using prevailing market interest rates on debt with similar creditworthiness, terms, and maturities. We concluded that this fair value measurement should be categorized within Level 2.

Future maturities of principal under the Term Loans are as follows for the years ending December 31, in thousands:

	Term Loans
2021	\$ 30,000
2022	33,750
2023	48,750
2024	465,000
	<u>\$ 577,500</u>

Convertible Notes

2025 Convertible Notes

In May 2020, we issued convertible senior notes in an aggregate principal amount of \$345.0 million (including the underwriters' exercise in full of their over-allotment option of \$45.0 million) which will mature on May 15, 2025 (the "2025 Convertible Notes"). The 2025 Convertible Notes were issued pursuant to an Indenture, dated May 22, 2020, by and between us and U.S. Bank National Association, as Trustee, as supplemented by the First Supplemental Indenture (as supplemented, the "Indenture"). We received net proceeds from the offering of approximately \$337.5 million after adjusting for debt issuance costs, including the underwriting discount.

The 2025 Convertible Notes accrue interest at a rate of 1.50% per year until maturity, payable semi-annually in arrears on May 15 and November 15 of each year, beginning on November 15, 2020. On or after February 15, 2025, until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert at their option all or any portion of their 2025 Convertible Notes at the then applicable conversion rate. The 2025 Convertible Notes are convertible at an initial rate of 13.04 shares of our common stock per \$1,000 principal amount of 2025 Convertible Notes (equivalent to an initial conversion price of approximately \$76.70 per share of our common stock). The conversion rate is subject to customary adjustments for certain events as described in the Indenture. Upon conversion, we will pay or deliver, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election. Upon any conversion of the 2025 Convertible Notes, it is our current intent to settle the first \$1,000 of conversion value for each \$1,000 principal amount of the 2025 Convertible Notes through combination settlement, which involves repayment of the principal portion in cash and any excess of the conversion value over the principal amount in shares of our common stock. Based on our closing stock price of \$87.24 on December 31, 2020, the if-converted value exceeded the aggregate principal amount of the 2025 Convertible Notes by \$47.4 million.

Holders may convert all or any portion of their 2025 Convertible Notes, at their option, prior to the close of business on the business day immediately preceding February 15, 2025 only under the following circumstances:

- during any calendar quarter commencing after the calendar quarter ending on September 30, 2020 (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day;
- during the five business day period after any five consecutive trading day period (the "Measurement Period") in which the trading price per \$1,000 principal amount of the 2025 Convertible Notes for each trading day of the Measurement Period was less than 98% of the product of the last reported sales price of our common stock and the conversion rate on each such trading day;
- if we call any or all of the 2025 Convertible Notes for redemption at any time prior to the close of business on the second scheduled trading day immediately preceding the redemption date; or
- upon the occurrence of specified corporate events, as described in the Indenture.

On or after May 20, 2023, we may redeem for cash, at our option, all or part of the 2025 Convertible Notes if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) ending on, and including, the trading day immediately preceding the date on which we provide notice of redemption, is greater than or equal to 130% of the conversion price on each applicable trading day. There is no sinking fund provided for the 2025 Convertible Notes.

In accounting for the issuance of the 2025 Convertible Notes, we separated the 2025 Convertible Notes into liability and equity components. We allocated \$288.0 million of the 2025 Convertible Notes to the liability component, and \$57.0 million to the equity component. The portion allocated to equity is presented in stockholders' equity net of \$3.9 million of related deferred taxes and of allocated issuance cost as described below. The excess of the principal amount of the liability component over its carrying amount is amortized to interest expense over the term of the 2025 Convertible Notes using the effective interest method. The equity component will not be remeasured as long as it continues to meet the conditions for equity classification.

We incurred issuance costs of \$7.5 million related to the 2025 Convertible Notes. Issuance costs were allocated to the liability and equity components based on their relative values. Issuance costs attributable to the liability component are being amortized to interest expense over the term of the 2025 Convertible Notes, and issuance costs attributable to the equity component are included along with the equity component in stockholders' equity.

2022 Convertible Notes

In May 2017, we issued convertible senior notes with aggregate principal of \$345.0 million (including the underwriters' exercise in full of their over-allotment option of \$45.0 million) which mature on November 15, 2022 (the "2022 Convertible Notes"). The 2022 Convertible Notes were issued under an indenture dated May 23, 2017 ("Indenture"), by and between us and Wells Fargo Bank, N.A., as Trustee. We received net proceeds from the offering of approximately \$304.2 million after adjusting for debt issuance costs, including the underwriting discount, the net cash used to purchase the Note Hedges and the proceeds from the issuance of the Warrants which are discussed below.

The 2022 Convertible Notes accrue interest at a rate of 1.50%, payable semi-annually on May 15 and November 15 of each year. On or after May 15, 2022, and until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert their 2022 Convertible Notes at their option. The 2022 Convertible Notes are convertible at an initial rate of 23.84 shares per \$1,000 of principal (equivalent to an initial conversion price of approximately \$41.95 per share of our common stock). The conversion rate is subject to customary adjustments for certain events as described in the Indenture. Upon conversion, we will pay or deliver, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election. It is our current intent to settle conversions of the 2022 Convertible Notes through combination settlement, which involves repayment of the principal portion in cash and any excess of the conversion value over the principal amount in shares of our common stock. Based on our closing stock price of \$87.24 on December 31, 2020, the if-converted value exceeded the aggregate principal amount of the 2022 Convertible Notes by \$372.5 million.

We may not redeem the 2022 Convertible Notes prior to their maturity date, and no sinking fund is provided for them. Holders may convert their 2022 Convertible Notes, at their option, prior to May 15, 2022 only under the following circumstances:

- during any calendar quarter commencing after the calendar quarter ending on June 30, 2017 (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day;

- during the five business day period after any five consecutive trading day period (the “Measurement Period”) in which the trading price per \$1,000 principal amount of the Convertible Notes for each trading day of the Measurement Period was less than 98% of the product of the last reported sales price of our common stock and the conversion rate on each such trading day; or
- upon the occurrence of specified corporate events, as defined in the Indenture.

In accounting for the issuance of the 2022 Convertible Notes, we separated the 2022 Convertible Notes into liability and equity components. We allocated \$282.5 million of the Convertible Notes to the liability component, and \$62.5 million to the equity component. The excess of the principal amount of the liability component over its carrying amount is amortized to interest expense over the term of the 2022 Convertible Notes using the effective interest method. The equity component will not be remeasured as long as it continues to meet the conditions for equity classification.

We incurred issuance costs of \$9.8 million related to the 2022 Convertible Notes. Issuance costs were allocated to the liability and equity components based on their relative values. Issuance costs attributable to the liability component are being amortized to interest expense over the term of the 2022 Convertible Notes, and issuance costs attributable to the equity component are included along with the equity component in stockholders' equity.

For both the 2022 and 2025 Convertible Notes (collectively referred to as the “Convertible Notes”), if we undergo a fundamental change (as defined in the respective Indentures), subject to certain conditions, holders may require us to repurchase for cash all or any portion of their Convertible Notes. The fundamental change repurchase price is equal to 100% of the principal amount of the respective Convertible Notes to be repurchased, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date. If holders elect to convert their Convertible Notes in connection with a make-whole fundamental change, as described in the Indentures, we will, to the extent provided in the Indentures, increase the conversion rate applicable to the Convertible Notes.

The Convertible Notes are senior unsecured obligations and rank senior in right of payment to any of our indebtedness that is expressly subordinated in right of payment to the Convertible Notes and equal in right of payment to any of our existing and future unsecured indebtedness that is not subordinated. The Convertible Notes are effectively junior in right of payment to any of our secured indebtedness to the extent of the value of assets securing such indebtedness and structurally junior to all existing and future indebtedness and other liabilities, including trade payables, of our subsidiaries. The Indentures do not limit the amount of debt that we or our subsidiaries may incur. The Convertible Notes are not guaranteed by any of our subsidiaries.

The Indentures do not contain any financial or operating covenants or restrictions on the payment of dividends, the incurrence of indebtedness, or the issuance or repurchase of securities by us or any of our subsidiaries. The Indentures contain customary events of default with respect to the Convertible Notes and provide that upon certain events of default occurring and continuing, the Trustee may, and the Trustee at the request of holders of at least 25% in principal amount of the Convertible Notes shall, declare all of principal and accrued and unpaid interest, if any, of the Convertible Notes to be due and payable. In case of certain events of bankruptcy, insolvency or reorganization involving us or a significant subsidiary, all of the principal of and accrued and unpaid interest on the Convertible Notes will automatically become due and payable.

