
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549
FORM 10-K**

(Mark One)

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

For the fiscal year ended December 31, 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: 333-239644

VERTEX, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or other jurisdiction of
incorporation or organization)
2301 Renaissance Blvd
King of Prussia, Pennsylvania
(Address of principal executive offices)

23-2081753
(I.R.S. Employer
Identification No.)
19406
(Zip Code)

Registrant's telephone number, including area code: (800) 355-3500

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

Title of each class	Trading symbol	Name of each exchange on which registered
Class A Common Stock, Par Value \$0.001 Per Share	VERX	NASDAQ

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

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

The registrant was not a public company as of the last business day of its most recently completed second fiscal quarter and, therefore, cannot calculate the aggregate market value of its voting and non-voting common equity held by non-affiliates as of such date.

As of March 11, 2021, the registrant had 26,327,441 shares of Class A common stock, \$0.001 par value per share, and 120,117,000 shares of Class B common stock, \$0.001 par value per share, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Definitive Proxy Statement relating to the 2021 Annual Meeting of Shareholders, are incorporated by reference into Part III of this report. The Definitive Proxy Statement will be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year ended December 31, 2020.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements. We intend such forward looking statements to be covered by the safe harbor provision for forward looking statement contained in Section 27A of the Securities Act of 1933, as amended, (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended, (the “Exchange Act”). All statements made in this Annual Report on Form 10-K that are not statements of historical fact, including statements about our beliefs and expectations and regarding future events or our future results of operations, financial condition, business, strategies, financial needs, and the plans and objectives of management, are forward-looking statements and should be evaluated as such. These statements often include words such as “anticipate,” “believe,” “expect,” “suggests,” “plans,” “intend,” “estimates,” “targets,” “projects,” “should,” “could,” “would,” “may,” “will,” “forecast,” and other similar expressions or the negatives of those terms. We base these forward-looking statements on our current expectations, plans and assumptions that we have made in light of our experience in the industry, as well as our perceptions of historical trends, current conditions, expected future developments and other factors we believe are appropriate under the circumstances at such time. As you read and consider this Annual Report on Form 10-K, you should understand that these statements are not guarantees of future performance or results. The forward-looking statements are subject to and involve risks, uncertainties and assumptions, and you should not place undue reliance on these forward-looking statements. Although we believe that these forward-looking statements are based on reasonable assumptions at the time they are made, you should be aware that many factors could affect our actual results or results of operations and could cause actual results to differ materially from those expressed in the forward-looking statements.

You should not place undue reliance on our forward-looking statements, and you should not rely on forward-looking statements as predictions of future events. The results, events, and circumstances reflected in the forward-looking statements may not be achieved or occur, and actual results, events, or circumstances could differ materially from those described in the forward-looking statements. The forward-looking statements made in this Annual Report on Form 10-K speak only as of the date of this report. We undertake no obligation to update any forward-looking statements made in this report to reflect events or circumstances after the date of this report or to reflect new information or the occurrence of unanticipated events, except as required by law. If we update one or more forward-looking statements, no inference should be drawn that we will make additional updates with respect to those or other forward-looking statements.

PART I

Item 1. Business

Overview

Vertex is a leading provider of enterprise tax technology solutions. Our vision is to accelerate global commerce, one transaction at a time. Companies with complex tax operations rely on Vertex to automate their end-to-end indirect tax processes. Our software, content and services address the increasing complexities of global commerce and compliance by reducing friction, enhancing transparency, and enabling greater confidence in meeting indirect tax obligations. As a result, our software is ubiquitous within our customers' business systems, touching nearly every line item of every transaction that an enterprise can conduct.

The rapid changes taking place in today's global business, technology and regulatory environments are having a compounding effect on the complexity of indirect tax management. As companies expand their business models, enter new geographies, and extend their distribution channels, they widen the aperture of their indirect tax obligations. Additionally, as they expand their core offerings to incorporate new digital products and services, they are increasingly impacted by new tax regulations being pursued by jurisdictions. This complexity demands intelligent solutions that enable businesses to satisfy tax obligations and support growth opportunities.

We have pioneered tax technology for over 40 years. Today, we have over 4,000 customers, including over half of the Fortune 500, and provide our customers with tax support in over 130 countries. Today, our software enables tax determination, compliance and reporting, tax data management and document management with powerful pre-built integrations to core business applications used by most companies, particularly those applications that have a significant impact on global commerce. Our software is fueled by over 300 million data-driven effective tax rules and supports indirect tax compliance in more than 19,000 jurisdictions worldwide. Our solutions can be deployed in the cloud, on-premise, or both, with implementation services available to enable optimal customer outcomes and satisfy unique business requirements.

Our Solutions

Our solutions automate the end-to-end indirect tax processes for enterprises with complex tax operations and audit risk. Our software includes tax determination, compliance and reporting, tax data management and document management tools, as well as pre-built integrations to major business applications. Customers can license these solutions individually or as part of a broader suite and can choose the delivery model that best aligns to their enterprise technology environments.

- **Tax Determination.** Our tax determination solutions enable real-time calculation of indirect taxes and applicable fees for sale and purchase transactions. This solution includes a powerful indirect tax calculation engine that applies rules-based logic from our proprietary content database to determine taxability, identify precise taxing jurisdictions, and consistently apply the appropriate amount of tax to each transaction in real-time. Our solution supports determination for sales tax, consumer and seller use tax, VAT, communications tax, leasing tax, payroll tax and lodging and occupancy tax.
- **Compliance and Reporting.** Our compliance and reporting solutions enable the automation of signature-ready returns and remittance of indirect tax to appropriate jurisdictions. These solutions leverage tax data files imported from Vertex or third-party applications to establish visible audit trails of tax determinations and user-made adjustments. Our solutions also include workflow management tools, such as calendar and document management, and role-based security and event logging, which supports our customers' internal control over financial reporting and compliance with the Sarbanes-Oxley Act. We support e-filing and print formats for returns, schedules, worksheets, tax reports and payment requests and also provide archiving and retrieval of all filings.
- **Tax Data Management.** Our tax data management tools enable enterprises to unify transaction data from multiple business applications and sources. These solutions enable tax teams to view detailed transaction-level tax data, identify anomalies or errors, and establish necessary rules to address gaps in data and audit logs for any adjustments or corrections that have been made.

- **Document Management.** Our document management solutions automate the validation of, storage of, and tax audit support for sales tax exemptions and reseller certificates, enabling enterprises to manage large quantities of documents, such as tax exemption certificates.
- **Pre-Built Integrations.** Our solutions are supported by a suite of powerful, pre-built integrations that enable real-time coordination between our solutions and major business applications, such as Adobe/Magento, Coupa, Microsoft Dynamics, NetSuite, Oracle, Salesforce, SAP, SAP Ariba, Workday and Zuora, among many others. Much more than traditional application programming interfaces, our integrations include mapping data fields, business logic and configurations to improve the processing of transactions to and from our solutions. The majority of our integrations are designed, tested and supported by us. We also allow for partner-developed integrations as part of a rigorous certification program.
- **Industry-Specific Solutions.** We offer a range of solutions that support certain industries that have specific indirect tax needs, such as retail, communications, and leasing. For example, our retail solution supports omnichannel transactions spanning store kiosks, eCommerce websites, catalog sales and mobile device transactions. Our communications solution supports the determination of taxes, surcharges and fees affecting United States of America (“U.S.”) providers of communication services, including wireless, voice-over-IP, satellite, internet and video and audio streaming services. We have pre-built integrations specific to the leading providers of business applications used by these industries.
- **Services.** Due to the ubiquitous nature of our software in our customers' technology environments, we also offer implementation services to enable our customers to realize the full benefit of our solution at initial deployment. These software implementation services include configuration, data migration and implementation, and premium support and training. Customers can also license indirect tax returns outsourcing as a managed service for compliance in the U.S. and Canada. These managed services include indirect tax return preparation, filing and tax payment and notice management.

Our Tax Content

All of our software and solutions are underpinned by our proprietary content database, which currently supports over 300 million effective tax rules. Our content is a key component of our software subscriptions. Its quality and accuracy are critical to the longevity of our customer subscriptions. On a monthly basis, our content team combines legislative research, analysis, technical logic, and automation to embed updated rules into our software. Unlike many enterprise software solutions where maintenance and support are focused solely on periodic technology upgrades, our monthly updates are a critical element of allowing our customers to ensure that they are utilizing the latest tax changes to accurately calculate their indirect taxes.

Our Technology

Our software and solutions are built upon a robust set of technology capabilities designed for the flexibility, configurability, speed, and scale to handle complex tax scenarios and processing volumes and interoperability to core business applications.

- **Real-Time Engine.** Our real-time engine determines the appropriate tax rules to apply to a line item in a transaction through a sequence of real-time processes that combine tax algorithms and tax content with transaction line-item level detail. Combining tax content stored as structured data with sequencing and decision tree logic results in one or more individual tax rules that are applied to each line item in a transaction. This is built within memory and cached for performance. The in-memory processes of the core calculation engine are tuned to accommodate high volume and complex transactions at speed and scale.
- **Configuration.** Our solutions are built to be highly configurable. Through our graphical user interfaces, users can configure and map their taxability to ensure the correct tax rules are executed. Our flexibility in configuration also extends to users who can create their own taxability rules, as appropriate. These user-defined taxability rules act as an override providing flexibility, to ensure that non-standard tax scenarios and processes can be addressed. Additionally, users can augment transactions entering and exiting the engine by building their own logic through our drag and drop experience. This logic is saved to then execute within the engine.

- **Tax Geography.** Accuracy in determining the appropriate taxation of a transaction depends on many factors, including detailed location information for where a transaction is occurring. We designed and created a proprietary solution for tax jurisdiction identification that leverages industry geographic information system tools and geospatial data. With our proprietary technology we are able to create and map multiple tax jurisdictions for a particular location and assign a unique identifier to each location so that it can be used by the engine to allow for higher accuracy. This technology is highly relevant to emerging economic shifts, such as the sharing economy, where the physical nexus of transactions is unclear, such as ride-sharing services.
- **Security.** Our application security framework allows our customers to define how users can interact with sensitive enterprise data and how they are authorized to use certain aspects of our software. Users are mapped to a set of predefined roles and we provide our customers with the ability to create user-defined roles. User-defined role-based access can be defined on a screen-by-screen level and further refined with read and/or write privileges.
- **Cloud Solutions.** We provide Cloud services from six geographically separate data centers located on two continents: North America and Europe. The data centers are paired for failover of operations to an alternate, geographically separate production facility in case any single data center becomes unavailable. All data centers are operated by leading vendors providing physical security, Internet access, environmental controls, and data retention services.

Our Customers

Today, we serve a large, diverse, and growing global customer base. Our market leadership in key industries can be demonstrated by our relationships with many of the largest and most well-known companies in retail trade, wholesale trade, and manufacturing. Our customers include the majority of the Fortune 500, as well as a majority of the top 10 companies by revenue in multiple industries such as retail, technology, and manufacturing, in addition to leading marketplaces. We have significant expansion opportunities with these customers driven by our growing product portfolio and geographic coverage.

A distinct and growing subset of our customer base includes marketplaces and various professional service providers, including accounting firms and outsourcing firms. Our robust technology and deep tax content differentiate us in our ability to serve the indirect tax needs of 7 of the top 10 marketplace providers in North America by revenue. These customers support tens of thousands of merchants who rely on their platform for their e-commerce transaction processing. We also support service providers such as outsourcing and accounting firms who use our technology to calculate tax and file tax returns for their end-customers. While we include these marketplaces and service providers in our customer counts, the tens of thousands of their end-user customers are not included in our customer counts.

As of December 31, 2020, we had over 4,000 customers and our ARR per customer was over \$78,000. While most of our revenue is currently generated by customers domiciled in the U.S., many of our customers are multinational organizations with global business operations. We also provide tax software solutions outside the U.S., primarily in Europe. No single customer represented more than 10% of our total revenue for the years ended December 31, 2020, 2019 and 2018.

Our Growth Strategies

We believe today's global commerce environment provides durable growth opportunities for our business. Our growth strategies include:

- **Retention and expansion of revenues from existing customers.** The breadth of our solutions allows us to continually meet our customer needs, even as their needs expand in scope. For example, customers initially investing in sales tax determination may need support for other tax types, jurisdictions, and capabilities to manage their indirect tax lifecycle over time. As businesses continue to evolve through acquisitions and expand products and services, enter new geographies, or expand their distribution channels, we believe they will need our software, services and content. We plan to continue to invest in new innovations and enhance our solutions to support the ongoing retention and expansion of revenue from our existing customers. Our flexible, tiered transaction-based pricing model also results in our customers growing their spend with us as they grow and continue to use our solutions.

- **Acquire new customers.** Our solutions address the complexity of aligning commerce and compliance and we believe the market for our software and solutions is large and underpenetrated, both in the U.S. and globally. As enterprise and mid-market companies continue to expand their business operations and their tax complexity grows, we expect demand for our solutions to increase among new customers and partners. We also expect these companies to adopt our solutions much earlier in their corporate lifecycle. This adoption is driven by advances in cloud computing and digital commerce, which enable more companies to accelerate new product delivery and scale their business through online marketplaces and emerging commerce platforms. These increases in business complexity necessitate advanced tax solutions for a broader number of companies. We plan to continue to invest in our sales and marketing teams and our solution development in order to capture this demand increase and acquire new customers.
- **Broaden and deepen our partner ecosystem.** We integrate with key technology partners that span enterprise resource planning (“ERP”), customer relationship management (“CRM”), procurement, billing, point of sale (“POS”), and eCommerce platforms. Our partners enhance our go-to-market capacity and extend our brand leadership and reach. We leverage our partnerships to maximize the benefits of our solutions for our customers and to identify new growth opportunities. We believe expanding our strategic alliances with emerging participants who are fueling global commerce, such as payment and digital commerce platforms, will create new value for our customers and new sources of revenue. Future partnerships with large-scale digital payments players will allow us to develop additional customer-centric solutions and further expand our customer base.
- **Extend global footprint.** We have a significant opportunity to further expand internationally, in terms of our regional operations, content depth and go-to-market coverage. We expect to continue to invest in our software and solutions outside of the U.S., most notably in Latin America and Europe. These jurisdictions are among the most complex and the largest international markets for our customers. We have also made significant investments in our own operations in these regions. In Europe and Brazil, for example, we have tailored our go-to-market strategy and enhanced our country-specific content database and furthered our investment in our global compliance reporting solution. By extending our global footprint, we believe we will also expand account penetration of existing customers with operations around the globe.
- **Sustained investment in new product innovation.** With the pace of change in commerce and compliance, we believe it is important to continue innovating and extending the functionality and breadth of our software and solutions. Our approach to innovation is driven by our relationships with our customers and partners, with whom we create new solutions, align product roadmaps, and embed our software within their applications and platforms. We have also created and invested in an innovation lab where we design, test, and incubate next-generation tax solutions and adjacent market opportunities. Over time, we expect such investment will bring additional value to existing customers and help us acquire new customers.

Sales and Marketing

We license our software and solutions primarily through our direct sales organization, with a focus on enterprise and mid-market businesses that have complex tax operations. Our direct sales team is comprised of inside sales and field sales, supported by our technical pre-sales and services teams. Teams are organized by territory and company size. We also have customer success teams focused on onboarding, usage, retention, renewals, and cross-selling additional products.

Our direct sales force leverages our partnerships with technology providers such as Oracle, SAP, Microsoft, and Salesforce, and a growing network of system integrators to influence and drive growth opportunities. The partnerships can include certified integrations that drive ease of implementation and rapid time-to-value for our joint customers. We leverage our relationships with professional services firms such as Deloitte, PwC, Ernst and Young, and KPMG to drive tax software adoption in partnership with their tax advisory and tax technology practices.

We also utilize indirect sales to efficiently grow and scale our revenues. Our indirect sales team focuses on building relationships with leading system integrators who implement eCommerce and other platforms, and resellers who offer our software, services, and training to their customer networks. These partnerships allow us to extend our demand generation and market reach efforts. We also extend our reach efficiently through marketplaces and service providers who use our technology to calculate tax and/or file tax returns for their end-customers.

Our marketing investments are focused on establishing and expanding our brand recognition, creating sales leads and growing our customer relationships. We generate sales leads through online and offline marketing channels, including search engine marketing, outbound lead generation, technology events and conferences and digital marketing programs. Word-of-mouth referrals from our customers, technology partners and consulting firms further scale our market reach. We engage and grow our customer revenues through hosted events, customer advisory boards and user groups, and digital seminars. We extend brand awareness through advertising, press coverage and social media, as well as through sponsorships of industry associations such as Tax Executive Institute, Council on State Taxation, and CPA.com.

Partners

We believe the scale and quality of our ecosystem is unparalleled in the industry, and we are committed to growing it even further. Our partner ecosystem consists of multiple types of partners that provide us access to their customers and clients.

Our continued success is enabled by our seamless integration into customers' business applications, gathering high-quality new customer leads and collaborating with professional service providers to help our customers solve their specific tax needs. In addition to driving technological innovation and growing our range of solution offerings, expanding our partner ecosystem has been an essential part of our growth.

- **Accounting & Consulting Partners.** We collaborate with over 50 tax, accounting, and consulting firms, which not only complement our global, local, and industry-specific regulatory expertise but also point us towards specific commercial opportunities. Our wide range of offerings and sophisticated technology align with these firms' areas of specialization, enabling organizations to strengthen end-to-end delivery capabilities for a diverse array of clients.
- **Technology Partners.** Our pre-built integrations with key partners including Adobe/Magento, Coupa, Microsoft Dynamics, NetSuite, Oracle, Salesforce, SAP, SAP Ariba, Workday, and Zuora, among many others, are key differentiators that enable our customers to seamlessly connect our solutions into their business applications and processes. Our trusted brand reputation has allowed us to be the leading SAP and Oracle tax technology provider, with a relationship spanning many years with these vendors. Our technology software and solutions and highly scalable transaction volume throughput has earned the trust of world-class online marketplaces. These deep partnerships allow us to expand the frontier of tax technology innovation and market opportunity.

Research and Development

Our research and development team consists of our architecture, software engineering, user experience, infrastructure automation and technical production support teams. This organization is responsible for the design, development, testing and delivery of new technologies, features and integrations of our tax software and solutions, as well as the continued improvement of our existing solutions. It is also responsible for operating and scaling our software and solutions and infrastructure that run in the cloud. We continue to invest in our research and development capabilities to extend our solutions further into the cloud and partner ecosystems to continuously deliver more value.

Competition

Our industry is highly competitive and fragmented. Businesses employ a mix of approaches to address their indirect tax obligations, including:

- in-house practices and spreadsheets that result in custom transaction-specific research, manual determination, static tax tables or rate calculator services, as well as manual filing and remittance activities;
- businesses utilizing native ERP capabilities with rudimentary tax determination capabilities, which are typically not designed for complex tax support and lack tax rates, rules and complex calculation functionality and require the user to manually track, input, maintain and update all tax law changes that occur;
- outsourced transaction tax compliance services offered by accounting and specialized consulting firms; and

- tax-specific solutions from other vendors.

We believe customers consider the following factors when selecting indirect tax technologies:

- ability to minimize compliance risk exposure associated with inaccurate and/or inconsistent determination and remittance of taxes;
- ability to deliver real time tax determinations;
- ease of deployment and use;
- ease of integration with the customer's business applications, across multiple systems;
- ability to address multiple transaction tax compliance functions, from initial taxability and tax rate determination through compliance and remittance of funds;
- lower total cost of ownership; and
- continuously updated tax content applicable to the customer's business.

Depending on the importance and complexity associated with these factors for each customer we maintain varying competitive advantages. We continually monitor these factors and adjust our functionalities, service offerings, pricing structures and overall solution delivery approach to continually strengthen our position.

Intellectual Property

Our success has resulted in part from our proprietary methodologies, software, reusable knowledge capital and other intellectual property rights. We rely on a combination of copyright, trademark, and trade secret law, as well as contractual restrictions such as confidentiality and non-compete provisions to protect our intellectual property rights, including our brand, technology, and confidential information. We have policies related to security, privacy, confidentiality, ownership, and the use and protection of our intellectual property. We also enter into confidentiality and invention assignment/proprietary rights agreements with our consultants, employees and other third parties as appropriate that protect and control access to our intellectual property, and we enforce these agreements where necessary. We recognize the value of our intellectual property in the marketplace and vigorously identify, create, and protect it. We believe the innovation of our employees and our continued enhancement of the features and functionality of our solutions is the keystone of our success.

Human Capital

Our culture is the foundation of everything we do, guided by a common purpose to build trusted relationships at work, in business and in our communities. We strive to be a values-driven employer of choice who attracts, retains, and inspires talented professionals to achieve their full potential. We have been recognized as one of the best places to work in Philadelphia for the past six years according to The Philadelphia Inquirer. We create and nurture an engaging work environment that embodies our core values of collaboration, performance, integrity, innovation, and fun, and we actively support our employees' participation in community service and philanthropy.

As of December 31, 2020, we had approximately 1,200 full-time employees. Of these employees, 95% were based in the U.S., 4% based in Europe and 1% in Latin America. We believe we have a strong relationship with our employees, and we have not experienced any work stoppages.

We have designed the following dashboards to power the business with human capital data to inform leaders on the development, attraction, and retention of personnel: Board Reporting, SEC Reporting and Program Management Reporting. These dashboards are maintained by our People and Culture and Recruiting teams. These dashboards present information regarding recruiting time to fill averages, retention of employees, workforce costs, diversity, employee engagement, training and development, culture initiatives, and workforce skills and capabilities.

Available Information

We file annual, quarterly, and current reports and other information with the Securities and Exchange Commission (“SEC”). The SEC maintains a website (www.sec.gov) that contains reports, proxy and information statements, and other information regarding registrants that file electronically with the SEC, including us. You may also access, free of charge, our reports filed with the SEC (for example, our Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q, and our Current Reports on Form 8-K and any amendments to those forms) through the “Investors” portion of our website (https://www.vertexinc.com/). Reports filed with or furnished to the SEC will be available as soon as reasonably practicable after they are filed with or furnished to the SEC. Our website is included in this Annual Report on Form 10-K as an inactive textual reference only. The information found on our website is not part of this or any other report filed with or furnished to the SEC.

Item 1A. Risk Factors

Our business faces significant risks and uncertainties. Certain important factors may have a material adverse effect on our business prospects, financial condition and results of operations, and they should be carefully considered. Accordingly, in evaluating our business, we encourage you to consider the following discussion of risk factors, in its entirety, in addition to other information contained in or incorporated by reference to this Annual Report on Form 10-K and our other public filings with the SEC. Other events that we do not currently anticipate or that we currently deem immaterial may also affect our business, prospects, financial condition and results of operations. See "Special Note Regarding Forward-Looking Statements" elsewhere in this Annual Report on Form 10-K.

A large portion of our revenue depends on maintaining and growing our revenue from existing customers and adding new customers, and if we fail to add new customers, retain our customers, or expand their usage of our solutions, our business, results of operations, financial condition and cash flows would be harmed.

We currently derive a substantial portion of our revenue from subscriptions to our indirect tax software. We have added, and will continue to add, additional solutions to expand our offerings, but, at least in the near term, we expect to continue to derive the majority of our revenue from our indirect tax software. As such, the ability of our indirect tax software to meet our customers' requirements is critical to our success. Demand for our solutions is affected by a number of factors, many of which are beyond our control, such as continued market acceptance and continued employment of our solutions by existing and new customers, the timing of the development and release of upgraded or new solutions, the introduction or upgrading of products and services by our competitors, technological change and growth or contraction in our addressable market. If our indirect tax software does not continue to meet customer requirements, our business, results of operations, financial condition and growth prospects will suffer.

Our customers have no obligation to renew their subscriptions for our solutions after the expiration of their subscription periods and our customers may not renew subscriptions for a similar mix of solutions. Our retention rates would decline as a result of a number of factors, including customer dissatisfaction, decreased customer spending levels, decreased customer transaction volumes, increased competition, changes in tax laws or rules, pricing changes or legislative changes affecting tax compliance providers. If our customers do not renew their subscriptions, or our customers reduce the solutions purchased under their subscriptions, our revenue would decline and our business may be harmed.

Our future success also depends in part on our ability to sell additional solutions to existing customers and on our customers' expanded use of our solutions. If our efforts to sell our additional solutions to our customers are not successful or if our customers do not expand their use of our solutions, it would decrease our revenue growth and harm our business, results of operations, financial condition and cash flows.

Our business and success depend in part on our strategic relationships with third parties, including our partner ecosystem, and our business would be harmed if we fail to maintain or expand these relationships.

We depend in part on and anticipate that we will continue to depend in part on, various third-party relationships to sustain and grow our business. Our relationships with third-party publishers of software business applications, including accounting, ERP, eCommerce, POS, recurring billing and CRM systems, help drive our business because the integration of our solutions with their applications allows us to reach their sizeable customer bases. Our customers' user experience is dependent on our ability to connect easily to such third-party software applications. We may fail to retain and expand these integrations or relationships for many reasons, including due to failures by third parties to maintain, support or secure their

technology platforms in general and our integrations in particular, or errors, bugs or defects in such third-party technology, or changes in our technology platform. Any such failure could harm our relationship with our customers, our reputation and brand and our business and results of operations.

In addition, integrating third-party technology can be complex, costly and time-consuming. Third parties may be unwilling to build integrations, and we may be required to devote additional resources to develop integrations for business applications on our own. Providers of business applications with which we have integrations may decide to compete with us or enter into arrangements with our competitors, resulting in such providers withdrawing support for our integrations. In addition, any failure of our solutions to operate effectively with business applications could reduce the demand for our solutions, resulting in customer dissatisfaction and harm to our business. If we are unable to respond to these changes or failures in a cost-effective manner, our solutions may become less marketable, less competitive or obsolete and our results of operations may be negatively impacted.

If we are unable to adapt to technological change by successfully introducing new and enhanced solutions and services, our business, results of operations, financial condition and cash flows would be adversely affected.

The market for our solutions is characterized by rapid technological change, frequent new product and service introductions and enhancements, changing customer demands and evolving industry standards. The introduction of software embodying new technologies can quickly make existing software obsolete and unmarketable. Software solutions are inherently complex, and it can take a long time and require significant research and development expenditures to develop and test new or enhanced solutions. The success of any enhancements or improvements to our software solutions or any new solutions and services depends on several factors, including timely completion, competitive pricing, adequate quality testing, integration with existing technologies and our platform and overall market acceptance. We cannot be sure that we will succeed in developing, marketing and delivering on a timely and cost-effective basis enhancements or improvements to our software or any new solutions and services that respond to technological change or new customer requirements, nor can we be sure that any enhancements or improvements to our software or any new solutions and services will be free of errors and defects or that they will achieve market acceptance. Moreover, even if we introduce new solutions, we would experience a decline in revenue of our existing solutions that is not offset by revenue from the new solutions. Customers may delay making purchases of new solutions to permit them to make a more thorough evaluation of these solutions or until industry and marketplace reviews become widely available. In addition, we may lose existing customers who choose a competitor's solutions rather than migrate to our new solutions. This could result in a temporary or permanent revenue shortfall and adversely affect our business.

Any failures in information technology or infrastructure could lead to disruptions of our software, loss of customer data or untimely remittance of taxes, any of which could adversely affect our reputation and financial condition.

Our software depends on uninterrupted, high-speed access to the internet in order to provide real-time tax determinations and processing of indirect tax data. Failures in our or our customers' and partners' information technology and infrastructure, or service outages at third-party internet providers, could lead to disruptions to our software. Such failures may be caused by numerous factors, including mechanical failure, power outage, human error, physical or electronic security breaches, war, terrorism, fire, earthquake, hurricane, flood and other natural disasters, sabotage and vandalism. Disruptions to our software could cause customers to lose sensitive or confidential information and could also lead to our or our customers' inability to timely remit taxes to the appropriate authorities. Any of these outcomes could lead customers to switch to our competitors or avoid using our solutions, which would negatively impact our revenue and harm our opportunities for growth.

Incorrect or improper implementation, integration or use of our solutions could result in customer dissatisfaction and negatively affect our business, results of operations, financial condition and cash flows.

Our customers may need training or education in the proper use of, and the variety of benefits that can be derived from, our solutions to maximize their potential benefits. If our solutions are not implemented or used correctly or as intended, inadequate performance may result. Because our customers rely on our solutions to manage a wide range of tax compliance operations, the incorrect or improper implementation or use of our solutions, or our failure to provide adequate support to our customers, may result in negative publicity or legal claims against us, which could harm our business, results of operations, financial condition and cash flows. Also, as we continue to expand our customer base, any failure by us to properly provide training and support will likely result in lost opportunities for additional subscriptions for our solutions. In addition, the upfront costs of our solutions can limit our sales to businesses using manual processes.

If we fail to attract and retain qualified technical and tax-content personnel, our business could be harmed.

Our technology is complex and our success depends in large part on our ability to attract and retain highly qualified personnel, particularly tax-content specialists, software developers, technical support and research and development personnel. Competition for skilled personnel is intense and we may not be successful in attracting, motivating and retaining needed personnel. We also may be unable to attract or integrate into our operations qualified personnel on the schedule we desire. Any inability to attract, integrate, motivate and retain the necessary personnel could harm our business. Dealing with the loss of the services of our executive officers or key personnel and the process to replace any of our executive officers or key personnel may involve significant time and expense, take longer than anticipated, and significantly delay or prevent the achievement of our business objectives, which would harm our financial condition, results of operations, and business.

We face competitive pressures from other tax software and services providers, as well as the challenge of convincing businesses using native ERP functions to switch to our software.

We face significant competitive challenges from other tax-specific software vendors and from outsourced transaction tax compliance services offered by accounting and specialized consulting firms. There are a number of competing tax-specific software vendors, some of which have substantially greater revenue, personnel and other resources than we do. Corporate competitors, as well as the state and local tax services offered by accounting firms, have historically targeted our customer base of large enterprise companies. In addition, our competitors who currently focus their tax compliance services on small- to medium-sized businesses may be better positioned to increase their market share with small- to medium-sized businesses and may choose to enter our markets, whether competing based on price, service or otherwise. We also face a growing number of competing private transaction tax compliance businesses focused primarily on eCommerce. Increased competition may impact our ability to add new customers and to retain and expand revenues from existing customers. It is also possible that large enterprises with substantial resources that operate in adjacent compliance, finance or eCommerce verticals may decide to pursue transaction tax compliance automation and become immediate, significant competitors. Our failure to successfully and effectively compete with current or future competitors could lead to lost business and negatively affect our revenue.

Our recent success may not be indicative of our future results of operations.

We cannot predict with certainty our customers' future usage or retention given the diversity of our customer base across industries, geographies, customer size and other factors. Accordingly, we may be unable to accurately forecast our revenues notwithstanding our substantial investments in sales and marketing, tax content infrastructure and research and development in anticipation of continued growth in our business. If we do not realize returns on these investments in our growth, our results of operations could differ materially from our prior results, which could cause our stock price to decline.

Changes to customers' and partners' software systems may impact our ability to offer a specific software deployment method to existing customers, which could cause a termination of customer contracts utilizing that deployment method, or otherwise affect our results of operations, financial condition and cash flow.

Our solutions are integrated with the software systems and complex workflows of our customers and partners. In the event that such software systems are modified or updated in a way that is incompatible with our software, we may be unable to continue to support the operations of our customers and partners. If our customers are unable to implement our solutions successfully or in a timely manner, or if our partners are unable to integrate with our solutions through our integrations, customer perceptions of our solutions may be impaired, our reputation and brand may suffer and customers may choose not to renew or expand the use of our solutions. In addition, if we fail to anticipate technological changes that our customers and partners may look to adopt, our solutions may be perceived as being less effective or obsolete. Any of these changes could have a material adverse effect on our results of operations and financial condition.

We need to continue making significant investments in software development and equipment to improve our business.

To improve the scalability, security and efficiency of our solutions, and to support the expansion of our software into other tax types, we will need to continue making significant capital expenditures and also invest in additional software and infrastructure development. If we experience increasing demand in subscriptions, we may not be able to augment our infrastructure quickly enough to accommodate such increasing demand. In the event of decreases in subscription sales, certain of our fixed costs, such as for capital expenditures, may make it difficult for us to quickly adjust our expenses

downward. Additionally, we are continually updating our software and content, which increases expenses for us. We may also need to review or revise our software architecture as we grow, which may require significant resources and investments. As a result, although we may have significant research and development expenditures, which may be incurred and certain of which may be capitalized, there is no guarantee our solutions will be accepted by the market. This could result in increased costs or an impairment of capitalized development costs with no resulting future revenue benefit.

If we fail to effectively manage our growth, our business, results of operations, financial condition and cash flows will be harmed.

We have experienced, and may continue to experience, growth in our headcount and operations, both domestically and internationally, which has placed, and may continue to place, significant demands on our management and our administrative, operational and financial reporting resources. We have also experienced significant growth in the number of customers, number of transactions and the amount of tax content that our platform and solutions support. Our growth will require us to hire additional employees and make significant expenditures, particularly in sales and marketing but also in our technology, professional services, finance and administration teams, as well as in our facilities and infrastructure. Our ability to effectively manage our growth will also require the allocation of valuable management and employee resources and improvements to our operational and financial controls and our reporting procedures and systems. In addition, as we seek to continue to expand internationally, we will likely encounter unexpected challenges and expenses due to unfamiliarity with local requirements, practices and markets. Our expenses may increase more than we plan, and we may fail to hire qualified personnel, expand our customer base, enhance our existing software, expanding our tax content, develop new solutions, integrate any acquisitions, satisfy the requirements of our existing customers, respond to competitive challenges or otherwise execute our strategies. If we are unable to effectively manage our growth, our business, results of operations, financial condition and cash flows would likely be harmed.

Future acquisitions of, and investments in, other businesses, software, tax content or technologies may not yield expected benefits, and our inability to successfully integrate acquisitions may negatively impact our business, results of operations, financial condition and cash flows.

We may in the future seek to grow our operations by pursuing acquisitions of businesses, software and technologies. We may not realize the anticipated benefits, or any benefits, from future acquisitions. In addition, if we finance acquisitions by incurring debt or by issuing equity or convertible or debt securities, our existing stockholders may be diluted or we could face constraints related to covenants in the agreements governing the indebtedness, which could affect the market value of our capital stock. To the extent that the acquisition consideration is paid in the form of an earnout on future financial results, the success of such acquisition will not be fully realized by us for a period of time as it is shared with the sellers. Further, if we fail to properly evaluate and execute acquisitions or investments, our business and prospects may be seriously harmed and the value of your investment may decline. For us to realize the benefits of future acquisitions, we must successfully integrate the acquired businesses, software or technologies with ours. This may take time and divert management's attention from our day-to-day operations, which could negatively impact our business, results of operations, financial condition and cash flows.

Our quarterly and annual results of operations will fluctuate in future periods.

We will experience quarterly or annual fluctuations in our results of operations due to a number of factors, many of which are outside of our control. This makes our future results difficult to predict and could cause our results of operations to fall below expectations or our predictions. Factors that might cause quarterly or annual fluctuations in our results of operations include:

- our ability to attract new customers and retain and grow revenue from existing customers;
- our ability to maintain, expand, train and achieve an acceptable level of production from our sales and marketing teams;
- our ability to find and nurture successful sales opportunities;
- the timing of our introduction of new solutions or updates to existing solutions;
- our ability to grow and maintain our relationships with our ecosystem of third-party partners, including integration partners and referral partners;

- the success of our customers' businesses;
- the timing of large subscriptions and customer renewal rates;
- new government regulations;
- changes in our pricing policies or those of our competitors;
- the amount and timing of our expenses related to the expansion of our business, operations and infrastructure;
- any impairment of our intangible assets, capitalized software, long-lived assets and goodwill;
- any seasonality in connection with new customer agreements, as well as renewal and upgrade agreements, each of which have historically occurred at a higher rate in the fourth quarter of each year;
- future costs related to acquisitions of content, technologies or businesses and their integration; and
- general economic conditions.