The net carrying amounts of the Convertible Notes at December 31, 2020 and 2019, were as follows:

	December 31, 2020		December 31, 2019
	2022 Convertible Notes	2025 Convertible Notes	2022 Convertible Notes
	(in thousands)		
Liability component:			
Principal amount	\$ 344,995	\$ 345,000	\$ 344,995
Unamortized discount	(23,680)	(51,110)	(35,287)
Unamortized debt issuance costs	(3,034)	(5,607)	(4,520)
Convertible notes, net	<u>\$ 318,281</u>	<u>\$ 288,283</u>	<u>\$ 305,188</u>
Equity component, net of issuance costs and deferred tax:	\$ 61,390	\$ 51,821	\$ 61,390

The estimated fair values of the 2022 and 2025 Convertible Notes at December 31, 2020 were \$723.9 million and \$443.7 million, respectively. The estimated fair value of the 2022 Convertible Notes at December 31, 2019 was \$486.7 million. The estimated fair values are based on quoted market prices as of the last trading day of the year; however, the Convertible Notes have only a limited trading volume and as such this fair value estimate is not necessarily the value at which the Convertible Notes could be retired or transferred. We concluded this measurement should be classified within Level 2.

The following table sets forth total interest expense related to the Convertible Notes for the year ended December 31, 2020, 2019, and 2018:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Contractual interest expense	\$ 8,339	\$ 5,175	\$ 5,175
Amortization of debt discount	17,497	10,948	10,322
Amortization of debt issuance costs	2,170	1,402	1,322
Total interest expense	<u>\$ 28,006</u>	<u>\$ 17,525</u>	<u>\$ 16,819</u>

The effective interest rate of the liability component for each of the years ended December 31, 2020, 2019, and 2018 was 5.87% for the 2022 Convertible Notes. The effective interest rate of the liability component for the year ended December 31, 2020 was 5.74% for the 2025 Convertible Notes.

Convertible Note Hedges and Warrants

On May 22, 2020, we entered into privately negotiated option contracts to purchase hedge instruments (the "Capped Calls") initially covering approximately 4.5 million shares of our common stock at a cost of \$39.4 million. The Capped Calls are subject to anti-dilution provisions substantially similar to those of the 2025 Convertible Notes, have a strike price of approximately \$76.70 per share, are subject to a cap price of \$118.00 per share, are exercisable by us upon any conversion under the 2025 Convertible Notes, and expire on May 15, 2025. The Capped Calls are transactions that are separate from the terms of the 2025 Convertible Notes, and holders of the 2025 Convertible Notes have no rights with respect to the Capped Calls.

On May 23, 2017, we entered into privately negotiated transactions to purchase hedge instruments ("Note Hedges"), covering approximately 8.2 million shares of our common stock at a cost of \$62.5 million. The Note Hedges are subject to anti-dilution provisions substantially similar to those of the Convertible Notes, have a strike price of approximately \$41.95 per share, are exercisable by us upon any conversion under the Convertible Notes, and expire on November 15, 2022.

The Capped Calls and Note Hedges (collectively referred to as the "Note Hedge Instruments") are generally expected to reduce the potential dilution to our common stock (or, in the event the conversion is settled in cash, to reduce our cash payment obligation) in the event that at the time of conversion our stock price exceeds the conversion price under our previously issued Convertible Notes. The costs of the Note Hedge Instruments are expected to be tax deductible as original issue discounts over the lives of the respective convertible notes, as the Note Hedge Instruments represent integrated debt instruments for tax purposes. As the Note Hedge Instruments meet certain accounting criteria, they are recorded in stockholders' equity as a reduction of additional paid-in-capital and are not accounted for as derivatives. The fair values of the Note Hedge Instruments are not remeasured each reporting period.

On May 23, 2017, we also sold warrants for the purchase of up to 8.2 million shares of our common stock for aggregate proceeds of \$31.5 million ("Warrants"). The Warrants have a strike price of \$57.58 per share and are subject to customary anti-dilution provisions. The Warrants will expire in ratable portions on a series of expiration dates commencing on February 15, 2023. The proceeds from the issuance of the Warrants were recorded as an increase to our additional paid-in capital in the accompanying Consolidated Financial Statements.

The Note Hedges are transactions that are separate from the terms of the 2022 Convertible Notes and the Warrants, and holders of the 2022 Convertible Notes and the Warrants have no rights with respect to the Note Hedges. The Warrants are similarly separate in both terms and rights from the Note Hedges and the 2022 Convertible Notes.

10. Stock-based Expense and Employee Benefits

On June 3, 2020, our stockholders approved the 2020 Equity Incentive Plan ("2020 Plan"). The 2020 Plan provides for the grant of incentive stock options, non-qualified stock options, restricted stock, restricted stock units, stock appreciation rights, performance units and performance shares. The 2020 Plan replaced our 2010 Equity Incentive Plan (the "2010 Plan"), which previously replaced our Amended and Restated 1998 Stock Incentive Plan. No further awards will be made under the 2010 Plan after the effective date of the 2020 Plan. Additionally, any awards that expire or are forfeited under the 2010 Plan will become available for issuance under the 2020 Plan.

We also grant awards to our directors which are generally in the form of restricted stock. The awards granted to directors generally vest ratably over a period of four quarters; however, should a director leave the board, we have the right to repurchase shares as if the awards vested on a pro rata basis.

Our board of directors periodically approves increases to the number of shares of common stock reserved for issuance under the 2020 Plan. At December 31, 2020 there were 9.5 million remaining shares of our common stock reserved for awards under the 2020 Plan. The 2020 Plan permits the exercise of stock options and grants of restricted stock to be fulfilled through the issuance of previously authorized but unissued common stock shares, or the reissuance of shares held in treasury. We use both unissued common stock shares and treasury shares when stock options are exercised or restricted stock is granted.

The following table represents a consolidated summary of our stock-based plan activity:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Total compensation expense recognized	\$ 59,274	\$ 62,563	\$ 50,641
Cash proceeds related to stock-based expense transactions	\$ 14,575	\$ 5,833	\$ 13,163
Aggregate grant-date fair value of shares and stock options that vested during the year	\$ 66,896	\$ 49,229	\$ 49,711

Total unrecognized compensation expense related to our stock-based expense plans, including our contingent share awards, was \$83.3 million at December 31, 2020, and is expected to be recognized over a weighted average period of 2.0 years.

Stock Option Awards

Stock options granted generally vested ratably over a period of twelve quarters. Expense was recognized over the requisite service period in a manner that reflected the vesting of the related awards. Awards under the plan generally expire ten years from the date of the grant. All outstanding options were granted at exercise prices equal to or exceeding our estimate of the fair market value of our common stock at the date of grant.

The following table summarizes stock option transactions under our Stock Incentive Plan and Equity Incentive Plan:

	Number of Shares	Range of Exercise Prices	Weighted Average Exercise Price
Balance as of January 1, 2018	2,200,465	\$ 4.28 - \$ 29.50	\$ 19.26
Exercised	(658,564)	4.92 - 29.50	20.00
Forfeited/cancelled	(11,329)	15.19 - 25.70	18.85
Expired	(2,250)	7.00 - 7.00	7.00
Balance at December 31, 2018	1,528,322	4.28 - 29.50	18.96
Exercised	(305,030)	4.28 - 29.50	19.12
Forfeited/cancelled	(725)	18.79 - 20.34	19.79
Other	2,585	17.67 - 27.18	22.59
Balance at December 31, 2019	1,225,152	7.50 - 29.50	18.94
Exercised	(796,750)	7.50 - 29.50	18.29
Forfeited/cancelled	(3,342)	17.75 - 21.54	19.57
Expired	(600)	27.18 - 27.18	27.18
Other	(4,750)	9.00 - 24.03	15.02
Balance at December 31, 2020	419,710	\$15.19 - \$ 29.50	\$ 20.23

The below table provides information regarding outstanding stock options which were fully vested and exercisable at December 31:

	2020	2019
	Options Fully Vested & Exercisable	Options Fully Vested & Exercisable
Number of options	419,710	1,225,152
Weighted-average remaining contractual term (in years)	3.3	3.1
Weighted-average exercise price	\$ 20.23	\$ 18.94
Aggregate intrinsic value, in thousands	\$ 28,124	\$ 42,650

The aggregate intrinsic value of options exercised during the years ended December 31, 2020, 2019, and 2018, was \$40.9 million, \$12.3 million, and \$23.0 million, respectively. There were no stock options awarded during the years ended December 31, 2020, 2019, and 2018.

Restricted Stock Awards

Restricted stock awards entitle the holder to receive shares of our common stock as the award vests. Grants of restricted stock are classified as time-based, market-based, or performance-based depending on the vesting criteria of the award.

Time-based restricted stock awards:

Time-based awards granted generally vest ratably over a period of twelve quarters with the first vesting on the first day of the second calendar quarter immediately following the grant date. The fair value of time-based restricted stock awards is based on the closing price of our common stock on the date of grant. Compensation expense for time-based restricted stock awards is recognized over the vesting period on a straight-line basis.

A summary of time-based restricted stock award activity is presented in the table below.