Any one of the factors above, or the cumulative effect of some or all of the factors referred to above, may result in significant fluctuations in our quarterly and annual results of operations. This variability and unpredictability could result in our failure to meet or exceed our internal operating plan. In addition, a percentage of our operating expenses is fixed in nature and is based on forecasted financial performance. In the event of revenue shortfalls, we may not be able to mitigate the negative impact on our results of operations quickly enough to avoid short-term impacts.

We generally recognize revenue from subscription fees paid by customers ratably over the subscription term. As a result, most of the subscription revenue we report in each quarter is the result of agreements entered into during previous quarters. Consequently, a decline in new or renewed subscriptions in any one quarter will not be fully reflected in our revenue results for that quarter. Any such decline, however, will negatively affect our revenue in future quarters. Our subscription model also makes it difficult for us to rapidly increase our revenue through additional sales in any period, as subscription revenue from new customers is generally recognized over the applicable subscription terms.

Operating globally involves challenges that may adversely affect our ability to grow.

We plan to continue expanding our business operations globally and to enter new markets where we have limited or no experience in marketing, selling and deploying our solutions. If we fail to deploy or manage our operations in international markets successfully, our business may suffer. In the future, as our international operations increase, or more of our expenses are denominated in currencies other than the U.S. dollar, our results of operations may become more sensitive to fluctuations in the exchange rates of the currencies in which we do business. In addition, we are subject to a variety of risks inherent in doing business internationally, including:

- political, social and economic instability;
- risks related to the legal and regulatory environment in foreign jurisdictions, including with respect to privacy, localization and content laws as well as unexpected changes in laws, regulatory requirements and enforcement due to the wide discretion given to some local lawmakers and regulators regarding the enactment, interpretation and implementation of local regulations;
- potential damage to our brand and reputation due to compliance with local laws, including potential censorship and requirements to provide user information to local authorities;
- fluctuations in currency exchange rates;
- higher levels of credit risk and payment fraud;
- complying with the tax laws and regulations of multiple tax jurisdictions;
- enhanced difficulties of integrating any foreign acquisitions;
- complying with a variety of foreign laws, including certain employment laws requiring national collective bargaining agreements that set minimum salaries, benefits, working conditions and termination requirements;
- reduced protection for intellectual property rights in some countries;

- difficulties in staffing and managing global operations and the increased travel, infrastructure and compliance costs associated with multiple international locations;
- regulations that might add difficulties in repatriating cash earned outside our core markets and otherwise prevent us from freely moving cash;
- import and export restrictions and changes in trade regulation;
- complying with statutory equity requirements;
- complying with the U.S. Foreign Corrupt Practices Act (the "FCPA"), the U.K. Bribery Act and similar laws in other jurisdictions; and
- complying with export controls and economic sanctions administered by the relevant local authorities, including in the U.S. and European Union, in our international business.

If we are unable to expand internationally and manage the complexity of our global operations successfully, our business could be seriously harmed.

We hold significant amounts of money that we remit to taxing authorities on behalf of our customers, and this may expose us to liability from errors, delays, fraud or system failures, which may not be covered by insurance.

We handle significant amounts of our customers' money so that we can remit those amounts to various taxing jurisdictions on their behalf. If we make mistakes in the determination or remittance of tax payments to the appropriate jurisdictions, our reputation and results of operations could suffer. Moreover, if our banks' or our own internal compliance procedures regarding cash management fail, are hacked or sabotaged, there is a communication error of taxing jurisdiction remittance instructions between the banks' and our systems, or if our banks or we are the subject of fraudulent behavior by personnel or third parties, we could face significant financial losses. Our efforts to remit tax payments to applicable taxing jurisdictions after receiving the corresponding funds from our customers may fail, which would expose us to the financial risk of collecting from our customers after we have remitted funds on their behalf.

Additionally, we are subject to risk from concentration of cash and cash equivalent accounts, including cash from our customers that is to be remitted to taxing jurisdictions, with financial institutions where deposits routinely exceed federal insurance limits. If the financial institutions in which we deposit our customers' cash were to experience insolvency or other financial difficulty, our access to cash deposits could be limited, any deposit insurance may not be adequate, we could lose our cash deposits entirely and we could be exposed to liability to our customers. Any of these events would negatively impact our liquidity, results of operations and our reputation.

If we are unable to successfully adapt to organizational changes and effectively implement strategic initiatives, our reputation and results of operations could be impacted.

We have a dynamic organization and routinely implement changes to our priorities and workforce in order to keep up with the constantly evolving market in which we operate. We expect these types of changes to continue for the foreseeable future. Our success is dependent on identifying, developing and retaining key employees to provide uninterrupted leadership and direction for our business. This includes developing organizational capabilities in key growth markets where the depth of skilled employees is limited and competition for these resources is intense. Further, business and organizational changes may result in more reliance on third parties for various services, and that reliance may increase reputational, operational and compliance risks.

Errors in our customers' transaction tax determinations and reporting functions, or delays in the remittance of their tax payments, could harm our reputation, results of operations and growth prospects.

The tax determinations functions that our customers have to perform are complicated from a data management standpoint, time-sensitive and dependent on the accuracy of the database of tax content underlying our solutions. Some of our processes are not fully automated, such as our process for monitoring updates to tax rates and rules, and even to the extent our processes are automated, our solutions are not proven to be without any possibility of errors. If errors are made in our customers' tax determinations and reporting functions, or delays occur in the remittance of their tax payments, our customers may be assessed interest and penalties. Although our agreements generally have disclaimers of warranties and limit our liability, a court could determine that such disclaimers and limitations are unenforceable as a matter of law and hold us liable for these errors. Additionally, erroneous tax determinations could result in overpayments to taxing authorities

that are difficult to reclaim from the applicable taxing authorities or underpayments that could result in penalties. Any history of erroneous tax determinations for our customers could also harm our reputation, could result in negative publicity, loss of or delay in market acceptance of our solutions, loss of customer renewals and loss of competitive position. In addition, our insurance coverage may not cover all amounts claimed against us if such errors or failures occur. The financial and reputational costs associated with any erroneous tax determinations may be substantial and could harm our results of operations.

Changes in tax laws and regulations, or their interpretation or enforcement, may cause us to invest substantial amounts to modify our software, cause us to change our business model or draw new competitors to the market.

Changes in tax laws or regulations or interpretations of existing taxation requirements in the U.S. or in other countries may require us to change the manner in which we conduct some aspects of our business and could harm our ability to attract and retain customers. For example, a material portion of our revenue is generated by performing what can be complex transaction tax determinations and the corresponding preparation of tax returns and remittance of taxes. Changes in tax laws or regulations that reduce complexity or decrease the frequency of tax filings could negatively impact our revenue. In addition, there is considerable uncertainty as to if, when and how tax laws and regulations might change. As a result, we may need to invest substantial funds to modify our solutions to adapt to new tax laws or regulations. If our software solutions are not flexible enough to adapt to changes in tax laws and regulations, our financial condition and results of operations may suffer.

A number of states have considered or adopted laws that attempt to require out-of-state retailers to collect sales taxes on their behalf or to provide the jurisdiction with information enabling it to more easily collect use tax. On June 21, 2018, the U.S. Supreme Court issued its opinion in *South Dakota v. Wayfair, Inc.*, upholding South Dakota's economic nexus law, which requires certain out-of-state retailers to collect and remit sales taxes on sales into South Dakota. Following the Supreme Court's decision, certain states with pre-existing economic nexus provisions announced that they would begin enforcing these provisions on out-of-state retailers and additional states have proceeded with similar efforts. There also has been consideration of federal legislation related to taxation of interstate sales, which, if enacted into law, would place guidelines or restrictions on states' authority to require online and other out of state merchants to collect and remit indirect tax on products and services that they may sell. Similar issues exist outside of the U.S., where the application of value-added taxes or other indirect taxes on online retailers is uncertain and evolving. The effect of changes in tax laws and regulations is uncertain and dependent on a number of factors. Depending on the content of any indirect tax legislation, the role of third-party compliance vendors may change, we may need to invest substantial amounts to modify our solutions or our business model, we could see a decrease in demand, we could see new competitors enter the market, or we could be negatively impacted by such legislation in a way not yet known.

We are exposed to cybersecurity and data privacy risks that, if realized, could expose us to legal liability, damage our reputation and harm our business.

We face risks of cyber-attacks, computer hacks, theft, viruses, malicious software, phishing, employee error, denial-of-service attacks and other security breaches that could jeopardize the performance of our software and expose us to financial and reputational harm. Any of these occurrences could create liability for us, put our reputation in jeopardy and harm our business. Such harm could be in the form of theft of our or our customers' confidential information, the inability of our customers to access our systems or the improper re-routing of customer funds through fraudulent transactions or other frauds perpetrated to obtain inappropriate payments. In some cases, we rely on the safeguards put in place by third parties to protect against security threats. These third parties, including vendors that provide products and services for our operations, could also be a source of security risk to us in the event of a failure or a security incident affecting their own security systems and infrastructure. Our network of ecosystem partners could also be a source of vulnerability to the extent their applications interface with ours, whether unintentionally or through a malicious backdoor. We do not review the software code included in third-party integrations in all instances. Because the techniques used to obtain unauthorized access or to sabotage systems change frequently and generally are not recognized until launched against a target, we or these third parties may be unable to anticipate these techniques or to implement adequate preventative measures. We have internal controls designed to prevent cyber-related frauds related to authorizing the transfer of funds, but such internal controls may not be adequate. With the increasing frequency of cyber-related frauds to obtain inappropriate payments and other threats related to cyber-attacks, we may find it necessary to expend resources to remediate cyber-related incidents or to enhance and strengthen our cybersecurity. Our remediation efforts may not be successful and could result in interruptions, delays or cessation of service. Although we have insurance coverage for losses associated with cyber-attacks, as with all insurance policies, there are coverage exclusions and limitations, and our coverage may not be sufficient to

cover all possible claims, and we may still suffer losses that could have a material adverse effect on our reputation and business.

Our customers provide us with information that our solutions store, some of which may be confidential information about them or their financial transactions. In addition, we store personal information about our employees and, to a lesser extent, those who purchase products or services from our customers. We have security systems and information technology infrastructure designed to protect against unauthorized access to such information. The security systems and infrastructure we maintain may not be successful in protecting against all security breaches and cyber-attacks, social-engineering attacks, computer break-ins, theft and other improper activity. Threats to our information technology security can take various forms, including viruses, worms and other malicious software programs that attempt to attack our solutions or platform or to gain access to the data of our customers or their customers. Like other companies, we have on occasion and will continue to experience threats to our data and systems. Any significant data breach could result in the loss of business, litigation and regulatory investigations, loss of customers and fines and penalties that could damage our reputation and brand and adversely affect the growth of our business.

We may become involved in material legal proceedings and audits, the outcomes which could adversely affect our business, results of operations, financial condition and cash flows.

From time to time, we are involved in claims, suits, investigations, audits and proceedings arising in the ordinary course of our business, and we may in the future become involved in legal proceedings and audits that could have a material adverse effect on our business, results of operations, financial condition and cash flows. Claims, suits, investigations, audits and proceedings are inherently difficult to predict and their results are subject to significant uncertainties, many of which are outside of our control. Regardless of the outcome, such legal proceedings could have a negative impact on us due to legal costs, diversion of management resources and other factors. In addition, it is possible that a resolution of one or more such proceedings could result in reputational harm, substantial settlements, judgments, fines or penalties, criminal sanctions, consent decrees or orders preventing us from offering certain features, functionalities, products or services, requiring us to change our development process or other business practices.

There is also inherent uncertainty in determining reserves for these matters. There is significant judgment required in the analysis of these matters, including assessing the probability of potential outcomes and determining whether a potential exposure can be reasonably estimated. Further, it may take time to develop factors on which reasonable judgments and estimates can be based. If we fail to establish appropriate reserves, our business could be negatively impacted.

Undetected errors, bugs or defects in our software could harm our reputation or decrease market acceptance of our software, which would harm our business and results of operations.

Our software may contain undetected errors, bugs or defects. We have experienced these errors, bugs or defects in the past in connection with new software and software upgrades and we expect that errors, bugs or defects may be found from time to time in the future in new or enhanced software after their commercial release. Our software is often used in connection with large-scale computing environments with different operating systems, system management software, equipment and networking configurations, which may cause or reveal errors or failures in our software or in the computing environments in which they are deployed. Despite testing by us, errors, bugs or defects may not be found in our software until they are used by our customers. In the past, we have discovered errors, bugs and defects in our software after they have been deployed to customers.

Any errors, bugs, defects, disruptions in service or other performance problems with our software may damage our customers' businesses and could hurt our reputation, brand and business. We may also be required, or may choose, for customer relations or other reasons, to expend additional resources to correct actual or perceived errors, bugs or defects in our software. If errors, bugs or defects are detected or perceived to exist in our software, we may experience negative publicity, loss of competitive position or diversion of the attention of our key personnel, our customers may delay or withhold payment to us or elect not to renew their subscriptions, or other significant customer relations problems may arise. We may also be subject to liability claims for damages related to errors, bugs or defects in our software. A material liability claim or other occurrence that harms our reputation or decreases market acceptance of our software may harm our business and results of operations.

Our software utilizes open-source software, and any defects or security vulnerabilities in the open-source software could negatively affect our business.

Certain of our software employs open-source software and we expect to use open-source software in the future. To the extent that our software depends upon the successful operation of open-source software, any undetected errors or defects in this open-source software could prevent the deployment or impair the functionality of our software, delay the introduction of new solutions, result in a failure of our software, and injure our reputation. For example, undetected errors or defects in open-source software could render it vulnerable to breaches or security attacks, and, in conjunction, make our systems more vulnerable to data breaches.

In addition, the terms of various open-source licenses have not been interpreted by U.S. courts, and there is a risk that such licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to market certain of our software solutions. Some open-source licenses might require us to make our source code available for no cost, to make publicly available source code for modifications or derivative works that we create based upon, incorporating or using the open-source software, and/or to license such modifications or derivative works under the terms of the particular open-source license. While we try to insulate our proprietary code from the effects of such open-source license provisions, we cannot guarantee we will be successful. In addition to risks related to open-source license requirements, usage of open-source software can lead to greater risks than use of third-party commercial software, as open-source licensors generally do not provide warranties or controls on the origin of the software. Many of the risks associated with usage of open-source software cannot be eliminated and could negatively affect our business, financial condition and results of operations.

We rely on third-party data centers, systems and technologies to operate our business, and interruptions or performance problems with these third-party providers may adversely affect our business and results of operations.

We rely on data centers and other technologies and services provided by third parties in order to operate our business. If any of these services becomes unavailable or otherwise is unable to serve our requirements, there could be interruptions to our software and provision of services to our customers. Our business depends on our ability to protect the growing amount of information stored in data centers and related systems, offices and hosting facilities against damage from earthquakes, floods, fires, other extreme weather conditions, power loss, telecommunications failures, hardware failures, viruses, terrorist attacks, acts of war, unauthorized electronic or physical intrusion, overload conditions and other events. If our data centers or related systems fail to operate properly or become disabled even for a brief period of time, we could suffer financial loss, a disruption of our business, liability to customers or damage to our reputation. Our response to any type of disaster may not be successful in preventing the loss of customer data, service interruptions, disruptions to our operations or damage to our important facilities. Our data center providers have no obligations to renew their agreements with us on commercially reasonable terms, or at all, and it is possible that we will not be able to switch our operations to another provider in a timely and cost-effective manner should the need arise. If we are unable to renew our agreements with these providers on commercially reasonable terms, or if in the future we add additional data center facility providers, we may face additional costs or expenses or downtime, which could harm our business.

We also rely on computer hardware purchased or leased from, software licensed from, content licensed from and services provided by a variety of third parties, which include database, operating system, virtualization software, tax requirement content and geolocation content and services. Any errors, bugs or defects in such third-party hardware, software, content or services could result in errors or a failure of our solutions, which could harm our business. In the future, we might need to license other hardware, software, content or services to enhance our solutions and meet evolving customer requirements. Any inability to license or otherwise obtain such hardware or software could result in a reduction in functionality, or errors or failures of our products, until equivalent technology is either developed by us or, if available, is identified, obtained through purchase or license, and integrated into our solutions, any of which may reduce demand for our solutions and increase our expenses. In addition, third-party licenses may expose us to increased risks, including risks associated with the integration of new technology, the diversion of resources from the development of our own proprietary technology, and our inability to generate revenue from new technology sufficient to offset associated acquisition and maintenance costs, all of which may increase our expenses and harm our results of operations.

If we fail to effectively protect, maintain and enhance our brand, our business may suffer.

As a leader in our industry for over 40 years, our brand is one of our most valuable assets, and any failure to protect our brand could cause our business to suffer. In addition, the promotion of our brand requires us to make substantial expenditures, and we anticipate that the expenditures will increase as our market becomes more competitive and as we

expand into new regions. The demand for and cost of online and traditional advertising have been increasing and may continue to increase. Our brand promotion efforts will require investment not just in our indirect tax solutions, but also in our full suite of software and services. To the extent that these activities yield increased revenue, this revenue may not offset the increased expenses we incur. If we do not successfully maintain and enhance our brand, our business may not grow, we may have reduced pricing power relative to competitors and we could lose customers or fail to attract potential new customers, all of which would adversely affect our business, results of operations, financial condition and cash flows.

Changes in the application, scope, interpretation or enforcement of laws and regulations pertaining to our operations may harm our business or results of operations, subject us to liabilities and require us to implement new compliance programs or business methods.

We perform a number of critical business functions for our customers, including remittance of the taxes our customers owe to taxing authorities. Our electronic payment of customers' taxes may be subject to federal or state laws or regulations relating to money transmission. The Federal Bank Secrecy Act requires that financial institutions, of which money transmitters are a subset, register with the U.S. Department of Treasury's Financial Crimes Enforcement Network and maintain policies and procedures reasonably designed to monitor, identify, report and, where possible, avoid money laundering and criminal or terrorist financing by customers. Most U.S. states also have laws that apply to money transmitters, and impose various licensure, examination and bonding requirements on them. We believe these federal and state laws and regulations were not intended to cover the business activity of remitting transaction taxes that taxpayers owe to the various states and localities. However, if federal or state regulators were to apply these laws and regulations to this business activity, whether through expansion of enforcement activities, new interpretations of the scope of certain of these laws or regulations or of available exemptions, or if our activities are held by a court to be covered by such laws or regulations, we could be required to expend time, money and other resources to deal with enforcement actions and any penalties that might be asserted, to institute and maintain a compliance program specific to money transmission laws, and possibly to change aspects of how we conduct our business to achieve compliance or minimize regulation. Application of these laws to our business could also make it more difficult or costly for us to maintain our banking relationships. Financial institutions may also be unwilling to provide banking services to us due to concerns about the large dollar volume moving in and out of our accounts on behalf of our customers in the ordinary course of our business. As we continue to expand the solutions we offer and the jurisdictions in which we offer them, we could become subject to other licensing, examination or regulatory requirements relating to financial services.

Determining the taxes owed by our customers involves providing solutions tailored to the types and prices of products our customers sell, as well as information regarding addresses that products are shipped from and delivered to. Numerous federal, state and local laws and regulations govern the collection, dissemination, use and safeguarding of personal information and other data, the scope of which is changing, subject to differing interpretations, and which may be costly to comply with, inconsistent between jurisdictions or conflicting with other rules. We may be subject to these laws in certain circumstances. Most states have also adopted laws that require notice be given to affected consumers in the event of a security breach. In the event of a security breach, our compliance with these laws may subject us to costs associated with notice and remediation, as well as potential investigations from federal regulatory agencies and state attorneys general. A failure on our part to safeguard consumer data adequately or to destroy data securely may subject us, depending on the personal information in question, to costs associated with notice and remediation, as well as to potential regulatory investigations or enforcement actions, and possibly to civil liability, under federal or state data security or unfair practices or consumer protection laws. If federal or state regulators were to expand their enforcement activities or change their interpretation of the applicability of these laws, or if new laws regarding privacy and protection of consumer data were to be adopted, the burdens and costs of complying with them could increase significantly, negatively affecting our results of operations and possibly the manner in which we conduct our business. For example, the European Union's General Data Protection Regulation requires certain operational changes for companies that receive or process personal data of residents of the EU and includes significant penalties for noncompliance. In addition, other governmental authorities around the world are considering implementing similar types of legislative and regulatory proposals concerning data protection. We may incur significant costs to comply with these mandatory privacy and security standards.

If economic conditions worsen, it may negatively affect our business and financial performance.

Our financial performance depends, in part, on the state of the economy, both in the U.S. and globally. Declining levels of economic activity may lead to declines in spending and customer revenue, which may result in decreased revenue for us. Concern about the strength of the economy may slow the rate at which businesses of all sizes are willing to hire an outside vendor to perform the determination and remittance of their transaction taxes and filing of related returns. If our

customers and potential customers experience financial hardship as a result of a weak economy, industry consolidation or other factors, the overall demand for our solutions could decrease. If economic conditions worsen, our business, results of operations, financial condition and cash flows could be harmed.

Natural disasters, epidemic outbreaks, terrorist acts and political events could disrupt business and result in lower sales and otherwise have a material adverse effect on our business, financial performance and results of operations.

The occurrence of one or more major natural disasters, unusual weather conditions, epidemic outbreaks, terrorist attacks or disruptive political events, each of which is out of our control, may result in reduced consumer and supplier spending and transactions, which in turn could cause our revenues to decline and our business to suffer. Natural disasters including tornados, hurricanes, floods and earthquakes may damage the facilities of our customers or those of their suppliers or retailers or their other operations, which could lead to reduced revenue for our customers and thus could result in declines in our revenue that is aligned with customer transaction volume. In addition, a global epidemic outbreak may have a material adverse effect on global economic conditions, consumer spending and the stability of global financial markets. For example, in December 2019, a novel strain of coronavirus ("COVID-19") appeared. The COVID-19 pandemic is continuing to have widespread, ongoing rapidly evolving and unpredictable impacts on global society, economies, financial markets and business practices. Federal and state governments have implemented measures in an effort to contain the virus, including social distancing, travel restrictions, border closures, limitations on public gatherings, work-from-home, supply chain logistical changes and closure of non-essential businesses. To protect the health and well-being of our employees and customers, substantial modifications were made to employee travel policies, our offices were closed and employees advised to work-from-home and conferences and other marketing events were cancelled or shifted to virtual-only. These protective actions remain in place to date. The COVID-19 pandemic has impacted and may continue to adversely impact our operations, including our employees, customers and partners, and there continues to be substantial uncertainty in the nature and degree of its continued effects over time. The extent to which the COVID-19 pandemic impacts our business going forward will depend on numerous evolving factors that cannot reliably be predicted, including (i) the duration and scope of the pandemic; (ii) governmental, business, and individuals' actions in response to the pandemic; (iii) the global availability and efficacy of a COVID-19 vaccine; and (iv) the impact on economic activity, including the ongoing possibility of recession or financial market instability. These factors may adversely impact consumer, business and government spending on technology as well as customers' ability to pay for our products and services on an ongoing basis. Similarly, terrorist attacks or disruptive political events, such as the imposition of retaliatory tariffs or governmental trade or price manipulation, could cause our customers, or their customers, to defer spending plans or otherwise reduce their economic activity. If any of the foregoing risks were to be realized, it could have a material adverse effect on our business, financial performance and results of operations.

We are subject to anti-corruption, anti-bribery and similar laws and noncompliance with such laws can subject us to criminal penalties or significant fines and harm our business and reputation.

We are subject to requirements under the U.S. Treasury Department's Office of Foreign Assets Control, anti-corruption, anti-bribery and similar laws, such as the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, the U.K. Bribery Act 2010, and other anti-corruption, anti-bribery and anti-money laundering laws in countries in which we conduct activities. Anti-corruption and anti-bribery laws have been enforced aggressively in recent years and are interpreted broadly and prohibit companies and their employees and agents from promising, authorizing, making, offering or providing anything of value to a "foreign official" for the purposes of influencing official decisions or obtaining or retaining business, or otherwise obtaining favorable treatment. As we increase our international operations, our risks under these laws may increase. Non-compliance with these laws could subject us to investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, adverse media coverage and other consequences. Any investigations, actions or sanctions could harm our business, results of operations, financial condition and cash flows.

In addition, in the future we may use third parties to sell access to our software and conduct business on our behalf abroad. We or such future third-party intermediaries may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities, and we can be held liable for the corrupt or other illegal activities of such future third-party intermediaries, and our employees, representatives, contractors, partners and agents, even if we do not explicitly authorize such activities. We cannot provide assurance that our internal controls and compliance systems will always protect us from liability for acts committed by employees, agents or business partners of ours (or of businesses we acquire or partner with) that would violate U.S. and/or non-U.S. laws, including the laws governing payments to government officials, bribery, fraud, kickbacks, false claims, pricing, sales and marketing practices,

conflicts of interest, competition, employment practices and workplace behavior, export and import compliance, economic and trade sanctions, money laundering, data privacy and other related laws. Any such improper actions or allegations of such acts could subject us to significant sanctions, including civil or criminal fines and penalties, disgorgement of profits, injunctions and debarment from government contracts, as well as related stockholder lawsuits and other remedial measures, all of which could adversely affect our reputation, business, results of operations and financial condition.

Any violation of economic and trade sanction laws, export and import laws, the FCPA or other applicable anti-corruption laws or anti-money laundering laws could also result in whistleblower complaints, adverse media coverage, investigations and severe criminal or civil sanctions, any of which could have a materially adverse effect on our reputation, business, results of operations and prospects.

Our ability to protect our intellectual property is limited, and we may be subject to claims of infringement by third parties.

Our success depends, in part, upon our proprietary technology, processes, trade secrets, and other proprietary information and our ability to protect this information from unauthorized disclosure and use. We primarily rely upon a combination of copyright, trademark and trade secret laws, as well as confidentiality procedures, contractual provisions and other similar measures to protect our proprietary or confidential information and intellectual property. Our trademarks and service marks include VERTEX™ and O Series™, which is our flagship indirect tax solution. Despite our efforts to protect our proprietary rights and intellectual property, unauthorized parties may attempt to copy aspects of our solutions or to obtain and use information that we regard as proprietary, and third parties may attempt to independently develop similar technology, policing unauthorized use of our technology and intellectual property rights may be difficult and may not be effective.

In addition, third parties may claim infringement by us with respect to current or future solutions or other intellectual property rights. The software and technology industries are characterized by the existence of a large number of patents, trademarks and copyrights and by frequent litigation based on allegations of infringement or other violations of intellectual property rights. The outcome of any claims or litigation, regardless of the merits, is inherently uncertain. Any claims and lawsuits to enforce our intellectual property rights or to defend ourselves against claims of infringement of third-party intellectual property rights, and the disposition of such claims and lawsuits, whether through settlement or licensing discussions, or litigation, could be time-consuming and expensive to resolve, divert management attention from executing our strategies, result in efforts to enjoin our activities, lead to attempts on the part of other parties to pursue similar claims, and, in the case of intellectual property claims, require us to change our technology, change our business practices, pay monetary damages, or enter into short- or long-term royalty or licensing agreements. Any adverse determination related to intellectual property claims or other litigation could prevent us from offering our solutions to others, could be material to our financial condition or cash flows, or both, or could otherwise harm our results of operations.

Our ability to obtain additional capital on commercially reasonable terms may be limited.

We intend to continue to make investments to support our business growth and may require additional funds, beyond those generated by our initial public offering or available under our existing credit facility, to respond to business challenges, including to better support and serve our customers, develop new software or enhance our existing solutions, expand our tax content, improve our operating and technology infrastructure or acquire complementary businesses and technologies. Accordingly, we may need to engage in public or private equity, equity-linked or debt financings to secure additional funds. If we raise additional funds through future issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our Class A common stock. Any debt financing that we secure in the future could involve restrictive covenants relating to our capital raising activities and other financial and operational matters, including the ability to pay dividends. This may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. 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 on terms satisfactory to us when we require it, our ability to continue to support our business growth and respond to business challenges could be significantly impaired, and our business and prospects could be adversely affected.

If we fail to maintain an effective system of disclosure controls and internal control over financial reporting, or fail to remediate any material weaknesses in our internal controls over financial reporting, our ability to produce timely and accurate financial statements or comply with applicable regulations could be impaired.

Ensuring that we have adequate internal financial and accounting controls and procedures in place to produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. The rapid growth of our operations and our recent transition to a publicly traded company has created a need for additional resources within the accounting and finance functions due to the increasing need to produce timely financial information and to ensure a level of segregation of duties customary for a U.S. public company. We continue to reassess the sufficiency of finance personnel in response to these increasing demands and expectations.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Our management does not expect that our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within our company will have been detected.

We have identified material weaknesses in our internal control over financial reporting and may experience additional material weaknesses in the future. Our failure to remediate these material weaknesses and maintain effective internal control over financial reporting could result in material misstatements in our financial statements, the inability to timely report our financial condition or results of operations, and investors losing confidence in our reported financial information, which may result in our stock price being adversely affected.

Management and our independent registered public accounting firm have identified a material weakness in our internal control over financial reporting for the year ended December 31, 2020 related to an insufficient process for segregating user access to financially significant systems, which resulted in a lack of segregation of incompatible duties. See Item 9A. "Controls and Procedures" included elsewhere in this Annual Report on Form 10-K.

Although management is in the process of remediating this material weakness, we cannot assure you that the material weakness in our internal control over financial reporting will be remediated timely and that additional material weaknesses will not be identified in the future.

The price of our Class A common stock may fluctuate significantly, and you could lose all or part of your investment.

The market price of our Class A common stock is likely to be volatile and could be subject to wide fluctuations in response to many risk factors listed in this section, and others beyond our control, including:

- actual or anticipated fluctuations in our results of operations and financial condition;
- variance in our financial performance from expectations of securities analysts;
- changes in our software subscription revenue;
- changes in our projected operating and financial results;
- changes in tax laws or regulations;
- announcements by us or our competitors of significant business developments, acquisitions or new offerings;
- our involvement in any litigation;
- our sale of our Class A common stock or other securities in the future;
- changes in senior management or key personnel;
- the trading volume of our Class A common stock;
- changes in the anticipated future size and growth rate of our market; and

- general economic, regulatory and market conditions.

The stock markets have historically experienced price and volume fluctuations that at times have been extreme and have affected and continue to affect the market prices of equity securities of many companies. These fluctuations have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry fluctuations, as well as general economic, political, regulatory and market conditions, may negatively impact the market price of our Class A common stock. If the market price of our Class A common stock falls below your investment price, you may lose some or all of your investment. In the past, companies that have experienced volatility in the market price of their securities have been subject to securities class action litigation. We may be the target of this type of litigation in the future, which could result in substantial costs and divert our management's attention.

We are a "controlled company" within the meaning of the NASDAQ Rules and, as a result, expect to qualify for, and intend to rely on, exemptions from certain corporate governance requirements. You will not have the same protections afforded to stockholders of companies that are subject to such requirements.

Our current principal stockholders beneficially own a majority of the combined voting power of all classes of our outstanding voting stock; thus, we are a controlled company within the meaning of the NASDAQ Rules, which state a company with more than 50% of the voting power held by another person or group of persons acting together is a controlled company and may elect not to comply with certain corporate governance requirements, including the requirements that:

- a majority of the board of directors consist of independent directors as defined under the rules of the NASDAQ Global Market;
- the nominating and governance committee be composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities; and
- the compensation committee be composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities.

These requirements will not apply to us as long as we remain a controlled company. We have elected to take advantage of the exemption from the requirement that a majority of our board of directors consist of independent directors and that our nominating and corporate governance committee consist entirely of independent directors. Accordingly, you may not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance requirements of the NASDAQ Global Market.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 2. Properties

Our corporate headquarters, which includes our operations and innovation lab, is located in King of Prussia, Pennsylvania, and consists of approximately 189,500 square feet of space under a lease that expires on September 30, 2028.

We also lease offices in Sarasota, Florida; Naperville, Illinois; London, United Kingdom; Amsterdam, The Netherlands; Frankfurt, Germany; Sao Paulo, Brazil; Chennai, India; and Cork, Ireland.

We believe our facilities are adequate for our current and presently foreseeable needs.

Item 3. Legal Proceedings

From time to time, we may be involved in various legal proceedings arising from the normal course of business activities. We are not presently a party to any litigation the outcome of which we believe, if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, cash flows or financial condition.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Market Information for Common Stock

Our Class A common stock has been listed on the NASDAQ exchange, under the symbol “VERX” since July 28, 2020. Prior to that date, there was no public trading market for our common stock.

Our Class B common stock is not listed on any stock exchange nor traded on any public market.

Holders

As of December 31, 2020, we had 3 holders of record of our Class A common stock. Because many of our shares of Class A common stock are held by brokers and other institutions on behalf of shareholders, we are unable to estimate the total number of shareholders represented by these record holders.

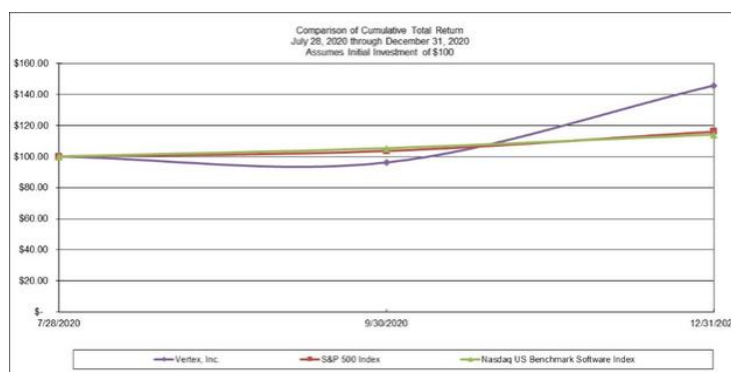
As of December 31, 2020, there were 25 stockholders of record of our Class B common stock.

Dividend Policy

We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any dividends on our common stock in the foreseeable future. Any future determination to declare dividends will be made at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements, general business conditions, and other factors that our board of directors may deem relevant.

Stock Performance Graph

The graph below compares the cumulative total return on our Class A common stock with that of the S&P 500 Index and the NASDAQ U.S. Benchmark Software TR Index. The period shown commences on July 28, 2020, and ends on December 31, 2020, the end of our most recent fiscal year. The graph assumes an investment of \$100 in each of the aforementioned on the close of market on July 28, 2020. The stock price performance graph is not necessarily indicative of future price performance.



Company / Index	Base Date 7/28/2020	9/30/2020	12/31/2020
Vertex, Inc.	\$ 100.00	\$ 96.11	\$ 145.63
S&P 500	\$ 100.00	\$ 103.54	\$ 116.12
NASDAQ U.S. Benchmark Software TR	\$ 100.00	\$ 105.29	\$ 114.08

Recent Sales of Unregistered Securities

None.

Use of Proceeds

On July 28, 2020, the SEC declared effective our Registration Statement on Form S-1 (File No. 333-239644) for our offering of Class A common stock (the “Registration Statement”). On July 31, 2020, we received \$423.0 million in proceeds, net of \$26.1 million of underwriting fees and commissions, from the sale of 23,812,216 shares of our Class A common stock. Subsequently, we paid \$6.2 million for offering costs and used a portion of the net proceeds of \$416.8 million to pay off all amounts outstanding under our term loan facility, which aggregated \$175.0 million. There has been no material change in the planned use of proceeds from our offering as described in our final prospectus filed with the SEC pursuant to Rule 424(b).