	Number of Shares	Weighted Average Grant- Date Fair Value
Non-vested shares at January 1, 2018	1,755,988	\$ 30.05
Granted	1,289,866	53.26
Vested	(1,017,367)	31.92
Forfeited/cancelled	(242,675)	40.70
Non-vested shares at December 31, 2018	1,785,812	44.34
Granted	880,594	60.37
Vested	(1,036,973)	42.22
Forfeited/cancelled	(261,416)	52.53
Non-vested shares at December 31, 2019	1,368,017	54.70
Granted	1,126,377	61.73
Vested	(924,214)	53.75
Forfeited/cancelled	(299,261)	57.91
Non-vested shares at December 31, 2020	<u>1,270,919</u>	\$ 60.84

Market-based restricted stock awards:

Market-based restricted stock awards become eligible for vesting upon the achievement of specific market-based conditions based on the per share price of our common stock. Shares that become eligible to vest, if any, become Eligible Shares. Eligible Shares generally vest ratably over a period of four quarters, with the first vesting on the first day of the quarter immediately after becoming Eligible Shares. Vesting is conditional upon the recipient remaining a service provider to us, as defined in the plan document, through each applicable vesting date.

A summary of market-based restricted stock award activity is presented in the table below.

	Number of Shares	Weighted Average Grant- Date Fair Value
Balance as of January 1, 2018	690,165	\$ 22.76
Granted	517,364	35.66
Vested	(677,857)	23.02
Balance at December 31, 2018	529,672	35.03
Granted	489,948	38.24
Vested	(144,455)	33.37
Forfeited/cancelled	(36,703)	35.66
Balance at December 31, 2019	838,462	37.17
Granted	461,948	30.65
Vested	(421,576)	35.06
Forfeited/cancelled	(226,912)	35.89
Balance at December 31, 2020	<u>651,922</u>	\$ 34.36

We estimate the fair value of market-based restricted stock awards using a discrete model to analyze the fair value of the subject shares. The discrete model utilizes multiple stock price-paths, through the use of a Monte Carlo simulation, which are then analyzed to determine the fair value of the subject shares. The weighted average of assumptions used to value awards granted during 2020, 2019, and 2018 were as follows:

	2020	2019	2018
Risk-free interest rate	0.7 %	2.5 %	2.5 %
Expected volatility	33.0 %	29.6 %	31.2 %

Risk-free interest rate. We estimate the risk-free rate from the U.S. Treasury strip note yield curve for the period corresponding to the expiration date of the grant as of the valuation date.

Expected volatility. We estimate expected volatility based on our historic and implied volatility rate.

Expense related to the market-based restricted stock awards is recognized over the requisite service period using the graded-vesting attribution method. The requisite service period is a measure of the expected time to achieve the specified market condition plus the time-based vesting period. The expected time to achieve the market condition is estimated utilizing a Monte Carlo simulation, considering only those stock price-paths in which the market condition is achieved. The estimated requisite service period for market-based restricted stock shares issued in 2020 ranged from three to twelve quarters. Market-based restricted stock awards granted in 2019 had requisite service periods ranging from two to twelve quarters.

Contingent share awards:

Certain of our acquisitions include contingent share award agreements for obligations denominated in fixed dollar amounts, subject to the achievement of performance criteria for periods ranging from 2021 through 2024 and continued post-acquisition employment services. As of December 31, 2020, the estimated intrinsic value of these awards was \$18.2 million. The number of contingently issuable restricted shares that may be granted in the future will be based on the satisfaction of the underlying performance criteria and our share price on the date of satisfaction. These awards typically vest over four quarters beginning the first quarter subsequent to the satisfaction of the performance criteria, or cliff vest at the end of the performance criteria measurement periods. These awards are accounted for under the liability method. We reassess the likelihood of the performance criteria being met at each reporting date based on our expectations of future operating results and adjust the total compensation expense to be recognized over the expected vesting period. A fair value liability is recognized as compensation expense is recorded and is included within "Accrued expenses and other current liabilities" and "Other long-term liabilities" within our Consolidated Balance Sheets. Upon the issuance of these restricted shares the fair value liability will be reclassified to additional paid-in capital.

For the periods ended December 31, 2020 and 2019, the total compensation expense recognized for these liability awards was \$4.9 million and \$2.2 million, respectively. Total unrecognized compensation expense for these awards was \$11.9 million at December 31, 2020, and is expected to be recognized over a weighted average period of 2.3 years. Compensation expense for these contingent share award agreements prior to 2019 was de minimis.

Modification of restricted stock awards:

Subsequent to the approval by our Board of Directors of the Merger Agreement, we modified the terms of certain market and time-based restricted stock awards for nine executives. These modifications accelerated all or portions of certain unvested restricted stock awards that had previously been granted between 2018 and 2020 (approximately 430,000 shares). In the event any of the executives are terminated by the Company for cause or by the executive without good reason prior to the completion of the acquisition by Thoma Bravo, any portion of these accelerated shares that would not have otherwise vested under the original terms of the awards must be returned or repaid to the Company, net of applicable withholding taxes. These modifications were accounted for as equity award modifications under ASC Topic 718, resulting in incremental stock-based expense of \$1.1 million based on the fair value of the modified awards. Because these awards may be required to be returned or repaid, total expense will continue to be recognized based on the original vesting terms of the awards. However, because shares that were withheld for taxes are no longer subject to the repayment requirements outlined above, we accelerated the relative proportion of unrecognized compensation expense, approximately \$2.2 million, for the year ended December 31, 2020.

Employee Benefit Plans

In 1998, our board of directors approved a defined contribution plan that provides retirement benefits under the provisions of Section 401(k) of the Internal Revenue Code. Our 401(k) Plan ("Plan") covers substantially all U.S. employees who meet a minimum service requirement. Contributions of \$6.2 million, \$4.5 million, and \$4.2 million were made by us under the Plan for the years ended December 31, 2020, 2019, and 2018, respectively.

11. Commitments and Contingencies

Guarantor Arrangements

We have agreements whereby we indemnify our officers and directors for certain events or occurrences while the officer or director is or was serving at our request in such capacity. The term of the indemnification period is for the officer or director's lifetime. The maximum potential amount of future payments we could be required to make under these indemnification agreements is unlimited; however, we have a director and officer insurance policy that limits our exposure and enables us to recover a portion of any future amounts paid. As a result of our insurance policy coverage, we believe the estimated fair value of these indemnification agreements is minimal. Accordingly, we had no liabilities recorded for these agreements as of December 31, 2020 or 2019.

In the ordinary course of our business, we include standard indemnification provisions in our agreements with clients. Pursuant to these provisions, we indemnify our clients for losses suffered or incurred in connection with third-party claims that our products infringed upon any U.S. patent, copyright, trademark, or other intellectual property right. Where applicable, we generally limit such infringement indemnities to those claims directed solely to our products and not in combination with other software or products. With respect to our products, we also generally reserve the right to resolve any such claims by designing a non-infringing alternative, by obtaining a license on reasonable terms, or by terminating our relationship with the client and refunding the client's fees.

The potential amount of future payments to defend lawsuits or settle indemnified claims under these indemnification provisions is unlimited in certain agreements; however, we believe the estimated fair value of these indemnification provisions is minimal, and, accordingly, we had no liabilities recorded for these agreements as of December 31, 2020 or 2019.

Litigation

From time to time, in the normal course of our business, we are a party to litigation matters and claims, including purported class action lawsuits and other complex litigation matters. Such matters can be expensive and disruptive to our normal business operations. Moreover, the results of such proceedings are difficult to predict, and our view of these matters may change in the future as the litigation and events related thereto unfold. We expense legal fees as incurred. Insurance recoveries associated with legal costs incurred are recorded when they are deemed probable of recovery.

At December 31, 2020 and 2019, we had accrued amounts for estimated settlement losses related to certain legal matters. We do not believe there is a reasonable possibility that a material loss exceeding amounts already recognized may have been incurred as of the date of the balance sheets presented herein. We are involved in other litigation matters, including purported class action lawsuits, that are not likely to be material either individually or in the aggregate based on information available at this time.

Other Matters

During May 2018, we were the subject of a targeted email phishing campaign that led to a business email compromise, pursuant to which an unauthorized party gained access to an external third party system used by a subsidiary that we acquired in 2017. The incident resulted in the diversion of approximately \$6.0 million, net of recovered funds, intended for disbursement to three clients. We immediately restored all funds to the client accounts.

We maintain insurance coverage to limit our losses related to criminal and network security events. During January 2019, we received approximately \$1.0 million from our primary insurance carrier as a partial repayment toward our losses from the business email compromise. We intend to vigorously pursue repayment of the remaining losses under such insurance coverage. Due to the uncertainty regarding timing and full collectability of the loss, we recorded an allowance of \$5.0 million for the remaining amount of the loss during 2018. We also incurred an additional \$0.4 million in related expenses. These charges are included in the line "General and administrative" in the accompanying Consolidated Statements of Operations.

Subsequent to the year ended December 31, 2020, we received \$2.9 million in recovered funds from the U.S. Secret Service. We will recognize a gain of \$2.9 million for the period ended March 31, 2021 related to these recovered funds.

12. Net Income per Share

Basic net income per share is computed by dividing net income by the weighted average number of common shares outstanding during the period. Diluted net income per share is computed by using the weighted average number of common shares outstanding, after giving effect to all potential dilutive common shares outstanding during the period. Included within diluted net income per share is the dilutive effect of outstanding stock options and restricted stock using the treasury stock method. Weighted average shares from common share equivalents in the amount of approximately 213,000, 149,000, and 286,000 were excluded from the dilutive shares outstanding because their effect was anti-dilutive for the years ended December 31, 2020, 2019, and 2018, respectively.