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Item 6. Selected Financial Data

The following table sets forth our selected historical consolidated financial information for the periods and dates indicated. The consolidated balance sheet data as of December 31, 2020 and 2019 and the consolidated comprehensive income (loss) data for the years ended December 31, 2020, 2019 and 2018 have been derived from our consolidated financial statements included elsewhere in this Annual Report on Form 10-K. The consolidated balance sheet data as of December 31, 2018 has been derived from our consolidated financial statements not included in this Annual Report on Form 10-K.

Our financial information has been impacted by certain events which occurred in 2020 and which are described below. The financial information set forth in this section is not necessarily indicative of future results of operations.

We have historically been taxed as an S-Corporation for U.S. federal income tax purposes and for income tax purposes in most states. As a result, net income or loss has been allocated to our stockholders and included on their individual income tax returns prior to July 27, 2020. Effective July 27, 2020 we converted to a C-Corporation, which has resulted in our net income or losses for all future periods to be taxed at the corporate level. As such, our income tax provision will not be comparable for periods prior to the C-Corporation conversion.

On July 28, 2020, the Company filed its amended and restated certificate of incorporation with the Delaware Secretary of State to: (i) effect a three-for-one forward stock split (the “Stock Split”); (ii) establish a new capital structure for the Company (the “New Capital Structure”); and (iii) effect a share exchange (the “Share Exchange”) (collectively, the “Recapitalization”). The Stock Split resulted in each one share owned by a stockholder being exchanged for three shares of common stock, and the number of shares of the Company’s common stock issued and outstanding was increased proportionately based on the Stock Split. After the Stock Split, the Share Exchange occurred, resulting in stockholders of record exchanging their existing Class A and Class B common stock (“former Class A” and “former Class B,” respectively) for newly created shares of Class A and Class B common stock (“Class A” and “Class B,” respectively) issued in connection with the New Capital Structure. The effect of the Stock Split and the Share Exchange are recognized retrospectively in our consolidated financial statements.

Our Registration Statement was declared effective on July 28, 2020, resulting in our Class A common stock being registered and available for trading on the NASDAQ exchange (the “Offering”). On July 31, 2020, the Company received \$423.0 million in proceeds from the sale of 23,812,216 shares of Class A common stock at the Offering price of \$19.00 per share on July 28, 2020, net of underwriting fees, and used a portion of the proceeds to pay off all amounts outstanding under our term loan facility, which aggregated \$175.0 million.

Historical earnings per share information for all periods presented prior to the Offering was retrospectively restated similar to the treatment of a stock split to reflect the Share Exchange as management concluded that there was no economic value attributable to such exchange of shares in connection with the Recapitalization. Class A common stock issued in connection with the Offering are reflected in the weighted average share calculation from their issuance date.

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This data should be read in conjunction with and is qualified in its entirety by reference to Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and notes thereto for the periods and dates indicated beginning on page F-1 of this Annual Report on Form 10-K. Revenues are reflected in accordance with Accounting Standards Update (“ASU”) 2014-09, *Revenue from Contracts with Customers*, (“ASC 606”), which we adopted on January 1, 2018.

(In thousands, except per share data)	For the Year Ended December 31,		
	2020	2019	2018
Consolidated Comprehensive Income (Loss) Data:			
Revenues:			
Software subscriptions	\$ 316,763	\$ 275,629	\$ 235,663
Services	57,902	45,871	36,740
Total revenues	<u>374,665</u>	<u>321,500</u>	<u>272,403</u>
Cost of Revenues:			
Software subscriptions ⁽¹⁾	105,676	77,259	68,945
Services ⁽¹⁾	59,711	33,119	26,753
Total cost of revenues	<u>165,387</u>	<u>110,378</u>	<u>95,698</u>
Gross profit	<u>209,278</u>	<u>211,122</u>	<u>176,705</u>
Operating expenses:			
Research and development ⁽¹⁾	54,340	30,557	23,755
Selling and marketing ⁽¹⁾	99,418	68,127	56,898
General and administrative ⁽¹⁾	149,057	71,014	58,947
Depreciation and amortization	11,018	8,996	7,937
Impairment of asset ⁽²⁾	—	—	32,692
Other operating expense (income), net	203	573	(691)
Total operating expenses	<u>314,036</u>	<u>179,267</u>	<u>179,538</u>
(Loss) income from operations	<u>(104,758)</u>	<u>31,855</u>	<u>(2,833)</u>
Interest expense, net	3,111	953	1,594
(Loss) income before income taxes	<u>(107,869)</u>	<u>30,902</u>	<u>(4,427)</u>
Income tax (benefit) expense	(28,932)	(155)	1,679
Net (loss) income	<u>(78,937)</u>	<u>31,057</u>	<u>(6,106)</u>
Other comprehensive loss (income) from foreign currency translation adjustments and revaluations, net of tax	2,636	(5)	355
Total comprehensive (loss) income	<u>\$ (81,573)</u>	<u>\$ 31,062</u>	<u>\$ (6,461)</u>
Net (loss) income attributable to Class A stockholders, basic	<u>\$ (6,660)</u>	<u>\$ 23</u>	<u>\$ (16)</u>
Net (loss) income per Class A share, basic	<u>\$ (0.60)</u>	<u>\$ 0.20</u>	<u>\$ (0.08)</u>
Weighted average Class A common stock, basic	<u>11,096</u>	<u>118</u>	<u>210</u>
Net (loss) income attributable to Class A stockholders, diluted	<u>\$ (6,660)</u>	<u>\$ 965</u>	<u>\$ (16)</u>
Net (loss) income per Class A share, diluted	<u>\$ (0.60)</u>	<u>\$ 0.25</u>	<u>\$ (0.08)</u>
Weighted average Class A common stock, diluted	<u>11,096</u>	<u>3,861</u>	<u>210</u>
Net (loss) income attributable to Class B stockholders, basic	<u>\$ (72,277)</u>	<u>\$ 31,034</u>	<u>\$ (6,090)</u>
Net (loss) income per Class B share, basic	<u>\$ (0.60)</u>	<u>\$ 0.26</u>	<u>\$ (0.05)</u>
Weighted average Class B common stock, basic	<u>120,415</u>	<u>120,417</u>	<u>120,417</u>
Net (loss) income attributable to Class B stockholders, diluted	<u>\$ (72,277)</u>	<u>\$ 30,092</u>	<u>\$ (6,090)</u>
Net (loss) income per Class B share, diluted	<u>\$ (0.60)</u>	<u>\$ 0.25</u>	<u>\$ (0.05)</u>
Weighted average Class B common stock, diluted	<u>120,415</u>	<u>120,417</u>	<u>120,417</u>

⁽¹⁾ Includes stock-based compensation expense as follows in the table below. For more details, see Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Seasonality and Quarterly Trends” included elsewhere in this Annual Report on Form 10-K.

(In thousands)	For the Year Ended		
	December 31,		
	2020	2019	2018
Stock-based compensation expense:			
Cost of revenues, software subscriptions	\$ 14,663	\$ 946	\$ 512
Cost of revenues, services	21,472	1,419	765
Research and development	14,694	946	511
Selling and marketing	29,551	1,892	1,022
General and administrative	67,524	4,257	2,298
Total stock-based compensation expense	<u>\$ 147,904</u>	<u>\$ 9,460</u>	<u>\$ 5,108</u>

- (2) During the year ended December 31, 2018, we recorded an impairment of \$32.7 million for capitalized internal-use software previously utilized to provide cloud-based services to customers, net of accumulated amortization of \$11.9 million. This impairment was related to a product strategy shift that resulted in this cloud offering no longer being made available for sale to customers after 2018. The capitalized development costs were deemed to be fully impaired due to the net book value of the asset exceeding its future expected cash flows.

(In thousands)	As of December 31,		
	2020	2019	2018
Consolidated Balance Sheet Data:			
Cash and cash equivalents	\$ 303,051	\$ 75,903	\$ 55,838
Total assets	<u>\$ 554,928</u>	<u>\$ 264,623</u>	<u>\$ 215,072</u>
Deferred revenue (current and non-current)	\$ 222,262	\$ 205,791	\$ 178,703
Debt (current and non-current)	\$ 1,107	\$ 51,486	\$ 54,883
Total liabilities	<u>\$ 329,442</u>	<u>\$ 377,055</u>	<u>\$ 326,768</u>
Options for redeemable shares	\$ —	\$ 17,344	\$ 14,581
Total stockholders' equity (deficit)	<u>\$ 225,486</u>	<u>\$ (129,776)</u>	<u>\$ (126,277)</u>

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

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with the consolidated financial statements and the notes thereto included elsewhere in this Annual Report on Form 10-K. In addition to historical financial information, the following discussion contains forward-looking statements that reflect our plans, estimates, beliefs and expectations that involve risks and uncertainties. Our actual results and the timing of events could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in the sections titled “Risk Factors” and “Special Note Regarding Forward-Looking Statements.”

Overview

Vertex is a leading provider of enterprise tax technology solutions. Our vision is to accelerate global commerce, one transaction at a time. Companies with complex tax operations rely on Vertex to automate their end-to-end indirect tax processes. Our software, content and services address the increasing complexities of global commerce and compliance by reducing friction, enhancing transparency, and enabling greater confidence in meeting indirect tax obligations. As a result, our software is ubiquitous within our customers' business systems, touching nearly every line item of every transaction that an enterprise can conduct.

We have pioneered tax technology for over 40 years. Today, we have over 4,000 customers, including over half of the Fortune 500, and provide our customers with tax support in over 130 countries. Today, our software enables tax determination, compliance and reporting, tax data management and document management with powerful pre-built integrations to core business applications used by most companies, particularly those applications that have a significant impact on global commerce. Our software is fueled by over 300 million data-driven effective tax rules and supports indirect tax compliance in more than 19,000 jurisdictions worldwide. Our solutions can be deployed on-premise, in the cloud, or both, with implementation services available to enable optimal customer outcomes and satisfy unique business requirements.

We have accumulated industry-specific tax knowledge for over four decades and our customers leverage our in-depth content through their use of our software. This allows our customers to comply with the dynamic regulatory landscape in real time and mitigates our customers' risk exposure. As our customers expand their global footprint and business models, we are actively supporting their expansion by continuously strengthening our content offering and allowing for additional jurisdiction-specific tax compliance.

We derive the majority of our revenues from software subscriptions. These subscriptions include use of our software and ongoing monthly content updates. Our software is offered on a subscription basis to our customers, regardless of their deployment preferences. On-premise subscriptions are typically sold through one-year contracts and cloud-based subscriptions are typically sold through one- to three-year contracts. We bill almost all of our customers annually in advance of the subscription period.

Our customers include a majority of the Fortune 500, as well as a majority of the top 10 companies by revenue in multiple industries such as retail, technology and manufacturing, in addition to leading marketplaces. At December 31, 2020, we had over 4,000 customers and our Annual Recurring Revenue (“ARR”) per customer was over \$78,000, while at December 31, 2019 our ARR per customer was over \$65,000. As our customers expand geographically and pursue omnichannel business models, their tax determination and compliance requirements increase and become more complex, providing sustainable organic growth opportunities for our business. Our flexible, tiered transaction-based pricing model also results in our customers growing their spend with us as they grow and continue to use our solutions. We principally price our solutions based on a customer's revenue base, in addition to a number of other factors. Refer to “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Key Business Metrics – Annual Recurring Revenue” for further discussion of ARR.

We employ a hybrid deployment model to align to our customers' technology preferences for their core financial management software across cloud deployments, on-premise or any combination of these models. Over time, we expect both existing and newly acquired customers to continue to shift towards cloud deployment models. Cloud-based subscription sales to new customers have grown at a faster rate than on-premise software subscription sales, which is a trend that we expect to continue over time. We generated 27.5%, 19.1% and 12.9% of software subscription revenues from cloud-based subscriptions in 2020, 2019 and 2018, respectively. While our on-premise software subscription revenues

comprise 72.5% of our 2020 software subscription revenues, we anticipate that it will continue to decrease as a percentage of total software subscription revenues as our customers' technology preferences increasingly continue to favor cloud deployment solutions.

We license our solutions primarily through our direct sales force, which focuses on selling to qualified leads provided by our marketing efforts, and through our network of referral partners. We also utilize indirect sales to a lesser extent to efficiently grow and scale our enterprise and mid-market revenues.

Our partner ecosystem is a differentiating, competitive strength in both our software development and our sales and marketing activities. We integrate with key technology partners that span ERP, CRM, procurement, billing, POS and eCommerce. These partners include Adobe/Magento, Coupa, Microsoft Dynamics, NetSuite, Oracle, Salesforce, SAP, SAP Ariba, Workday and Zuora. We also collaborate with numerous accounting firms who have built implementation practices around our software to serve their customer base.

We believe that the global commerce and compliance environments provide durable and accelerating growth opportunities for our business. We generated revenues of \$374.7 million, \$321.5 million and \$272.4 million in 2020, 2019 and 2018, respectively. We had a net income (loss) of \$(78.9) million, \$31.1 million and \$(6.1) million in 2020, 2019 and 2018, respectively. Adjusted EBITDA was \$78.4 million, \$67.9 million and \$61.5 million in 2020, 2019 and 2018, respectively. Adjusted EBITDA is a financial measure that is not prepared in accordance with accounting principles generally accepted in the U.S. ("GAAP"). Refer to "Management's Discussion and Analysis of Financial Condition and Results of Operations—Key Business Metrics – Adjusted EBITDA and Adjusted EBITDA Margin" for further discussion.

Income Tax Status Change, Recapitalization and Initial Public Offering

Our financial information has been impacted by certain events which occurred in 2020.

We have historically been taxed as an S-Corporation for U.S. federal income tax purposes and for income tax purposes in most states. As a result, net income or loss has been allocated to our stockholders and included on their individual income tax returns prior to July 27, 2020. Effective July 27, 2020 we converted to a C-Corporation, which has resulted in our net income or losses for all future periods to be taxed at the corporate level. As such, our income tax provision will not be comparable for periods prior to the C-Corporation conversion. During the year ended December 31, 2020, we recognized an income tax benefit of \$24.9 million specifically associated with our conversion to a C-Corporation.

On July 28, 2020, the Company effected the Recapitalization, which included effecting the Stock Split, establishing the New Capital Structure and effecting the Share Exchange. The effect of the Stock Split and the Share Exchange are recognized retrospectively in our consolidated financial statements. Historical earnings per share information for all periods presented prior to the Offering was retrospectively restated.

Our Registration Statement was declared effective on July 28, 2020. On July 31, 2020, the Company receiving \$423.0 million in proceeds from the sale of 23,812,216 shares of Class A common stock at an Offering price of \$19.00 per share, net of underwriting fees. After payment of Offering costs of \$6.2 million, the Company used a portion of the proceeds to pay off \$175.0 million in outstanding debt. The net proceeds remaining after these payments are being used for working capital and other corporate purposes.

Key Factors Affecting Performance

The growth of our business and our future success depends on many factors, including our ability to retain and expand our revenues from existing customers, acquire new customers, broaden and deepen our partner ecosystem, continually innovate our software, invest in growth and scale our business and manage customer migrations to cloud solutions. While these areas represent significant opportunities for us, we also face significant risks and challenges that we must successfully address in order to sustain the growth of our business and improve our operating results. We anticipate that we will continue to expand our operations and headcount. The expected addition of new personnel and the investments that we anticipate will be necessary to manage our anticipated growth may make it more difficult for us to achieve or maintain profitability. Many of these investments will occur in advance of experiencing any direct benefit and will make it difficult to determine if we are allocating our resources efficiently.

Retention and expansion of revenues from existing customers. Given the breadth of our customer base and their own internal growth, the majority of our revenues and revenue growth comes from existing customers. This revenue growth is comprised of the acquisition of new licenses for additional products, increases in subscription fees due to expanded usage of currently licensed software and price increases. We plan to continue to invest in new innovations and offerings and in our sales and marketing teams in order to support the ongoing strong retention and expansion of revenues with our existing customers. We monitor our net revenue retention rate (“NRR”) in order to understand our ability to retain and grow revenues from our customers. Our NRR was 106%, 109% and 104% in 2020, 2019 and 2018, respectively. Refer to “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Key Business Metrics – Net Revenue Retention Rate” for further discussion.

Acquire new customers. Our solutions address the complexity of aligning commerce and compliance and we believe the market for our software and solutions is large and underpenetrated, both in the U.S. and globally. As enterprise and mid-market companies continue to expand their business operations—both through their product and service offerings and their global footprint—we expect demand for our tax solutions to increase due to the fact that legacy solutions such as spreadsheets, manual processes, native ERP functionality or home-built solutions are error prone, inefficient and cannot scale. We plan to continue to invest in our sales and marketing teams and our solution development in order to address this increased demand from new customers. This increased investment will result in increases in expenses in advance of revenues attributable to these investments.

Broaden and deepen our partner ecosystem. We have an extensive network of partners that spans ERP, CRM, procurement, billing, POS and eCommerce platforms. Our partners enhance the coverage and adoption of our solutions and promote our thought leadership. We leverage our partnerships to maximize the benefits of our solutions for our customers and to identify new customer opportunities. By forming additional strategic alliances with participants in the global digital transformation, such as payments and eCommerce platforms, we can continue to expand our exposure to all transactions, both business-to-consumer (“B2C”) and business-to-business (“B2B”). Future partnerships with large-scale digital payments companies will allow us to develop additional customer-centric solutions and further expand our customer base.

Continued innovation of our software. With the pace of change in commerce and compliance, we believe it is important to continue innovating and extending the functionality and breadth of our software. We plan on investing to further enhance our content and the speed and usability of our software. Historically such innovation has been accomplished through internal development efforts. However, we may pursue acquisitions, development arrangements with partners or similar activities to accelerate these investments. On January 25, 2021, we acquired Tellutax, a designer of edge-based technology utilizing a container architecture, which enables customers to deliver tax solutions seamlessly at the point of need with increased scalability and simplified management. We believe continuing to enhance our existing software and expanding our tax content will increase our ability to generate revenues by broadening the appeal of our software to new customers as well as increasing our engagement with existing customers.