For purposes of considering the Convertible Notes in determining diluted net income per share, it is our current intent to settle conversions of the Convertible Notes through combination settlement, which involves repayment of the principal portion in cash and any excess of the conversion value over the principal amount (the "conversion premium") in shares of our common stock. Therefore, only the impact of the conversion premium is included in total dilutive weighted average shares outstanding using the treasury stock method. The dilutive effects of the conversion premium are shown in the table below.

The Warrants sold in connection with the issuance of the 2022 Convertible Notes are considered to be dilutive when the average price of our common stock during the period exceeds the Warrants' strike price of \$57.58 per share. The effect of the additional shares that may be issued upon exercise of the Warrants is included in total dilutive weighted average shares outstanding using the treasury stock method and, to the extent dilutive, is shown in the table below. The Note Hedge Instruments purchased in connection with the issuance of the Convertible Notes are considered to be anti-dilutive and therefore do not impact our calculation of diluted net income per share. Refer to Note 9 for further discussion regarding the Convertible Notes.

We exclude common shares subject to a holdback pursuant to business combinations from the calculation of basic weighted average shares outstanding where the release of such shares is contingent upon an event not solely subject to the passage of time. During 2020, approximately 150,000 previously contingently returnable shares were issued upon settlement of sellers' indemnification obligations and included in basic weighted average shares outstanding. As of December 31, 2020, there were no remaining contingently returnable shares outstanding. As of December 31, 2019, there were approximately 163,000 contingently returnable shares related to certain acquisitions which were excluded from the computation of basic net income per share as these shares were subject to sellers' indemnification obligations and are subject to a holdback. There were no contingently returnable shares as of December 31, 2018. Dilutive common shares outstanding include the weighted average contingently returnable shares discussed above that are subject to a holdback, and any contingently returnable shares prior to their release each period.

Certain of our performance-based restricted stock awards are considered contingently issuable shares and are excluded from the diluted weighted average shares outstanding computation because the related performance-based criteria were not achieved as of the end of the reporting period.

The following table presents the calculation of basic and diluted net income per share attributable to common stockholders:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands, except per share amounts)		
Numerator:			
Net income	\$ 46,314	\$ 58,208	\$ 34,725
Denominator:			
Basic:			
Weighted average shares used in computing basic net income per share:	96,841	92,017	87,290
Diluted:			
Add weighted average effect of dilutive securities:			
Stock options and restricted stock	1,253	1,368	2,032
Convertible Notes and Warrants	3,205	2,675	1,948
Contingently issuable or returnable shares in connection with our acquisitions	66	222	261
Weighted average shares used in computing diluted net income per share:	<u>101,365</u>	<u>96,282</u>	<u>91,531</u>
Net income per share:			
Basic	\$ 0.48	\$ 0.63	\$ 0.40
Diluted	\$ 0.46	\$ 0.60	\$ 0.38

13. Income Taxes

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

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Domestic	\$ 48,308	\$ 60,024	\$ 32,190
Foreign	2,999	534	2,110
Total	<u>\$ 51,307</u>	<u>\$ 60,558</u>	<u>\$ 34,300</u>

Our income tax expense (benefit) consisted of the following components:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Current:			
Federal	\$ —	\$ (1,769)	\$ 666
State	517	478	295
Foreign	1,033	1,536	738
Total current income tax expense	<u>1,550</u>	<u>245</u>	<u>1,699</u>
Deferred:			
Federal	3,186	3,284	(1,543)
State	(386)	366	(255)
Foreign	643	(1,545)	(326)
Total deferred income tax expense (benefit)	<u>3,443</u>	<u>2,105</u>	<u>(2,124)</u>
Total income tax expense (benefit)	<u>\$ 4,993</u>	<u>\$ 2,350</u>	<u>\$ (425)</u>

The reconciliation of our income tax expense computed at the U.S. federal statutory tax rate to the actual income tax expense is as follows:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Expense derived by applying the Federal income tax rate to income before income taxes	\$ 10,774	\$ 12,717	\$ 7,203
State income tax, net of federal benefit	110	728	(204)
Foreign income tax	(217)	63	26
Change in valuation allowance	1,163	(91)	734
Nondeductible officer compensation	6,473	1,329	1,092
Other nondeductible expenses	1,849	1,095	1,095
Stock-based expense	(11,919)	(2,142)	(11,788)
Research and development credit	(2,427)	(10,765)	—
Base erosion and anti-abuse tax	—	(1,117)	1,117
Other	(813)	533	300
Total income tax expense (benefit)	<u>\$ 4,993</u>	<u>\$ 2,350</u>	<u>\$ (425)</u>

Our effective tax rate of 9.7% for the year ended December 31, 2020 was higher than our effective tax rate of 3.9% for the year ended December 31, 2019 primarily due to lower benefits recognized in 2020 from federal and state research and development credits and increased expense for covered officers under Internal Revenue Code ("IRC") Section 162(m), partially offset by higher windfall benefits for stock compensation.

Our effective tax rate of 3.9% for the year ended December 31, 2019 was higher than our effective tax rate of (1.2)% for the year ended December 31, 2018 primarily due to lower excess tax benefits realized from stock-based compensation offset in part by benefits from federal and state research and development credits from a study conducted during the quarter ended

December 31, 2019 for tax years 2013 through 2018 and the reversal of estimated base erosion and anti-avoidance tax (“BEAT”) accrued during 2018 pursuant to the 2017 U.S. tax reform commonly known as the Tax Cuts and Jobs Act (“TCJA”). During the quarter ended June 30, 2019, we completed a review of certain U.S. tax reform elements primarily related to BEAT and verified the existence of required information to confirm our eligibility for certain exceptions allowed under the BEAT provisions. As a result, we determined that we no longer had liability related to the BEAT as clarified in additional guidance from proposed regulations issued on December 13, 2018 and finalized on December 6, 2019.

Under the TCJA, we are also subject to current tax on Global Intangible Low-Taxed Income (“GILTI”) earned by foreign subsidiaries. The FASB Staff Q&A Topic No. 5, Accounting for Global Intangible Low-Taxed Income, states that an entity can make an accounting policy election either to recognize deferred taxes for temporary differences that are expected to reverse as GILTI in future years or provide for the tax expense related to GILTI resulting from those items in the year the tax is incurred. It is our policy to recognize GILTI as a period expense in the period the tax is incurred.

The components of deferred tax assets and liabilities are as follows:

	December 31,	
	2020	2019
	(in thousands)	
Deferred tax assets:		
Reserves, deferred revenue and accrued liabilities	\$ 16,145	\$ 8,015
Stock-based expense	6,902	8,635
Lease liabilities	28,760	31,686
Net operating loss carryforwards and tax credits	73,594	69,043
Deferred tax assets before valuation allowance	125,401	117,379
Valuation allowance	(2,467)	(1,233)
Total deferred tax assets, net of valuation allowance	122,934	116,146
Deferred tax liabilities:		
Property, equipment, and software	(20,081)	(16,270)
Right-of-use assets	(22,522)	(25,412)
Intangible assets	(45,883)	(30,914)
Other	(14,856)	(12,091)
Total deferred tax liabilities	(103,342)	(84,687)
Net deferred tax assets ⁽¹⁾	\$ 19,592	\$ 31,459

⁽¹⁾ Includes net deferred tax assets and liabilities from the acquisitions of Modern Message, Stratis, Chirp, and WhiteSky discussed in Note 3.

We recognize valuation allowances on deferred tax assets if it is more likely than not that some or all of the deferred tax assets will not be realized. We had valuation allowances against certain deferred tax assets of \$2.5 million and \$1.2 million as of December 31, 2020 and 2019, respectively. In 2020, we recognized an additional valuation allowance of \$1.2 million against net operating losses in a UK subsidiary which we do not expect to realize against future taxable income.

As of December 31, 2020, our federal, state, and international net operating loss (“NOL”) carryforwards are \$246.9 million, \$88.6 million, and \$8.7 million, respectively. These carryforwards, combined with federal, state and international tax credits of \$15.0 million, comprise a major component of our deferred tax assets. If not used, the underlying federal NOLs will begin to expire in 2026. The state NOLs will begin to expire in 2021, with approximately \$1.5 million expiring in the next five years. If not used, \$0.1 million of our tax credits will expire in 2026, and the remaining credits will begin to expire in 2034. Approximately \$0.7 million of our tax credits will be fully realizable by 2021. Our NOL carryforward balance partially consists of \$66.7 million subject to Section 382 limitations, as these balances were generated by subsidiaries prior to our acquiring them as part of current and previous stock acquisitions. If unused, these NOLs begin to expire in 2026.

We consider our investments in our foreign subsidiaries to be indefinitely reinvested. As of December 31, 2020, we have no basis differences that would result in material unrecognized deferred tax liabilities.

Our subsidiary in Hyderabad, India benefits from a tax holiday under the Special Economic Zone program. This benefit was initially granted on July 8, 2013 and applies to a portion of our operations in this location. The benefit was reduced from a 100% tax holiday to a 50% tax holiday in April 2018 and is set to expire in April 2023. During 2020, the Company expanded operations and was granted a new tax holiday. The benefit related to the new holiday provides a 100% tax holiday through 2025

and a 50% tax holiday through 2030. We realized tax savings from these holidays of \$0.3 million, \$0.4 million, and \$0.1 million for the years ended December 31, 2020, 2019, and 2018, respectively.

Our subsidiary in Manila, Philippines benefits from income tax holidays pursuant to registration with the Philippine Economic Zone Authority ("PEZA"). Tax savings realized under the Philippine tax holidays were \$0.3 million, \$0.1 million, and \$0.3 million for the years ended December 31, 2020, 2019, and 2018, respectively. The income tax holidays are set to expire in June 2021 and May 2022.

Uncertain Tax Positions

At December 31, 2020 and 2019, we had no unrecognized tax benefits. Our policy is to include interest and penalties related to unrecognized income tax benefits in income tax expense, and as of December 31, 2020 and 2019, there were no accrued interest and penalties.

We file consolidated and separate tax returns in the U.S. and seven foreign jurisdictions. We are no longer subject to U.S. federal income tax examinations for years before 2017 and are no longer subject to state and local income tax examinations by tax authorities for years before 2016; however, net operating losses from all years continue to be subject to examinations and adjustments for at least three years following the year in which the attributes are used.

Our subsidiary, RealPage India Private Limited ("RealPage India"), is currently undergoing an income tax examination for the fiscal years beginning April 1, 2011, April 1, 2012, and April 1, 2013. We determined that resolution of the RealPage India audit would best be accomplished through the US-India tax treaty's article known as Mutual Agreement Procedures ("MAP") with the competent authorities from both the US and India. We expect resolution for the previous years' examinations as well as the go-forward mark-up sometime in late 2021.

14. Fair Value Measurements

Assets and liabilities measured at fair value on a recurring basis:

Interest rate swap agreements: The fair value of our interest rate derivatives is determined using widely accepted valuation techniques including discounted cash flow analysis on the expected cash flows of the derivatives. This analysis reflects the contractual terms of the derivatives, including the period to maturity, and uses observable market-based inputs, including interest rate curves. We incorporate credit valuation adjustments to appropriately reflect both our own nonperformance risk and the respective counterparty's nonperformance risk in the fair value measurements.

Although the credit valuation adjustments associated with our derivatives utilize Level 3 inputs, such as estimates of current credit spreads, we have determined that the majority of the inputs used to value our derivatives fall within Level 2 of the fair value hierarchy. We have assessed the significance of the impact of the credit valuation adjustments on the overall valuation of our derivative positions and determined that the credit valuation adjustments are not significant to the overall valuation of our interest rate swaps. As a result, we determined that our interest rate swap valuation in its entirety is classified in Level 2 of the fair value hierarchy.

Foreign currency forward contracts: We enter into foreign exchange currency contracts to hedge fluctuations associated with foreign currency denominated monetary assets and liabilities, and the future payment of operating expenses by certain of our non-U.S. subsidiaries. The fair values of our foreign exchange currency contracts are based on quoted foreign exchange forward rates at the reporting date and are classified within Level 2 of the fair value hierarchy.

Contingent consideration obligations: The fair value of our contingent consideration obligations includes inputs not observable in the market and thus represent Level 3 measurements. The amount to be paid under these obligations is contingent upon the achievement of stipulated operational or financial targets by the business subsequent to acquisition. The fair values of our contingent consideration obligations are estimated using probability weighted discount models which consider the achievement of the conditions upon which the contingent obligations are dependent. The probability of achieving the specified conditions is generally assessed by applying Monte Carlo weighted-average models. Inputs into the valuation model include a discount rate specific to the acquired entity, a measure of the estimate volatility, and a risk of target metric rate, which for the period ended December 31, 2020 were 2.6%, 32.8%, and 11.8%, respectively. These estimates are generally sensitive to changes in these projections. We develop the projected future operating results based on an analysis of historical results, market conditions, and the expected impact of anticipated changes in our overall business and/or product strategies.

The following tables disclose the assets and liabilities measured at fair value on a recurring basis as of December 31, 2020 and 2019, by the fair value hierarchy levels as described above:

	Fair Value at December 31, 2020			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Assets:				
Foreign currency forward contracts ⁽¹⁾	\$ 581	\$ —	\$ 581	\$ —
Total assets measured at fair value	<u>\$ 581</u>	<u>\$ —</u>	<u>\$ 581</u>	<u>\$ —</u>
Liabilities:				
Interest rate swap agreements	\$ 6,008	\$ —	\$ 6,008	\$ —
Foreign currency forward contracts	1	—	1	—
Contingent consideration liabilities	4,328	—	—	4,328
Total liabilities measured at fair value	<u>\$ 10,337</u>	<u>\$ —</u>	<u>\$ 6,009</u>	<u>\$ 4,328</u>

⁽¹⁾ The fair value of foreign currency forward contracts include those designated as cash flow hedge instruments and those designated as balance sheet hedge instruments.

	Fair Value at December 31, 2019			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Assets:				
Foreign currency forward contracts ⁽²⁾	\$ 237	\$ —	\$ 237	\$ —
Total assets measured at fair value	<u>\$ 237</u>	<u>\$ —</u>	<u>\$ 237</u>	<u>\$ —</u>
Liabilities:				
Interest rate swap agreements	\$ 2,193	\$ —	\$ 2,193	\$ —
Foreign currency forward contracts	14	—	14	—
Contingent consideration liabilities	6,536	—	—	6,536
Total liabilities measured at fair value	<u>\$ 8,743</u>	<u>\$ —</u>	<u>\$ 2,207</u>	<u>\$ 6,536</u>

⁽²⁾ The fair value of foreign currency forward contracts include those designated as cash flow hedge instruments and those designated as balance sheet hedge instruments.

The maximum remaining potential payments related to our contingent consideration liabilities are \$35.3 million as of December 31, 2020.

Changes in the fair value of Level 3 measurements for the reporting periods were as follows during the years ended December 31, 2020 and 2019:

	December 31,	
	2020	2019
	(in thousands)	
Balance at beginning of period	\$ 6,536	\$ 6,000
Initial contingent consideration fair value	4,300	6,700
Settlements through cash payments	—	(5,963)
Net change in fair value	(6,508)	(201)
Balance at end of period	<u>\$ 4,328</u>	<u>\$ 6,536</u>

Gains and losses resulting from changes in the fair value of the above liabilities are included in "General and administrative" expense in the accompanying Consolidated Statements of Operations.

Assets and liabilities measured at fair value on a non-recurring basis:

In August 2016, we acquired a \$3.0 million noncontrolling interest in an unrelated company that specializes in the aggregation of commercial lease data. We have elected the measurement alternative for our equity investment, whereby we measure the investment at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for an identical or similar investment of the same issuer. During the year ended December 31, 2019, we recorded a gain of \$2.6 million based on an observable price change, which is reflected in the line "Interest expense and other, net" in the accompanying Consolidated Statements of Operations. The factors considered in the remeasurement included the price at which the investee issued equity instruments similar to those of our investment and the rights and preferences of those equity instruments compared to ours. We concluded that this fair value measurement should be categorized within Level 2.

We invested an additional \$1.8 million in our investment during the year ended December 31, 2019. The carrying value of this investment at December 31, 2020 and 2019 was \$7.4 million, and is included in "Other assets" in the accompanying Consolidated Balance Sheets.

Refer to Note 8 for further information about assets measured at fair value on a non-recurring basis at December 31, 2020 and 2019. There were no liabilities measured at fair value on a non-recurring basis at December 31, 2020 and 2019.

15. Stockholders' Equity**Accumulated Other Comprehensive Income (Loss)**

Changes in accumulated other comprehensive income (loss) by component for the years ended December 31, 2020, 2019 and 2018 were as follows:

	Unrealized Gain (Loss) on Derivative Instruments, Net of Tax	Foreign Currency Translation Adjustments	Total
	(in thousands)		
Balance as of January 1, 2018	\$ 776	\$ (533)	\$ 243
Other comprehensive income (loss) before reclassifications	61	(183)	(122)
Amounts reclassified to income	(613)	—	(613)
Net other comprehensive income (loss)	(552)	(183)	(735)
Balance as of December 31, 2018	224	(716)	(492)
Cumulative effect of adopting ASU 2017-12	25	—	25
Other comprehensive income (loss) before reclassifications	(1,233)	(171)	(1,404)
Amounts reclassified to income	(477)	—	(477)
Net other comprehensive income (loss)	(1,710)	(171)	(1,881)
Balance as of December 31, 2019	(1,461)	(887)	(2,348)
Other comprehensive income (loss) before reclassifications	(3,380)	175	(3,205)
Amounts reclassified to income	1,150	—	1,150
Net other comprehensive income (loss)	(2,230)	175	(2,055)
Balance as of December 31, 2020	<u>\$ (3,691)</u>	<u>\$ (712)</u>	<u>\$ (4,403)</u>

Stock Repurchase Program

In October 2018, our board of directors approved a share repurchase program authorizing the repurchase of up to \$100.0 million of our outstanding common stock. The share repurchase program expired on October 25, 2019. In November 2019, our board of directors approved a new share repurchase program authorizing the repurchase of up to \$100.0 million of our outstanding common stock. In October 2020, our board of directors approved a one year extension of this program authorizing the repurchase of up to \$100.0 million of our outstanding common stock through November 7, 2021.