Investing in growth and scaling our business. We believe that our market opportunity is large, and we will continue to invest significantly in scaling across organizational functions in order to support the anticipated growth in our operations both domestically and internationally. Any investments we make in our research and development and our sales and marketing organization will occur in advance of experiencing the benefits from such investments, so it may be difficult for us to determine if we are efficiently allocating resources in those areas. The company may pursue acquisitions or partner arrangements to accelerate its growth initiatives. On January 7, 2020, we acquired Systax Sistemas Fiscais LTDA (“Systax”), a provider of Brazilian transaction tax content and software. See Note 2 to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

Customer migration to cloud solutions. Over time, we expect a continued shift to our cloud solutions from existing and newly acquired customers. Generally, when existing customers migrate from on-premise to cloud-based solutions, this generally has a favorable impact on our long-term ARR due to price structures and opportunities to promote additional license sales. Over the past three years, cloud sales to new customers have grown at a significantly faster rate than sales of on-premise solutions, which is a trend that we expect to continue over time. We generated 12.9%, 19.1% and 27.5% of software subscription revenues from cloud-based subscriptions in 2018, 2019 and 2020, respectively. We recognize revenue from the sale of cloud-based subscriptions ratably over the life of the contract, whereas for on-premise subscriptions, the first year pricing includes a premium that is not included in future renewal pricing. The premium is recognized ratably over the estimated period of benefit to the customer, which is generally three years. Therefore, as more of our sales shift to cloud-based subscriptions, our revenue growth rate may increase. We provide hosting for our cloud-

based subscriptions. To the extent that revenues from our cloud offerings increase as a percentage of total revenues, our gross margin may decrease due to the associated hosting costs of those offerings.

Recent Developments—Impact of COVID-19

During 2020, the COVID-19 pandemic had minimal impact on our revenues and results of operations, as we continue to derive the significant majority of our revenues from our existing software subscriptions. As we principally price our solutions based on our customers' revenues within certain revenue bands, elongated declines in our existing customers' revenues may impact our ability to grow our existing customer revenues. We did not experience an abnormal number of non-renewals in 2020, nor any material declines in revenues associated with declines in our customers' revenues, and we currently expect our existing customer base to remain largely stable, as it did through the recession in 2008 and 2009. However, significant increases in non-renewals or concessions to renewal customers would have a material impact on our revenues and cash flows. During 2020, we did see some delays in signing deals due to prospects shifting to working remotely, and some due to economic uncertainty. We expect that the uncertainty caused by the COVID-19 pandemic could impact our billings to new customers beyond 2020 as the pandemic continues to generate economic uncertainty, and it may also negatively impact our efforts to maintain or expand revenues from our existing customers as they continue to evaluate certain long-term projects and budget constraints. However, we do not anticipate that overall demand for our software and solutions, our ability to deliver such software and solutions, or our growth strategies will be materially impacted by the COVID-19 pandemic, as companies continue to rely on us for their indirect tax solutions.

Our cash collections for the year were consistent with our expectations as some of the procedural disruptions that customers experienced as they shifted to remote work early in the year stabilized by the end of 2020. We believe that we may see delays in collections in 2021 as the pandemic continues to generate economic uncertainty. However, we do not believe that these delays will materially impact our business; we continue to expect that we will be able to collect amounts due under subscription contracts from customers experiencing issues as a result of the COVID-19 pandemic, and we have not recorded an additional allowance for doubtful accounts in connection with any delays. Given that customers cannot forgo our monthly content updates, which are necessary to remain compliant with the most current regulations, we believe customers will continue to pay our renewal invoices in a timely, even if slightly elongated, manner. We believe that we currently have ample liquidity and capital resources to continue to meet our operating needs, and our ability to continue to service our debt or other financial obligations is not currently impaired. For a further description of our liquidity, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources."

The extent to which the COVID-19 pandemic impacts our business going forward will depend on numerous evolving factors that cannot reliably be predicted, including the duration and scope of the pandemic; governmental, business, and individuals' actions in response to the pandemic; and the impact on economic activity, including the possibility of recession or financial market instability. These factors may adversely impact consumer, business and government spending on technology as well as customers' ability to pay for our products and services on an ongoing basis. This uncertainty also affects management's accounting estimates and assumptions, which could result in greater variability in a variety of areas that depend on these estimates and assumptions, including estimated allowance for subscription cancellations, product life cycles and estimated useful lives and potential impairment of long-lived assets, intangible assets and goodwill.

Key Business Metrics

We regularly review several metrics identified below to evaluate growth trends, measure our performance, formulate financial projections and make strategic decisions.

Annual Recurring Revenue. We derive the vast majority of our revenues from recurring software subscriptions. We believe ARR provides us with visibility to our projected software subscription revenues in order to evaluate the health of our business. Because we recognize subscription revenues ratably, we believe investors can use ARR to measure our expansion of existing customer revenues, new customer activity, and as an indicator of future software subscription revenues. ARR is based on monthly recurring revenues ("MRR") from software subscriptions for the most recent month at period end, multiplied by twelve. MRR is calculated by dividing the software subscription price, inclusive of discounts,

by the number of subscription covered months. MRR only includes customers with MRR at the end of the last month of the measurement period.

(Dollars in millions)	For the Year Ended December 31,		Year-Over-Year Change	For the Year Ended December 31,		Year-Over-Year Change		
	2020	2019		2019	2018			
Annual Recurring Revenue	\$ 316.4	\$ 278.5	\$ 37.9	13.6 %	\$ 278.5	\$ 233.5	\$ 45.0	19.2 %

ARR increased by \$37.9 million or 13.6% from 2019 to 2020. The increase was primarily driven by \$17.5 million of growth in revenues from existing customers through their expanded use of our solutions as well as price increases, and \$20.4 million of on-premise and cloud-based subscriptions of our tax solutions to new customers.

ARR increased by \$45.0 million or 19.2% from 2018 to 2019. The increase was primarily driven by \$21.6 million of growth in revenues from existing customers through their expanded use of our solutions as well as price increases, and \$23.4 million of on-premise and cloud-based subscriptions of our tax solutions to new customers.

Net Revenue Retention Rate. We believe that our NRR provides insight into our ability to retain and grow revenues from our customers, as well as their potential long-term value to us. We also believe it demonstrates to investors our ability to expand existing customer revenues, which is one of our key growth strategies. Our NRR refers to the ARR expansion during the 12 months of a reporting period for all customers who were part of our customer base at the beginning of the reporting period. Our NRR calculation takes into account any revenues lost from departing customers or customers who have downgraded or reduced usage, as well as any revenue expansion from migrations, new licenses for additional products or contractual and usage-based price changes.

Net Revenue Retention Rate	For the Year Ended December 31,		
	2020	2019	2018
	106 %	109 %	104 %

The 300 basis point decrease in NRR from 2019 to 2020 was primarily attributable to a reduction in sales growth to existing customers as compared to the prior year related to delays in signing deals due to their focus shifting to working remotely, and economic uncertainty in connection with the impact of the COVID-19 pandemic on their businesses.

The 500 basis point increase in NRR from 2018 to 2019 was primarily driven by growth of \$21.6 million in recurring subscription revenues from existing customers through their expanded use of our solutions.

Adjusted EBITDA and Adjusted EBITDA Margin. We believe that Adjusted EBITDA and Adjusted EBITDA margin are measures widely used by securities analysts and investors to evaluate the financial performance of our Company and other companies. We believe that Adjusted EBITDA and Adjusted EBITDA margin are useful as supplemental measures to evaluate our overall operating performance as they measure business performance focusing on cash-related charges and because they are important metrics to lenders under our credit agreements. We define Adjusted EBITDA as net income or loss before interest, taxes, depreciation, and amortization, as adjusted to exclude charges for asset impairments, stock-based compensation expense, severance charges, and transaction costs. Adjusted EBITDA margin represents Adjusted EBITDA divided by total revenues for the same period. The following schedules reconcile Adjusted EBITDA and Adjusted EBITDA margin to net income (loss), the most closely directly comparable GAAP financial measure. For more information about how we use these and other non-GAAP financial measures in our business, the limitations of these measures and reconciliations to the most directly comparable GAAP measures, see “Management’s

Discussion and Analysis of Financial Condition and Results of Operations — “Use and Reconciliation of Non-GAAP Financial Measures.”

(Dollars in thousands)	For the Year Ended		
	December 31,		
	2020	2019	2018
Adjusted EBITDA:			
Net (loss) income	\$ (78,937)	\$ 31,057	\$ (6,106)
Interest expense, net	3,111	953	1,594
Income tax (benefit) expense	(28,932)	(155)	1,679
Depreciation and amortization - property and equipment	11,018	8,996	7,937
Depreciation and amortization of capitalized software and acquired intangible assets - cost of subscription revenues	21,021	16,194	16,964
Amortization of acquired intangible assets - selling and marketing expense	176	—	—
Impairment of asset	—	—	32,692
Stock-based compensation expense	147,904	9,460	5,108
Severance expense	3,031	1,408	1,603
Adjusted EBITDA	<u>\$ 78,392</u>	<u>\$ 67,913</u>	<u>\$ 61,471</u>
Adjusted EBITDA Margin:			
Total revenues	<u>\$ 374,665</u>	<u>\$ 321,500</u>	<u>\$ 272,403</u>
Adjusted EBITDA margin	<u>20.9 %</u>	<u>21.1 %</u>	<u>22.6 %</u>

The increase in Adjusted EBITDA of \$10.5 million in 2020 is primarily driven by an increase of \$36.8 million in non-GAAP gross profit, partially offset by increases in various non-GAAP operating expense categories including \$13.2 million in non-GAAP general and administrative expense, \$10.0 million in non-GAAP research and development expense, and \$3.5 million in non-GAAP selling and marketing expense. Growth in these operating expense categories is driven primarily by our ongoing investment in our research and development, sales and marketing teams and technology infrastructure to support current and future growth.

The increase in Adjusted EBITDA of \$6.4 million in 2019 is primarily driven by an increase in gross profit, offset by an increase in operating expenses including additional sales and marketing and research and development investments.

Adjusted EBITDA margin decreased in 2020 and 2019 by 20 basis points and 150 basis points, respectively, in comparison to the immediately preceding period, primarily because operating expenses increased at a higher rate than our increase in revenue, driven by our previously noted investments to enable future growth.

Free Cash Flow and Free Cash Flow Margin. Our management uses free cash flow as a critical measure in the evaluation of liquidity in conjunction with related GAAP amounts. We also use the measure when considering available cash, including for decision making purposes related to dividends and discretionary investments. We consider free cash flow to be an important measure for investors because it measures the amount of cash we generate from our operations after our capital expenditures and capitalization of software development costs. In addition, we base certain of our forward-looking estimates and budgets on free cash flow and free cash flow margin. We define free cash flow as the total of net cash provided by operating activities, adjusted for the redemption of stock appreciation rights (“SARs”) in 2020 in connection with the Offering reflected as a reduction of cash provided by operating activities, less purchases of property and equipment and capitalized software. We define free cash flow margin as free cash flow divided by total revenues for the same period. The following schedule reconciles free cash flow and free cash flow margin to net cash provided by operating activities, the most closely directly comparable GAAP financial measure. For more information about how we use these and other non-GAAP financial measures in our business, the limitations of these measures, and reconciliations

to the most directly comparable GAAP measures, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations — “Use and Reconciliation of Non-GAAP Financial Measures.”

(Dollars in thousands)	For the Year Ended		
	December 31,		
	2020	2019	2018
Free Cash Flow:			
Cash provided by operating activities	\$ 59,543	\$ 92,498	\$ 80,449
Redemption of Converted SARs	22,889	—	—
Property and equipment additions	(20,955)	(20,339)	(21,053)
Capitalized software additions	(11,850)	(17,221)	(12,261)
Free cash flow	<u>\$ 49,627</u>	<u>\$ 54,938</u>	<u>\$ 47,135</u>
Free Cash Flow Margin:			
Total revenues	<u>\$ 374,665</u>	<u>\$ 321,500</u>	<u>\$ 272,403</u>
Free cash flow margin	<u>13.2 %</u>	<u>17.1 %</u>	<u>17.3 %</u>

Free cash flow decreased by \$5.3 million in 2020 compared to 2019, driven primarily by a net decrease of \$10.1 million in cash provided by operating activities, after reflecting the addback of \$22.9 million in cash consumed by the redemption of SARs converted to stock options and subsequently redeemed in the Offering (“Converted SARs”), which was partially offset by a year over year reduction in cash consumed by investments in on-premise capitalized software development of \$5.4 million. This decrease in on-premise capitalized software development costs is associated with the continued shift in our development efforts to cloud-based solutions. Investments in cloud-based solutions increased by \$4.5 million in 2020 over 2019 and are included in internal use software as additions to property and equipment. These increased investments in cloud-based solutions offset the reductions in investments in other property and equipment due to the COVID-19 pandemic. Cash flow from operating activities, excluding the impact of the Converted SARs, were unfavorably impacted during the 2020 period as a result of an increase in costs associated with increased development activity associated with nascent technologies, and comparatively lower cash generated through changes in operating assets and liabilities, which included changes in accounts receivable and deferred revenues as a result of timing, sales mix and differences in customer payment terms. Cash flow from operations was favorably impacted by our expansion of Adjusted EBITDA in 2020 of \$10.5 million as previously discussed. Free cash flow margin decreased in 2020 by 390 basis points compared to 2019, primarily due to the decline in cash from operations noted above during a period of expansion of total revenues of \$53.2 million.

Free cash flow increased by \$7.8 million in 2019 over 2018, driven primarily by an increase in cash from operating activities of \$12.0 million, due to a \$4.5 million increase in net income after excluding the impact of the asset impairment in 2018 and an increase in cash provided by changes in operating assets and liabilities. This amount is offset by an increase of \$5.0 million in investments in capitalized software costs to support the growth of our customers. Free cash flow margin remained relatively consistent with the prior year at approximately 17%.

Components of Our Results of Operations

Revenues

We generate revenues from software subscriptions and services.

Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration expected to be received in exchange for those products or services. We enter into contracts that include various combinations of products and services, which are generally capable of being distinct and accounted for as separate performance obligations. Revenue is recognized net of allowance for subscription and non-renewal cancellations and any taxes collected from customers that are subsequently remitted to governmental authorities.

Software Subscriptions

Licenses for on-premise software subscriptions, which are generally one year, provide the customer with a right to use the software as it exists when made available to the customer. Customers purchase a subscription to these licenses, which includes the related software and tax content updates and product support. The updates and support, which are part

of the subscription agreement, are essential to the continued utility of the software; therefore, we have determined the software and the related updates and support to be a single performance obligation. Accordingly, when on-premise software is licensed, the revenue associated with this combined performance obligation is recognized ratably over the license term as these subscriptions are provided for the duration of the license term. Revenue recognition begins on the later of the beginning of the subscription period or the date the software is made available to the customer to download. Our on-premise software subscription prices in the initial subscription year are higher than standard renewal prices. The excess initial year price over the renewal price is a material right that provides customers with the right to this reduced renewal price. We recognize revenue associated with this material right over the estimated period of benefit to the customer, which is generally three years.

Our cloud-based subscriptions allow customers to use Company-hosted software over the contract period without taking possession of the software. The contracts are generally for one to three years and are generally billed annually in advance of the subscription period. Our cloud-based offerings also include related updates and support. All services within the cloud-based contracts consistently provide a benefit to the customer during the subscription period, thus the associated revenue is recognized ratably over the subscription period. Revenue recognition begins on the later of the beginning of the subscription period or the date the customer is provided access to the cloud-based solutions.

Revenue is impacted by the timing of sales and our customers' growth or contractions resulting in their need to expand or contract their subscription usage, the purchase of new solutions or the non-renewal of existing solutions. In addition, revenue will fluctuate with the cessation of extended product support fees charged for older versions of our software subscription solutions when they are retired and these fees are no longer charged. Contracts for on-premise licenses permit cancellations at the end of the license term, which is generally one year. Legacy cloud-based subscription contracts for multi-year periods previously provided customers the right to terminate their contract for services prior to the end of the subscription period at a significant penalty. This penalty requires the payment of a percentage of the remaining months of the then current contract term. Current cloud-based contracts do not contain such termination rights. Terminations of cloud-based subscriptions prior to the end of the subscription term have occurred infrequently and the impact has been immaterial. The allowance for subscription and non-renewal cancellations reflects an estimate of the amount of such cancellations and non-renewals based upon our historical experience.

Services

We generate services revenues primarily in support of our customers' needs associated with our software and to enable them to realize the full benefit of our solutions. These software subscription-related services include configuration, data migration and implementation, and premium support and training. In addition, we generate services revenues through our managed services offering which allows customers to outsource all or a portion of their indirect tax operations to us. These services include indirect tax return preparation, filing and tax payment and notice management. We generally bill for services on a per-transaction or time and materials basis, and we recognize revenue from deliverable-based professional services as services are performed.

Fluctuations in services revenues are typically directly correlated to fluctuations in our subscription revenues with respect to implementation and training services as we have historically experienced an attachment rate to subscription sales for these services in excess of 60%. However, demand for services in 2020 exceeded historical levels as certain customers migrated to a newer version of the software which is not expected to be a significant driver of our services revenues growth in 2021. In addition, and to a lesser extent, our managed services offering has continued to experience increased revenues associated with returns processing volume increases attributable to regulatory changes, as customers expanded their tax filings into more jurisdictions.

Cost of Revenues

Software Subscriptions

Cost of software subscriptions revenues consists of costs related to providing and supporting our software subscriptions and includes personnel and related expenses, including salaries, benefits, bonuses and stock-based compensation. In addition, cost of revenues includes direct costs associated with information technology, such as data center and software hosting costs, and tax content maintenance. Cost of revenues also includes amortization associated with direct labor and related expenses for capitalized internal-use software and developed software for new products and enhancements to existing products and cloud-based subscription solutions, and costs associated with the amortization of

acquired intangible assets. We plan to continue to significantly expand our infrastructure and personnel to support our future growth and increases in transaction volumes of our cloud-based solutions, including through acquisitions. We expect growth in our business will result in an increase in cost of revenues in absolute dollars.