Shares repurchased under the stock repurchase program are retired. Repurchase activity during the years ended December 31, 2020, 2019 and 2018 was as follows:

	Year Ended December 31,		
	2020	2019	2018
Number of shares repurchased	—	158,971	599,664
Weighted-average cost per share	\$ —	\$ 53.41	\$ 46.83
Total cost of shares repurchased, in thousands	\$ —	\$ 8,491	\$ 28,082

Shelf Registration and Public Offering

In May 2018, we filed a shelf registration statement on Form S-3 (File No. 333-225074) with the SEC, which became effective upon filing. The shelf registration allows us to sell, from time to time, an unspecified number of shares of common stock; shares of preferred stock; debt securities; warrants to purchase shares of common stock, preferred stock, or other securities; purchase contracts; and units representing two or more of the foregoing securities.

In May 2020, we consummated an underwritten public offering of 5.85 million shares of our common stock, which included 0.76 million shares sold pursuant to the underwriters' full exercise of their option to purchase additional shares. The offering was priced at \$59.00 per share for total gross proceeds of \$345.0 million. The aggregate net proceeds to us were \$334.1 million, after deducting underwriting discounts and offering expenses in the aggregate amount of \$10.9 million.

16. Derivative Financial Instruments

Cash Flow Hedges

Interest Rate Swap Agreements

We are exposed to interest rate risk on our variable rate debt. We have entered into interest rate swap agreements to effectively convert portions of our variable rate debt to a fixed-rate basis. The principal objective of these contracts is to eliminate or reduce the variability of the cash flows in interest payments associated with our variable rate debt, thus reducing the impact of interest rate changes on future interest payment cash flows. These derivative instruments are designated as cash flow hedges, as defined in ASC 815, and are assessed for effectiveness against the underlying exposure every reporting period.

On December 24, 2018, we entered into two interest rate swap agreements (collectively the "2018 Swap Agreements"). The 2018 Swap Agreements covered an aggregate notional amount of \$100.0 million from December 2018 to February 2022 by replacing the obligation's variable rate with a blended fixed rate of 2.57%. We designated the 2018 Swap Agreements as cash flow hedges of interest rate risk.

On February 10, 2020, we entered into an interest rate swap agreement (the "2020 Swap Agreement") that covers an aggregate notional amount of \$100.0 million from February 2020 to September 2024 by replacing the obligation's variable rate with a fixed rate of 1.89%. In connection with this transaction, we terminated the 2018 Swap Agreements on a prospective basis and designated the 2020 Swap Agreement under a new cash flow hedge relationship. The fair value of the 2018 Swap Agreements immediately prior to termination was a liability of \$2.5 million. The 2020 Swap Agreement contains a blend of the current interest rate environment and the unfavorable portion of the terminated 2018 Swap Agreements, which resulted in a significant financing element at inception of the new cash flow hedge due to off-market terms. Because the forecasted transactions that the 2018 Swap Agreements were designated to hedge are still probable to occur, the unrealized loss will be reclassified into earnings through September 2024.

The changes in the fair value of the swap agreements are initially recorded in accumulated other comprehensive income (loss) net of tax and are subsequently reclassified into earnings in the period that the hedged forecasted transaction affects earnings. Amounts reported in accumulated other comprehensive income (loss) related to the swap agreements will be reclassified to "Interest expense and other, net" in the accompanying Consolidated Statements of Operations as interest payments are made on our variable rate debt.

Foreign Currency Exchange Contracts

We are exposed to market risk that includes changes in foreign exchange rates. We have operations in certain foreign countries where the functional currency is the local currency. For international operations that are determined to be extensions of the parent company, the U.S. dollar is the functional currency. As of December 31, 2020, we have entered into a series of foreign exchange forward contracts with a total notional amount of \$25.1 million to hedge the effect of adverse fluctuations in foreign currency exchange rates for the Indian rupee and Philippines peso. These contracts are designated as cash flow hedges, as defined by ASC 815, of forecasted transactions, are intended to offset the impact of movement of exchange rates on future operating costs, and are scheduled to mature within twelve months.

The changes in the fair value of these contracts are initially recorded in accumulated other comprehensive income (loss) net of tax and are subsequently reclassified to "Cost of revenue" and "Operating expenses" in the accompanying Consolidated Statements of Operations in the same period that the hedged transactions affect earnings.

The table below presents the fair value of the derivative instruments designated as cash flow hedges as well as their classification in the Consolidated Balance Sheets as of December 31, 2020 and 2019:

Balance Sheet Location	Fair Value at	
	December 31, 2020	December 31, 2019
(in thousands)		
Derivatives designated as cash flow hedging instruments:		
Assets:		
Foreign currency forward contracts	Other current assets	\$ 532 \$ 217
Total derivative assets		\$ 532 \$ 217
Liabilities:		
Interest rate swaps	Other long-term liabilities	\$ 6,008 \$ 2,193
Foreign currency forward contracts	Other current liabilities	1 14
Total derivative liabilities		\$ 6,009 \$ 2,207

As of December 31, 2020, we have not posted any collateral related to our derivative instruments. If we had breached any of the default provisions at December 31, 2020, we could have been required to settle our obligations under the agreements at their termination value of \$5.7 million.

The table below presents the amount of gains and losses related to the derivative instruments and their location in the Consolidated Statements of Operations and the Consolidated Statements of Comprehensive Income for the fiscal years ended December 31, 2020, 2019 and 2018:

Derivatives designated as cash flow hedging instruments:	Gain (Loss) Recognized in OCI			Location of Gain (Loss) Recognized in Income	Gain (Loss) Recognized in Income		
	2020	2019	2018		2020	2019	2018
Swap agreements, net of tax	\$ (3,935)	\$ (1,477)	\$ 61	Interest expense and other	\$ (1,495)	\$ 403	\$ 613
Foreign currency forward contracts, net of tax	555	244	—	Cost of revenue and operating expenses	345	74	—

As of December 31, 2020, we estimate that \$2.0 million of the net loss related to derivatives designated as cash flow hedges recorded in accumulated other comprehensive income is expected to be reclassified into earnings within the next twelve months.

Gains and losses on our cash flow hedges are net of income tax benefit (expense) of \$0.7 million, \$0.9 million, and \$(0.2) million during the years ended December 31, 2020, 2019, and 2018, respectively. Cash flows from these derivative instruments, and those from the underlying items being hedged, are included within operating activities in the Consolidated Statements of Cash Flows. The 2020 Swap Agreement contains an other-than-insignificant financing element and, accordingly, the associated cash flows are reported as financing activities in the Consolidated Statements of Cash Flows.

Balance Sheet Hedges

We also enter into foreign currency forward contracts to hedge fluctuations associated with foreign currency denominated monetary assets and liabilities, primarily associated with our lease liabilities. These forward contracts are not designated for hedge accounting treatment, therefore, the change in fair value of these derivatives is recorded as a component of "General and administrative" in the accompanying Consolidated Statements of Operations and offsets the change in fair value of the foreign currency denominated assets and liabilities, which are also recorded in "General and administrative". As of December 31, 2020, the notional amounts of outstanding foreign currency contracts entered into under our balance sheet hedge program totaled \$2.0 million. The effects of derivatives not designated as hedge instruments for the years ended December 31, 2020 and 2019 were de minimis.

17. Customer Deposits Held in Restricted Accounts

In connection with our payment processing services, we collect tenant funds and subsequently remit these tenant funds, net of our fees, to our clients after varying holding periods. These funds are settled through our Originating Depository

Financial Institution (“ODFI”) custodial accounts at major banks. The balances in the custodial accounts were \$193.7 million and \$222.4 million, and the related client deposit liability was \$193.4 million and \$222.4 million at December 31, 2020 and 2019, respectively. The balances in the custodial accounts are included in our Consolidated Balance Sheets as restricted cash. The corresponding liability for these custodial balances is reflected as client deposits. In connection with the timing of our payment processing services, we are exposed to credit risk in the event of nonperformance, such as returned checks, by other parties. We utilize credit analysis and other controls to manage the credit risk exposure. We have not experienced any material credit losses to date. Any expected losses are included in our allowance for credit losses. The custodial accounts are in the name of RealPage’s wholly-owned subsidiaries, or in the name of the sponsoring bank for debit or credit card transactions. The obligations under the custodial account agreements are guaranteed by us.

We offer invoice processing services to our clients as part of our overall utility management solution. This service includes the collection of invoice payments from our clients and the remittance of those payments to utility companies. We had \$20.4 million and \$14.7 million in restricted cash and \$20.4 million and \$14.7 million in client deposits related to these services at December 31, 2020 and 2019, respectively.