Services

Cost of services revenues consists of direct costs of software subscription-related services and our managed services offering. These costs include personnel and related expenses, including salaries, benefits, bonuses, stock-based compensation and the cost of third-party contractors and other direct expenses. We plan to continue to expand our infrastructure and personnel as necessary to support our future growth and related increases in our service revenues. We expect growth in our business will result in an increase in the cost of services revenues in absolute dollars but may decrease as a percentage of revenues as we scale our operations.

Research and Development

Research and development expenses consist primarily of personnel and related expenses for our research and development activities, including salaries, benefits, bonuses and stock-based compensation, and the cost of third-party developers and other contractors. Research and development costs, other than software development expenses qualifying for capitalization, are expensed as incurred. For the years ended December 31, 2020, 2019 and 2018, \$11.9 million, \$17.2 million and \$12.3 million of software development costs were capitalized, respectively. Capitalized software development costs consist primarily of employee-related and third-party labor costs.

We devote substantial resources to developing new products and enhancing existing products, conducting quality assurance testing and improving our core technology. We believe continued investments in research and development are critical to attain our strategic objectives and expect research and development costs to increase in absolute dollars. These investments include enhancing our solution offerings to address changing customer needs to support their growth, as well as implementing changes required to keep pace with our partners' technology to ensure the continued ability of our solutions to work together and deliver value to our customers. The market for our solutions is characterized by rapid technological change, frequent new product and service introductions and enhancements, changing customer demands and evolving industry standards. As a result, although we are making significant research and development expenditures, which may be incurred and certain of which may be capitalized, there is no guarantee these solutions will be accepted by the market. This could result in increased costs or an impairment of capitalized development costs with no resulting future revenue benefit.

Selling and Marketing

Selling and marketing expenses consist primarily of personnel and related expenses in support of sales and marketing efforts. These costs include salaries, benefits, bonuses and stock-based compensation. In addition, selling expense includes costs related to advertising and promotion efforts, branding costs, partner-based commissions, costs associated with our annual customer conferences, and the amortization of certain acquired intangible assets. We intend to continue to invest in our sales and marketing capabilities in the future to continue to increase our brand awareness and expect these costs to increase on an absolute dollar basis as we grow our business and continue to expand our market and partner ecosystem penetration. Sales and marketing expense in absolute dollars and as a percentage of total revenues may fluctuate from period-to-period based on total revenue levels and the timing of our investments in our sales and marketing functions as these investments may vary in scope and scale over future periods.

General and Administrative

General and administrative expenses consist primarily of personnel and related expenses for administrative, finance, information technology, legal, risk management, facilities and human resources staffing, including salaries, benefits, bonuses, severance, stock-based compensation, professional fees, insurance premiums, facility costs and other internal support costs.

We expect our general and administrative expenses to increase in absolute dollars as we continue to expand our operations, hire additional personnel, integrate future acquisitions and incur additional costs associated with becoming a publicly listed company. As a public company, we expect to incur increased expenses related to accounting, tax and

auditing activities, legal, insurance, SEC and internal control compliance, including the design, implementation and testing of increasingly formalized systems of internal control over financial reporting.

Depreciation and Amortization

Depreciation and amortization expense consists of the allocation of purchased and developed asset costs over the future periods benefitted by the use of these assets. These assets include leasehold improvements for our facilities, computers and equipment needed to support our customers and our internal infrastructure and capitalized internal-use software associated with our internal infrastructure and tools. Depreciation and amortization will fluctuate in correlation with our ongoing investment in internal infrastructure costs to support our growth.

Interest Expense, Net

Interest expense, net reflects the amount of our interest expense that exceeds interest income over the same period.

Interest expense consists primarily of interest payments and other financing costs on our debt facility. Interest expense includes write-downs of deferred financing costs upon redemption of debt. Interest expense will vary as a result of fluctuations in the level of debt outstanding as well as interest rates on such debt. In addition, interest expense will include adjustments to the fair value of contracts that may be entered into to hedge risks associated with currency fluctuations for cash receipts or cash payments denominated in currencies other than U.S. dollars and which do not qualify for hedge accounting. In addition, changes in the settlement value of the future payment obligation for the Systax acquisition will be recorded as interest expense, as described further in Note 2 to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

Interest income reflects earnings on investments of our cash on hand and on funds held for customers related to our managed outsourcing services. Interest income will vary as a result of fluctuations in the future level of funds available for investment and the rate of return available in the market on such funds.

Provision for Taxes

Prior to July 27, 2020, we have been taxed as an S-Corporation for U.S. federal income tax purposes and for income tax purposes in most states. As a result, net income or loss prior to this date has been allocated to our stockholders and included on their individual income tax returns. In certain states, we have been taxed at the corporate level. Accordingly, the income tax provision or benefit for such periods was based on taxable income allocated to those states. In certain foreign jurisdictions, our subsidiaries were also taxed at the corporate level. Similar to states, the income tax provision or benefit is based on taxable income sourced to these foreign jurisdictions.

Effective July 27, 2020 we converted to a C-Corporation, which has resulted in our net income or losses for all future periods being taxed at the corporate level. As such, our income tax provision will not be comparable for periods prior to the C-Corporation conversion. During the year ended December 31, 2020, we recognized an income tax benefit of \$24.9 million specifically associated with our conversion to a C-Corporation.

Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with the consolidated financial statements and the notes thereto beginning on page F-1 of this Annual Report on Form 10-K. The period-to-period comparison of financial results is not necessarily indicative of financial results to be achieved in future periods. In particular, in connection with the Offering, we converted to a C-Corporation, which will result in taxation at the corporate level.

The following table sets forth our consolidated statements of comprehensive income (loss) for the periods indicated. Revenues are reflected in accordance with ASC 606, which we adopted on January 1, 2018.

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	For the Year Ended December 31,		Year-Over-Year Change		
	2020	2019		2019	2018			
Revenues:								
Software subscriptions	\$ 316,763	\$ 275,629	\$ 41,134	14.9 %	\$ 275,629	\$ 235,663	\$ 39,966	17.0 %
Services	57,902	45,871	12,031	26.2 %	45,871	36,740	9,131	24.9 %
Total revenues	<u>374,665</u>	<u>321,500</u>	<u>53,165</u>	<u>16.5 %</u>	<u>321,500</u>	<u>272,403</u>	<u>49,097</u>	<u>18.0 %</u>
Cost of revenues:								
Software subscriptions ⁽¹⁾	105,676	77,259	28,417	36.8 %	77,259	68,945	8,314	12.1 %
Services ⁽¹⁾	59,711	33,119	26,592	80.3 %	33,119	26,753	6,366	23.8 %
Total cost of revenues	<u>165,387</u>	<u>110,378</u>	<u>55,009</u>	<u>49.8 %</u>	<u>110,378</u>	<u>95,698</u>	<u>14,680</u>	<u>15.3 %</u>
Gross profit	<u>209,278</u>	<u>211,122</u>	<u>(1,844)</u>	<u>(0.9)%</u>	<u>211,122</u>	<u>176,705</u>	<u>34,417</u>	<u>19.5 %</u>
Operating expenses:								
Research and development ⁽¹⁾	54,340	30,557	23,783	77.8 %	30,557	23,755	6,802	28.6 %
Selling and marketing ⁽¹⁾	99,418	68,127	31,291	45.9 %	68,127	56,898	11,229	19.7 %
General and administrative ⁽¹⁾	149,057	71,014	78,043	109.9 %	71,014	58,947	12,067	20.5 %
Depreciation and amortization	11,018	8,996	2,022	22.5 %	8,996	7,937	1,059	13.3 %
Impairment of asset	—	—	—	— %	—	32,692	(32,692)	(100.0)%
Other operating expense (income), net	203	573	(370)	(64.6)%	573	(691)	1,264	(182.9)%
Total operating expenses	<u>314,036</u>	<u>179,267</u>	<u>134,769</u>	<u>75.2 %</u>	<u>179,267</u>	<u>179,538</u>	<u>(271)</u>	<u>(0.2)%</u>
(Loss) income from operations	(104,758)	31,855	(136,613)	(428.9)%	31,855	(2,833)	34,688	(1,224.4)%
Interest expense, net	3,111	953	2,158	226.4 %	953	1,594	(641)	(40.2)%
(Loss) income before income taxes	(107,869)	30,902	(138,771)	(449.1)%	30,902	(4,427)	35,329	(798.0)%
Income tax (benefit) expense	(28,932)	(155)	(28,777)	18,565.8 %	(155)	1,679	(1,834)	(109.2)%
Net (loss) income	<u>(78,937)</u>	<u>31,057</u>	<u>(109,994)</u>	<u>(354.2)%</u>	<u>31,057</u>	<u>(6,106)</u>	<u>37,163</u>	<u>(608.6)%</u>
Other comprehensive loss (income) from foreign currency translations, net of tax								
Total comprehensive (loss) income	<u>\$ (81,573)</u>	<u>\$ 31,062</u>	<u>\$ (112,635)</u>	<u>(362.6)%</u>	<u>\$ 31,062</u>	<u>\$ (6,461)</u>	<u>\$ 37,523</u>	<u>(580.7)%</u>

⁽¹⁾ Includes stock-based compensation expenses as follows in the table below. For more details, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations - Seasonality and Quarterly Trends.”

(In thousands)	For the Year Ended December 31,		
	2020	2019	2018
Stock-based compensation expense:			
Cost of revenues, software subscriptions	\$ 14,663	\$ 946	\$ 512
Cost of revenues, services	21,472	1,419	765
Research and development	14,694	946	511
Selling and marketing	29,551	1,892	1,022
General and administrative	67,524	4,257	2,298
Total stock-based compensation expense	<u>\$ 147,904</u>	<u>\$ 9,460</u>	<u>\$ 5,108</u>

The following table sets forth our results of operations as a percentage of our total revenues for the periods presented.

	For the Year Ended December 31		
	2020	2019	2018
Revenues:			
Software subscriptions	84.5 %	85.7 %	86.5 %
Services	15.5 %	14.3 %	13.5 %
Total revenues	<u>100.0 %</u>	<u>100.0 %</u>	<u>100.0 %</u>
Cost of Revenues:			
Software subscriptions	28.2 %	24.0 %	25.3 %
Services	15.9 %	10.3 %	9.8 %
Total cost of revenues	<u>44.1 %</u>	<u>34.3 %</u>	<u>35.1 %</u>
Gross profit	<u>55.9 %</u>	<u>65.7 %</u>	<u>64.9 %</u>
Operating expenses:			
Research and development	14.5 %	9.5 %	8.7 %
Selling and marketing	26.5 %	21.2 %	20.9 %
General and administrative	39.8 %	22.1 %	21.6 %
Depreciation and amortization	2.9 %	2.8 %	2.9 %
Impairment of asset	— %	— %	12.0 %
Other operating expense (income), net	0.1 %	0.2 %	(0.2)%
Total operating expenses	<u>83.8 %</u>	<u>55.8 %</u>	<u>65.9 %</u>
(Loss) income from operations	<u>(27.9)%</u>	<u>9.9 %</u>	<u>(1.0)%</u>
Interest expense, net	0.8 %	0.3 %	0.6 %
(Loss) income before income taxes	<u>(28.7)%</u>	<u>9.6 %</u>	<u>(1.6)%</u>
Income tax (benefit) expense	<u>(7.7)%</u>	<u>(0.1)%</u>	<u>0.6 %</u>
Net (loss) income	<u>(21.0)%</u>	<u>9.7 %</u>	<u>(2.2)%</u>
Other comprehensive loss (income) from foreign currency translations, net of tax	0.7 %	— %	0.1 %
Total comprehensive (loss) income	<u>(21.7)%</u>	<u>9.7 %</u>	<u>(2.3)%</u>

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

Revenues

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change
	2020	2019	
Revenues:			
Software subscriptions	\$ 316,763	\$ 275,629	\$ 41,134 14.9 %
Services	57,902	45,871	12,031 26.2 %
Total revenues	<u>\$ 374,665</u>	<u>\$ 321,500</u>	<u>\$ 53,165 16.5 %</u>

Revenues increased \$53.2 million, or 16.5%, to \$374.7 million in 2020 compared to \$321.5 million in 2019. The increase in software subscriptions revenues of \$41.1 million, or 14.9%, was primarily driven by an increase of \$37.5 million in revenues derived from our existing customers and a year over year increase of \$3.6 million in revenues derived from new customers.

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The \$12.0 million increase in services revenues is primarily driven by an increase of \$9.8 million in software subscription-related services associated with the growth in subscription revenues, which includes new customers implementing our solutions and upgrading existing customers to newer versions of our solutions. In addition, our managed services offering experienced a \$2.2 million increase in recurring services revenues over the prior year due to returns processing volume increases related to regulatory changes as customers expanded their tax filings into more jurisdictions.

Cost of Software Subscriptions Revenues

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2020	2019		
Cost of software subscriptions revenues	\$ 105,676	\$ 77,259	\$ 28,417	36.8 %

Cost of software subscriptions revenues increased \$28.4 million, or 36.8%, to \$105.7 million in 2020 compared to \$77.3 million in 2019. Of this increase, 48.3% is due to an increase in stock-based compensation expense of \$13.7 million. After excluding the impact of stock-based compensation there is a remaining increase of \$14.7 million. Of this increase, \$3.7 million is due to increased amortization expense associated with the late Q3 2019 release of O Series 9.0. The remaining \$11.0 million variance is primarily associated with increased costs of personnel supporting year-over-year growth of sales and customers and ongoing infrastructure investments to support expansion of customer transaction volumes for our cloud-based subscription customers.

As a percentage of total revenues, the cost of software subscriptions revenues increased to 28.2% in 2020 compared to 24.0% in 2019. Adjusting for the increase in stock-based compensation in 2020, cost of software subscriptions revenues as a percentage of total revenues would have been 24.5% in 2020.

Cost of Services Revenues

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2020	2019		
Cost of services revenues	\$ 59,711	\$ 33,119	\$ 26,592	80.3 %

Cost of services revenues increased \$26.6 million, or 80.3%, to \$59.7 million in 2020 compared to \$33.1 million in 2019. Of this increase, 75.4% is due to an increase in stock-based compensation of \$20.1 million. After excluding the impact of stock-based compensation there is a remaining increase of \$6.5 million primarily due to headcount growth in the service delivery areas to support revenue growth in software subscription-related services and our managed services offering.

As a percentage of total revenues, cost of services revenues increased to 15.9% in 2020 compared to 10.3% in 2019. Adjusting for the increase in stock-based compensation in 2020, cost of services revenues as a percentage of total revenues would have been 10.6% in 2020.

Research and Development

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2020	2019		
Research and development	\$ 54,340	\$ 30,557	\$ 23,783	77.8 %

Research and development expenses increased \$23.8 million, or 77.8%, to \$54.3 million in 2020 compared to \$30.6 million in 2019. Of this increase, 57.8% is due to an increase in stock-based compensation of \$13.7 million. After excluding the impact of stock-based compensation there is a remaining increase of \$10.1 million. The increase was primarily due to costs associated with increased development activity associated with nascent technologies and new solutions to address end-to-end data analysis and compliance needs of our customers.

As a percentage of total revenues, research and development expenses increased to 14.5% in 2020 compared to 9.5% in 2019. Adjusting for the increase in stock-based compensation in 2020, research and development expenses as a percentage of total revenue would have been 10.8% in 2020.

Selling and Marketing

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2020	2019		
Selling and marketing	\$ 99,418	\$ 68,127	\$ 31,291	45.9 %

Selling and marketing expenses increased \$31.3 million, or 45.9%, to \$99.4 million in 2020 compared to \$68.1 million in 2019. Of this increase, 88.4% is due to an increase in stock-based compensation of \$27.7 million. After excluding the impact of stock-based compensation there is a remaining increase of \$3.6 million. The increase was primarily due to an increase in employee-related expenses to support the growth in year-over-year subscription and services revenues and expansion of our partner and channel management programs. In addition, we expanded our promotional and brand awareness efforts to support sales growth. Partially offsetting these increases, we experienced a reduction in travel and external marketing events in 2020 due to COVID-19 travel and conference restrictions. These costs are expected to increase once travel and conference restrictions are lifted, although it is uncertain whether these costs will return to their historical levels experienced pre-COVID-19.

As a percentage of total revenues, selling and marketing expenses increased to 26.5% in 2020 compared to 21.2% in 2019. Adjusting for the increase in stock-based compensation in 2020, selling and marketing expenses as a percentage of total revenues would have been 19.2% in 2020.

General and Administrative

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2020	2019		
General and administrative	\$ 149,057	\$ 71,014	\$ 78,043	109.9 %

General and administrative expenses increased \$78.0 million, or 109.9%, to \$149.1 million in 2020 compared to \$71.0 million in 2019. Of this increase, 81.1% is due to an increase in stock-based compensation of \$63.3 million. After excluding the impact of stock-based compensation there is a remaining increase of \$14.7 million. The increase was primarily due to planned strategic investments in information technology infrastructure to drive automation and modernization of our infrastructure, combined with other continuing initiatives to support future operating leverage. Lastly, there were investments in employees and other systems and resources in support of our growth.

Due to these factors, as a percentage of total revenues, general and administrative expenses increased to 39.8% in 2020 compared to 22.1% in 2019. Adjusting for the increase in stock-based compensation in 2020, general and administrative expenses as a percentage of total revenue would have been 22.9%.

Depreciation and Amortization

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2020	2019		
Depreciation and amortization	\$ 11,018	\$ 8,996	\$ 2,022	22.5 %

Depreciation and amortization increased \$2.0 million, or 22.5%, to \$11.0 million in 2020 compared to \$9.0 million in 2019. The increase was primarily due to the impact of infrastructure and technology purchases placed in service in 2019 and other capitalized infrastructure costs to support our growth.

As a percentage of total revenues, depreciation and amortization expense increased to 2.9% in 2020 compared to 2.8% in 2019.