In connection with our renter insurance products, we collect premiums from policy holders and subsequently remit the premiums, net of our commission, to the underwriter. We maintain separate accounts for these transactions. We had \$7.5 million and \$6.2 million in restricted cash and \$7.5 million and \$6.2 million in client deposits related to these renter insurance products at December 31, 2020 and 2019, respectively.

We also receive funds from our clients to purchase reward cards for their tenants in connection with our tenant incentive programs. We had \$5.9 million in restricted cash, \$0.2 million in other current assets, and \$6.1 million in client deposits related to these programs at December 31, 2020.

18. Selected Quarterly Financial Data (unaudited)

The following is unaudited quarterly financial information for the years ended December 31, 2020 and 2019 (in thousands, except per share amounts).

	Three Months Ended							
	December 31, 2020	September 30, 2020	June 30, 2020	March 31, 2020	December 31, 2019	September 30, 2019	June 30, 2019	March 31, 2019
Revenue:								
On demand	\$ 288,569	\$ 290,239	\$ 278,559	\$ 268,471	\$ 246,235	\$ 245,637	\$ 235,185	\$ 226,519
Professional and other	9,486	7,910	7,048	8,202	8,532	9,565	8,676	7,787
Total revenue	\$ 298,055	\$ 298,149	\$ 285,607	\$ 276,673	\$ 254,767	\$ 255,202	\$ 243,861	\$ 234,306
Gross profit	\$ 170,436	\$ 172,416	\$ 160,363	\$ 153,991	\$ 143,008	\$ 146,104	\$ 138,253	\$ 134,598
Net income	\$ 13,067	\$ 16,341	\$ 11,301	\$ 5,605	\$ 20,169	\$ 11,704	\$ 15,063	\$ 11,272
Net income per share attributable to common stockholders:								
Basic	\$ 0.13	\$ 0.16	\$ 0.12	\$ 0.06	\$ 0.22	\$ 0.13	\$ 0.16	\$ 0.12
Diluted	\$ 0.12	\$ 0.16	\$ 0.11	\$ 0.06	\$ 0.21	\$ 0.12	\$ 0.16	\$ 0.12

The above quarterly financial information should be read in conjunction with the Consolidated Financial Statements and notes thereto included herein.

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

None.

Item 9A. Controls and Procedures.**Evaluation of Disclosure Controls and Procedures**

Pursuant to Rule 13a-15(b) and Rule 15d-15(b) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), we carried out an evaluation, with the participation of our management, and under the supervision of our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as defined under Rule 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Annual Report on Form 10-K. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective in ensuring that information required to be disclosed in the reports that we file or submit under the Exchange Act, is recorded, processed, summarized and reported, within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Management’s assessment of the effectiveness of our disclosure controls and procedures is expressed at the level of reasonable assurance because management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives.

Management’s Report on Internal Control Over Financial Reporting

Our internal controls over financial reporting are designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States. Management is responsible for establishing and maintaining adequate internal control over financial reporting. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions or that the degree or compliance with the policies or procedures may deteriorate.

Under supervision and with participation of management, including the Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of internal control over financial reporting as of December 31, 2020. In conducting this evaluation, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) in Internal Control — Integrated Framework (2013 framework). Management’s assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of certain businesses which we acquired during 2020 (i.e. Modern Message, Stratis, Chirp, and WhiteSky), which businesses are included in our 2020 Consolidated Financial Statements.

- Modern Message constituted approximately 2% of our consolidated total assets as of December 31, 2020, and less than 1% of our consolidated total revenues for the year then ended.
- Stratis constituted approximately 2% of our consolidated total assets as of December 31, 2020, and less than 1% of our consolidated total revenues for the year then ended.
- Chirp constituted less than 1% of our consolidated total assets as of December 31, 2020, and less than 1% of our consolidated total revenues for the year then ended.
- WhiteSky constituted approximately 2% of our consolidated total assets as of December 31, 2020, and less than 1% of our consolidated total revenues for the year then ended.

Based on our evaluation using criteria set by COSO, management concluded that our internal control over financial reporting was effective as of December 31, 2020.

The effectiveness of internal control over financial reporting as of December 31, 2020 has been audited by Ernst & Young LLP, our independent registered public accounting firm, which is stated in their report included in Part II Item 8 of this Annual Report on Form 10-K.

Changes in Internal Controls

There were no changes in our internal control over financial reporting during the three months ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations of Internal Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal controls will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item is incorporated by reference to RealPage's Proxy Statement for its 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2020.

Item 11. Executive Compensation.

The information required by this item is incorporated by reference to RealPage's Proxy Statement for its 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2020.

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

The information required by this item is incorporated by reference to RealPage's Proxy Statement for its 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2020.

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

The information required by this item is incorporated by reference to RealPage's Proxy Statement for its 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2020.

Item 14. Principal Accounting Fees and Services.

The information required by this item is incorporated by reference to RealPage's Proxy Statement for its 2021 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2020.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(a) Financial Statements

(1) The financial statements filed as part of this Annual Report on Form 10-K are listed on the index to financial statements.

(2) Any financial statement schedules required to be filed as part of this Annual Report on Form 10-K are set forth in section (c) below.

(b) Exhibits

See Exhibit Index at the end of this Annual Report on Form 10-K, which is incorporated by reference.

(c) Financial Statement Schedules

The following schedule is filed as part of this Annual Report on Form 10-K:

All other schedules have been omitted because the information required to be presented in them is not applicable or is shown in the financial statements or related notes.

SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS

REALPAGE, INC.

December 31, 2020

(in thousands)

Accounts receivable allowances

	Balance at Beginning of Year	Adoption of ASC 606	Additions Charged to Income ⁽¹⁾	Deductions ⁽²⁾	Balance at End of Year
Year ended December 31:					
2018	\$ 3,951	\$ 4,702	\$ 17,180	\$ (16,983)	\$ 8,850
2019	\$ 8,850	\$ —	\$ 22,718	\$ (21,297)	\$ 10,271
2020	\$ 10,271	\$ —	\$ 24,728	\$ (20,727)	\$ 14,272

⁽¹⁾ Credit losses are charged to expense. Credit accommodations are charged to revenue.

⁽²⁾ Applied credits and uncollectible accounts written off, net of recoveries.

Accounts receivable allowances represent a reserve for credits and an estimate for credit losses.

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Form	Incorporated by Reference		Included Herewith
			Date	Number	
2.1	Agreement and Plan of Merger by and among the Registrant, RP Newco XXIX LLC, a Delaware limited liability company, Buildium, LLC, a Delaware limited liability company ("Buildium"), Sumeru Equity Partners Fund L.P., a Delaware limited partnership ("SEP"), K1 Private Investors, L.P., a Delaware limited partnership ("K1 PI"), K1 Private Investors (A), L.P., a Delaware limited partnership ("K1 PI(A)"), K1PI(A) and together with K1 PI, "K1", and SEP, solely in its capacity as the Securityholders' Agent **	10-K	3/2/2020	2.4	
2.2	Agreement and Plan of Merger, dated as of December 20, 2020, by and among Mirasol Parent, LLC, Mirasol Merger Sub, Inc. and RealPage, Inc.**	8-K	12/21/2020	2.1	
3.1	Amended and Restated Certificate of Incorporation of the Registrant, as amended	10-Q	8/6/2018	3.1	
3.2	Bylaws of RealPage, Inc., as Amended and Restated on December 20, 2020	8-K	12/21/2020	3.2	
4.1	Form of Common Stock certificate of the Registrant	S-1/A	7/26/2010	4.1	
4.2	Shareholders' Agreement among the Registrant and certain stockholders, dated December 1, 1998, as amended July 16, 1999 and November 3, 2000	S-1	4/29/2010	4.2	
4.3	Second Amended and Restated Registration Rights Agreement among the Registrant and certain stockholders, dated February 22, 2008	S-1	4/29/2010	4.3	
4.4	Indenture between the Registrant and Wells Fargo Bank, National Association, dated May 23, 2017	10-Q	8/4/2017	4.4	
4.5	Form of Global Note to represent the 1.50% Convertible Senior Notes due 2022, of the Registrant	10-Q	8/4/2017	4.5	
4.6	Form of Warrant Confirmation in connection with 1.50% Convertible Senior Notes due 2022, of the Registrant	10-Q	8/4/2017	4.6	
4.7	Form of Call Option Confirmation in connection with 1.50% Convertible Senior Notes due 2022, of the Registrant	10-Q	8/4/2017	4.7	
4.8	Description of Registered Securities	10-K	3/2/2020	4.8	
4.9	Indenture between the Registrant and U.S. Bank National Association, dated as of May 22, 2020	8-K	5/22/2020	4.1	
4.10	Supplemental Indenture between the Registrant and U.S. Bank National Association, dated as of May 22, 2020	8-K	5/22/2020	4.2	
4.11	Form of Global Note to represent 1.50% Convertible Senior Note due 2025, of the Registrant	8-K	5/22/2020	4.3	
4.12	Form of Capped Call Confirmation in connection with 1.50% Convertible Senior Notes due 2025, of the Registrant	8-K	5/22/2020	10.1	
10.1	Form of Indemnification Agreement entered into between the Registrant and each of its directors and officers	S-1	4/29/2010	10.1	
10.2	2010 Equity Incentive Plan, as Amended and Restated June 4, 2014+	DEF-14A	4/17/2014	Appendix A	
10.3	First Amendment to the Amended and Restated 2010 Equity Incentive Plan+	8-K	1/21/2015	10.1	
10.4	Second Amendment to the Amended and Restated 2010 Equity Incentive Plan+	8-K	4/7/2015	10.1	
10.5	Third Amendment to the Amended and Restated 2010 Equity Incentive Plan+	10-Q	5/6/2016	10.1	
10.6	Fourth Amendment to the RealPage, Inc. 2010 Equity Incentive Plan, as amended and restated, dated February 16, 2017+	10-Q	5/8/2017	10.5	

Exhibit Number	Exhibit Description	Incorporated by Reference			Included Herewith
		Form	Date	Number	
10.7	Fifth Amendment to the RealPage, Inc. 2010 Equity Incentive Plan, as amended and restated, dated February 21, 2019+	10-Q	5/8/2019	10.5	
10.8	Forms of Stock Option Award Agreements and Restricted Stock Award Agreements approved for use under the 2010 Equity Incentive Plan+	S-8	8/17/2010	4.6 , 4.7 , 4.8 , 4.9	
10.9	Form of Stock Option Award Agreement between the Registrant and certain executive officers approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	8-K	3/5/2015	10.2	
10.10	Form of Restricted Stock Award Agreement for time-based awards between the Registrant and certain executive officers approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	8-K	3/5/2015	10.4	
10.11	Form of Restricted Stock Award Agreement for time-based awards between the Registrant and certain executive officers approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	10-Q	5/6/2016	10.4	
10.12	Form of Restricted Stock Award Agreement for market-based awards between the Registrant and certain executive officers approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	10-Q	5/6/2016	10.5	
10.13	Form of Restricted Stock Award Agreement for market-based awards between the Registrant and Stephen T. Winn approved for use under the 2010 Equity Incentive Plan, as amended and restated June 4, 2014, as amended+	10-Q	5/6/2016	10.6	
10.14	RealPage, Inc. 2020 Equity Incentive Plan, incorporated by reference to Appendix A of the Registrant's Proxy Statement filed on April 29, 2020+	8-K	6/9/2020	10.1	
10.15	Form of Restricted Stock Award Agreement for time-based awards between the Registrant and certain executive officers approved for use under the RealPage, Inc. 2020 Equity Incentive Plan+	10-Q	8/4/2020	10.4	
10.16	Form of Restricted Stock Award Agreement for market-based awards between the Registrant and certain executive officers approved for use under the RealPage, Inc. 2020 Equity Incentive Plan+	10-Q	8/4/2020	10.5	
10.17	Form of Restricted Stock Award Agreement approved for use under the RealPage, Inc. 2020 Equity Incentive Plan+	10-Q	11/6/2020	10.2	
10.18	Form of Letter Agreement, dated December 29, 2020+	8-K	12/31/2020	10.1	
10.19	Outside Director Compensation Policy+	8-K	6/9/2020	10.2	
10.20	Form of 2020 Management Incentive Plan+	8-K	3/18/2020	10.1	
10.21	Amended and Restated Employment Agreement between the Registrant and Stephen T. Winn dated as of October 26, 2016+	8-K	10/31/2016	10.1	
10.22	Amended and Restated Employment Agreement between the Registrant and William Chaney dated as of March 1, 2015+	8-K	3/5/2015	10.13	
10.23	Transition Agreement between the Registrant and William Chaney dated as of January 13, 2020+	10-K	3/2/2020	10.22	
10.24	Employment Agreement between the Registrant and David Monk, dated May 1, 2015+	10-Q	8/7/2015	10.18	
10.25	Employment Agreement between the Registrant and Ashley Glover, dated August 3, 2016+	10-Q	11/8/2016	10.2	
10.26	Exhibit I to the Employment Agreement between the Registrant and Ashley Glover referenced herein as Exhibit 10.25+	10-Q	5/6/2016	10.4	

Exhibit Number	Exhibit Description	Form	Incorporated by Reference		Included Herewith
			Date	Number	
10.27	Exhibit II to the Employment Agreement between the Registrant and Ashley Glover referenced herein as Exhibit 10.25+	10-Q	5/6/2016	10.5	
10.28	Employment Agreement between the Registrant and Thomas C. Ernst, Jr., dated January 7, 2019+	10-K	2/27/2019	10.33	
10.29	Exhibit I to the Employment Agreement between the Registrant and Thomas C. Ernst, Jr. referenced herein as Exhibit 10.28+	10-Q	5/6/2016	10.4	
10.30	Exhibit II to the Employment Agreement between the Registrant and Thomas C. Ernst Jr. referenced herein as Exhibit 10.28+	10-Q	5/6/2016	10.5	
10.31	Transition Agreement between the Registrant and Thomas C. Ernst, Jr., dated July 13, 2020+	10-Q	8/4/2020	10.1	
10.32	Employment Agreement between the Registrant and Brian Shelton, dated January 2, 2020+	10-K	3/2/2020	10.33	
10.33	Employment Agreement between the Registrant and Mike Britti, dated January 13, 2020+	10-K	3/2/2020	10.34	
10.34	Employment Agreement between the Registrant and Barry Carter, dated January 13, 2020+	10-K	3/2/2020	10.35	
10.35	Employment Agreement between the Registrant and Kurt Twining, dated March 1, 2015+	10-K	3/2/2020	10.36	
10.36	Lease Agreement dated June 2, 2015 by and between the Registrant and Lakeside Campus Partners, LP	8-K	6/4/2015	10.1	
10.37	First Amendment to the Lease Agreement dated July 27, 2015 by and between the Registrant and Lakeside Campus Partners, LP	10-Q	8/7/2015	10.20	
10.38	Second Amendment to the Lease Agreement dated July 8, 2016 by and between the Registrant and Lakeside Campus Partners, LP	10-Q	11/8/2016	10.1	
10.39	Amended and Restated Credit Agreement by and among the Registrant, the lenders from time to time party thereto and Wells Fargo Bank, National Association, as administrative agent, dated September 5, 2019	10-Q	11/8/2019	10.1	
10.40	Amended and Restated Guaranty Agreement by and among the Registrant and certain domestic subsidiaries of the Registrant in favor of Wells Fargo Bank, National Association, as administrative agent, dated September 5, 2019	10-Q	11/8/2019	10.2	
10.41	Amended and Restated Collateral Agreement by and among the Registrant and certain of its subsidiaries in favor of Wells Fargo Bank, National Association, as administrative agent, dated September 5, 2019	10-Q	11/8/2019	10.3	
21.1	Subsidiaries of the Registrant				X
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm				X
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) or 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				X
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) or 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				X
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*				X

Exhibit Number	Exhibit Description	Incorporated by Reference			Included Herewith
		Form	Date	Number	
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*				X
99.1	Voting Agreement, dated as of December 20, 2020, by and among Mirasol Parent, LLC, RealPage, Inc. and the Stockholders Party Thereto by and among Mirasol Parent, LLC, RealPage, Inc. and the Stockholders Party Thereto	8-K	12/21/2020	99.1	
99.2	Consent and Joinder Agreement to the Voting Agreement dated as of February 15, 2021 by and among Mirasol Parent, LLC, RealPage, Inc. and the Stockholders Party Thereto by and among Mirasol Parent, LLC, RealPage, Inc. and the Stockholders Party Thereto				X
101.INS	Instance				X
101.SCH	Taxonomy Extension Schema				X
101.CAL	Taxonomy Extension Calculation				X
101.LAB	Taxonomy Extension Labels				X
101.PRE	Taxonomy Extension Presentation				X
101.DEF	Taxonomy Extension Definition				X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				X

+ Indicates management contract or compensatory plan or arrangement.

* Furnished herewith.

** Exhibits and schedules have been omitted pursuant to Item 601(b)(2) of Regulation S-K and will be furnished to the Securities and Exchange Commission upon request.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Richardson, State of Texas, on this 1st day of March, 2021.

REALPAGE, INC.

By: /s/ Stephen T. Winn
 Stephen T. Winn
 Chairman of the Board of Directors, Chief Executive Officer,
 and Director

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/s/ Stephen T. Winn Stephen T. Winn	Chairman of the Board of Directors, Chief Executive Officer, and Director (Principal Executive Officer)	March 1, 2021
/s/ Brian D. Shelton Brian D. Shelton	Executive Vice President, Chief Financial Officer, and Treasurer (Principal Financial Officer)	March 1, 2021
/s/ Alfred R. Berkeley Alfred R. Berkeley	Director	March 1, 2021
/s/ Peter Gyenes Peter Gyenes	Director	March 1, 2021
/s/ Scott S. Ingraham Scott S. Ingraham	Director	March 1, 2021
/s/ Dana S. Jones Dana S. Jones	Director	March 1, 2021
/s/ Charles F. Kane Charles F. Kane	Director	March 1, 2021
/s/ Jeffrey T. Leeds Jeffrey T. Leeds	Director	March 1, 2021
/s/ Jason A. Wright Jason A. Wright	Director	March 1, 2021