Interest Expense, Net

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2020	2019		
Interest expense, net	\$ 3,111	\$ 953	\$ 2,158	226.4 %

Interest expense increased \$2.2 million, or 226.4%, to \$3.1 million in 2020 compared to \$1.0 million in 2019. The increase is primarily due to the write-down of deferred financing fees of \$1.4 million in connection with the July 2020 payoff of the \$175.0 million term loan facility with a portion of the proceeds from the Offering. Additionally, interest income decreased \$0.5 million in 2020 primarily due to a significant reduction in investment rates of return on cash balances which we believe was attributable to Federal Reserve actions due to the COVID-19 pandemic.

Provision for Taxes

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2020	2019		
Income tax benefit	\$ (28,932)	\$ (155)	\$ (28,777)	18,565.8 %

Income tax benefit increased \$28.8 million to \$28.9 million in 2020 compared to \$0.2 million in 2019. The change in tax benefit was primarily driven by the establishment of deferred tax assets at the higher C-Corporation tax rate in connection with our conversion to a C-Corporation on July 27, 2020, resulting in a benefit of \$24.9 million being recorded in 2020. The substantial increases in stock-based compensation expense led to an overall pretax loss in 2020, thereby increasing our deferred tax assets and the recognition of an increased income tax benefit in 2020 at the higher C-Corporation tax rate.

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

Revenues

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2019	2018		
Revenues:				
Software subscriptions	\$ 275,629	\$ 235,663	\$ 39,966	17.0 %
Services	45,871	36,740	9,131	24.9 %
Total revenues	<u>\$ 321,500</u>	<u>\$ 272,403</u>	<u>\$ 49,097</u>	<u>18.0 %</u>

Revenues increased \$49.1 million, or 18.0%, to \$321.5 million in 2019 compared to \$272.4 million in 2018. The increase in software subscriptions revenues of \$40.0 million, or 17.0%, was primarily driven by \$29.0 million in revenue growth derived from our existing customers and \$11.0 million of revenues from new customers.

The \$9.1 million increase in services revenues is primarily driven by an increase of \$5.3 million in software subscription-related services associated with the growth in subscription revenues, which includes new customers implementing our solutions and upgrading existing customers to newer versions of our solutions. In addition, our managed services offering experienced a \$2.5 million increase in recurring services revenues over the prior year due to returns processing volume increases related to regulatory changes as customers expanded their tax filings into more jurisdictions.

Cost of Software Subscriptions Revenues

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2019	2018		
Cost of software subscriptions revenues	\$ 77,259	\$ 68,945	\$ 8,314	12.1 %

Cost of software subscriptions revenues increased \$8.3 million, or 12.1%, to \$77.3 million in 2019 compared to \$68.9 million in 2018. The increase was primarily due to costs of personnel supporting year-over-year growth of sales and

customers, as well as ongoing infrastructure investments to support expansion of customer transaction volumes for our cloud-based subscription customers. Specifically, services headcount grew by 34% in 2019 as compared to 2018.

As a percentage of total revenues, the cost of software subscriptions revenues decreased to 24.0% in 2019 compared to 25.3% in 2018.

Cost of Services Revenues

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2019	2018		
Cost of services revenues	\$ 33,119	\$ 26,753	\$ 6,366	23.8 %

Cost of services revenues increased \$6.4 million, or 23.8%, to \$33.1 million in 2019 compared to \$26.8 million in 2018. The increase was primarily due to headcount growth in the service delivery areas to support revenue growth in software subscription-related services and our managed services offering.

As a percentage of total revenues, cost of services revenues increased to 10.3% in 2019 compared to 9.8% in 2018.

Research and Development

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2019	2018		
Research and development	\$ 30,557	\$ 23,755	\$ 6,802	28.6 %

Research and development expenses increased \$6.8 million, or 28.6%, to \$30.6 million in 2019 compared to \$23.8 million in 2018. The increase was primarily due to costs associated with increased development activity associated with nascent technologies and new solutions to address end-to-end data analysis and compliance needs of our customers.

As a percentage of total revenues, research and development expenses increased to 9.5% in 2019 compared to 8.7% in 2018, driven in part by our expanded investment in developing our global compliance reporting solution.

Selling and Marketing

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2019	2018		
Selling and marketing	\$ 68,127	\$ 56,898	\$ 11,229	19.7 %

Selling and marketing expenses increased \$11.2 million, or 19.7%, to \$68.1 million in 2019 compared to \$56.9 million in 2018. The increase was primarily due to an increase in payroll and related expenses associated with the growth in year-over-year subscription and services revenues and expansion of our partner and channel management programs. In addition, increases in advertising and promotional spending and expanded brand awareness efforts contributed to this increase.

As a percentage of total revenues, selling and marketing expenses increased to 21.2% in 2019 compared to 20.9% in 2018.

General and Administrative

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2019	2018		
General and administrative	\$ 71,014	\$ 58,947	\$ 12,067	20.5 %

General and administrative expenses increased \$12.1 million, or 20.5%, to \$71.0 million in 2019 compared to \$59.0 million in 2018. The increase was primarily due to planned strategic investments of \$6.8 million in information technology infrastructure, business process reengineering and other initiatives to drive future operating leverage, as well as investments aggregating \$3.7 million in employees and other systems and resources in support of our growth.

Due to these factors, as a percentage of total revenues, general and administrative expenses increased to 22.1% in 2019 compared to 21.6% in 2018.

Depreciation and Amortization

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2019	2018		
Depreciation and amortization	\$ 8,996	\$ 7,937	\$ 1,059	13.3 %

Depreciation and amortization increased \$1.0 million, or 13.3%, to \$9.0 million in 2019 compared to \$7.9 million in 2018. The increase was primarily due to the impact of infrastructure and technology purchases placed in service in 2018 and 2019 and other capitalized infrastructure costs to support our growth.

As a percentage of total revenues, depreciation and amortization expense decreased to 2.8% in 2019 compared to 2.9% in 2018.

Impairment of Asset

During the year ended December 31, 2018, we recorded an impairment of \$32.7 million for capitalized internal-use software previously utilized to provide cloud-based services to customers, net of accumulated amortization of \$11.9 million. This impairment was related to a product strategy shift that resulted in this cloud offering no longer being made available for sale to customers after 2018. The capitalized development costs were deemed to be fully impaired due to the net book value of the asset exceeding its future expected cash flows.

Interest Expense, Net

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2019	2018		
Interest expense, net	\$ 953	\$ 1,594	\$ (641)	(40.2)%

Interest expense, net decreased \$0.6 million, or 40.2%, to \$1.0 million in 2019 compared to \$1.6 million in 2018. The decrease was primarily due to increases in interest income through returns earned on higher balances of cash on hand available for investment and increase in funds held for customers during 2019. Interest expense was relatively consistent with the prior year, reflecting only a slight decrease primarily due to the decrease in outstanding balance of debt due to principal payments made during 2019.

Provision for Taxes

(Dollars in thousands)	For the Year Ended December 31,		Year-Over-Year Change	
	2019	2018		
Income tax (benefit) expense	\$ (155)	\$ 1,679	\$ (1,834)	(109.2)%

Provision for taxes decreased \$1.8 million, or 109.2%, to an income tax benefit of \$0.2 million in 2019 compared to income tax expense of \$1.7 million in 2018. The decrease in expense was primarily due to a \$1.0 million charge in 2018 to establish deferred taxes for assets that were transferred to the U.S. from a taxing jurisdiction that had a 0% tax rate.

Quarterly Results of Operations

The following table sets forth our unaudited quarterly consolidated statements of operations data for each of the periods presented, as well as the percentage of total revenues that each line item represented for each quarter. In management's opinion, the data below have been prepared on the same basis as the audited consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K and reflect all necessary adjustments, consisting only of normal recurring adjustments, necessary for a fair statement of this data. The results of historical periods are not necessarily indicative of the results to be expected for a full year or any future period. Historical periods are also impacted by acquisitions. The following quarterly financial data should be read in conjunction with our consolidated financial statements and related notes beginning on page F-1 of this Annual Report on Form 10-K.

(In thousands)	For the Three Months Ended (Unaudited)							
	Mar 31, 2019	Jun 30, 2019	Sept 30, 2019	Dec 31, 2019	Mar 31, 2020	Jun 30, 2020	Sep 30, 2020	Dec 31, 2020
Revenues:								
Software subscriptions	\$ 64,384	\$ 67,267	\$ 71,041	\$ 72,937	\$ 75,760	\$ 77,306	\$ 79,778	\$ 83,919
Services	10,230	11,108	11,398	13,135	13,485	13,965	14,827	15,625
Total revenues	74,614	78,375	82,439	86,072	89,245	91,271	94,605	99,544
Cost of revenues:								
Software subscriptions ⁽¹⁾	18,426	19,417	18,647	20,769	24,684	26,001	29,161	25,830
Services ⁽¹⁾	7,138	7,692	8,786	9,503	14,778	15,744	18,807	10,382
Total cost of revenues	25,564	27,109	27,433	30,272	39,462	41,745	47,968	36,212
Gross profit	49,050	51,266	55,006	55,800	49,783	49,526	46,637	63,332
Operating expenses:								
Research and development ⁽¹⁾	7,573	7,205	7,271	8,508	13,079	13,617	16,501	11,143
Selling and marketing ⁽¹⁾	16,047	17,287	15,830	18,963	24,333	24,544	29,423	21,118
General and administrative ⁽¹⁾	15,448	16,647	17,263	21,656	37,636	37,758	48,043	25,620
Depreciation and amortization	2,045	2,172	2,311	2,468	2,869	2,505	2,735	2,909
Other operating expense (income), net	163	305	4	101	111	103	(60)	49
Total operating expenses	41,276	43,616	42,679	51,696	78,028	78,527	96,642	60,839
Income (loss) from operations	7,774	7,650	12,327	4,104	(28,245)	(29,001)	(50,005)	2,493
Interest expense (income), net	245	307	252	149	569	1,059	1,796	(313)
Income (loss) before income taxes	7,529	7,343	12,075	3,955	(28,814)	(30,060)	(51,801)	2,806
Income tax expense (benefit)	204	221	175	(755)	250	(985)	(30,773)	2,576
Net income (loss)	7,325	7,122	11,900	4,710	(29,064)	(29,075)	(21,028)	230
Other comprehensive (income) loss from foreign currency translations, net of tax	(21)	23	174	(181)	2,998	276	238	(876)
Total comprehensive income (loss)	\$ 7,346	\$ 7,099	\$ 11,726	\$ 4,891	\$ (32,062)	\$ (29,351)	\$ (21,266)	\$ 1,106

⁽¹⁾ Includes stock-based compensation expenses as follows in the table below. For more details, see "Management's Discussion and Analysis of Financial Condition and Results of Operations - Seasonality and Quarterly Trends."

(In thousands)	For the Three Months Ended (Unaudited)							
	Mar 31, 2019	Jun 30, 2019	Sep 30, 2019	Dec 31, 2019	Mar 31, 2020	Jun 30, 2020	Sep 30, 2020	Dec 31, 2020
Stock-based compensation expense:								
Cost of revenues, software subscriptions	\$ 131	\$ 131	\$ 131	\$ 553	\$ 3,492	\$ 4,168	\$ 6,342	\$ 661
Cost of revenues, services	197	197	197	828	5,238	6,251	9,230	753
Research and development	131	131	131	553	3,492	4,168	6,340	694
Selling and marketing	261	261	261	1,109	6,984	8,335	12,821	1,411
General and administrative	590	590	590	2,487	15,714	18,754	29,561	3,495
Total stock-based compensation expense	\$ 1,310	\$ 1,310	\$ 1,310	\$ 5,530	\$ 34,920	\$ 41,676	\$ 64,294	\$ 7,014

The following table sets forth our results of operations as a percentage of our total revenues for the periods presented.

	For the Three Months Ended (Unaudited)							
	Mar 31, 2019	Jun 30, 2019	Sep 30, 2019	Dec 31, 2019	Mar 31, 2020	Jun 30, 2020	Sep 30, 2020	Dec 31, 2020
Revenues:								
Software subscriptions	86.3 %	85.8 %	86.2 %	84.7 %	84.9 %	84.7 %	84.3 %	84.3 %
Services	13.7 %	14.2 %	13.8 %	15.3 %	15.1 %	15.3 %	15.7 %	15.7 %
Total revenues	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
Cost of revenues:								
Software subscriptions	24.7 %	24.8 %	22.6 %	24.1 %	27.7 %	28.5 %	30.8 %	25.9 %
Services	9.6 %	9.8 %	10.7 %	11.0 %	16.6 %	17.2 %	19.9 %	10.4 %
Total cost of revenues	34.3 %	34.6 %	33.3 %	35.1 %	44.3 %	45.7 %	50.7 %	36.3 %
Gross profit	65.7 %	65.4 %	66.7 %	64.9 %	55.7 %	54.3 %	49.3 %	63.7 %
Operating expenses:								
Research and development	10.1 %	9.2 %	8.8 %	9.9 %	14.7 %	14.9 %	17.4 %	11.2 %
Selling and marketing	21.5 %	22.1 %	19.2 %	22.0 %	27.3 %	26.9 %	31.1 %	21.2 %
General and administrative	20.7 %	21.2 %	20.9 %	25.2 %	42.2 %	41.4 %	50.8 %	25.7 %
Depreciation and amortization	2.7 %	2.8 %	2.8 %	2.9 %	3.2 %	2.7 %	2.9 %	2.9 %
Other operating expense (income), net	0.2 %	0.4 %	— %	0.1 %	0.1 %	0.1 %	(0.1)%	0.1 %
Total operating expenses	55.2 %	55.7 %	51.7 %	60.1 %	87.5 %	86.0 %	102.1 %	61.1 %
Income (loss) from operations	10.5 %	9.7 %	15.0 %	4.8 %	(31.8)%	(31.7)%	(52.8)%	2.6 %
Interest expense (income), net	0.3 %	0.4 %	0.3 %	0.1 %	0.6 %	1.2 %	1.9 %	(0.3)%
Income (loss) before income taxes	10.2 %	9.3 %	14.7 %	4.7 %	(32.4)%	(32.9)%	(54.7)%	2.9 %
Income tax (benefit) expense	0.3 %	0.3 %	0.2 %	(0.9)%	0.3 %	(1.1)%	(32.5)%	2.6 %
Net income (loss)	9.9 %	9.0 %	14.5 %	5.6 %	(32.7)%	(31.8)%	(22.2)%	0.3 %
Other comprehensive (income) loss from foreign currency translations, net of tax	— %	— %	0.2 %	(0.2)%	3.4 %	0.3 %	0.3 %	(0.9)%
Total comprehensive income (loss)	9.9 %	9.0 %	14.3 %	5.8 %	(36.1)%	(32.1)%	(22.5)%	1.2 %

The following table sets forth our quarterly earnings per share information for the periods presented.

(In thousands, except per share data)	For the Three Months Ended (Unaudited)							
	Mar 31, 2019	Jun 30, 2019	Sept 30, 2019	Dec 31, 2019	Mar 31, 2020	Jun 30, 2020	Sep 30, 2020	Dec 31, 2020
Earnings Per Share Data:								
Net income (loss) attributable to Class A stockholders, basic	\$ —	\$ 10	\$ 22	\$ 3	\$ —	\$ (32)	\$ (2,751)	\$ 41
Net income (loss) per Class A share, basic	\$ —	\$ 0.06	\$ 0.10	\$ 0.04	\$ —	\$ (0.24)	\$ (0.15)	\$ 0.00
Weighted average Class A common stock, basic	—	173	225	73	—	132	18,124	25,888
Net income (loss) attributable to Class A stockholders, diluted	\$ 230	\$ 223	\$ 373	\$ 142	\$ —	\$ (32)	\$ (2,751)	\$ 55
Net income (loss) per Class A share, diluted	\$ 0.06	\$ 0.06	\$ 0.10	\$ 0.04	\$ —	\$ (0.24)	\$ (0.15)	\$ 0.00
Weighted average Class A common stock, diluted	3,910	3,891	3,893	3,754	—	132	18,124	37,654
Net income (loss) attributable to Class B stockholders, basic	\$ 7,325	\$ 7,112	\$ 11,878	\$ 4,707	\$ (29,064)	\$ (29,043)	\$ (18,277)	\$ 189
Net income (loss) per Class B share, basic	\$ 0.06	\$ 0.06	\$ 0.10	\$ 0.04	\$ (0.24)	\$ (0.24)	\$ (0.15)	\$ 0.00
Weighted average Class B common stock, basic	120,417	120,417	120,417	120,417	120,417	120,417	120,417	120,411
Net income (loss) attributable to Class B stockholders, diluted	\$ 7,095	\$ 6,899	\$ 11,527	\$ 4,568	\$ (29,064)	\$ (29,043)	\$ (18,277)	\$ 175
Net income (loss) per Class B share, diluted	\$ 0.06	\$ 0.06	\$ 0.10	\$ 0.04	\$ (0.24)	\$ (0.24)	\$ (0.15)	\$ 0.00
Weighted average Class B common stock, diluted	120,417	120,417	120,417	120,417	120,417	120,417	120,417	120,411

Seasonality and Quarterly Trends

We have historically signed a higher percentage of software subscription agreements with new and existing customers in the fourth quarter of each year. This can be attributed to buying patterns typical in the software industry. Since most of our customer agreement terms are annual, agreements initially entered into in the fourth quarter will generally come up for renewal at that same time in subsequent years. As a result, customer agreement cancellations may have a higher concentration during the end of the year. This seasonality is reflected in our revenues, though the impact to overall annual or quarterly revenues is typically minimal since we recognize subscription revenue ratably over the term of the customer contract. Additionally, this seasonality is reflected in commission expenses to our sales personnel and our partners.

Our quarterly revenues have generally increased over the last two years primarily due to new sales to existing customers and sales to new customers. However, the pace of our revenue growth has not been consistent. Many of our customers are enterprise and large corporations and their purchase patterns can be sensitive to timing of budget decisions. Depending on such timing, these decisions can create volatility in the amount of business transacted by our salesforce and the amount of revenues recorded in each quarter. As such, certain periods may be less comparable due to the timing of our customers purchase patterns.

Our operating expenses generally have increased over the two-year period due to increases in headcount and related expenses to support our growth. Quarterly fluctuations in our costs and expenses overall primarily reflect changes in our headcount, and other costs related to certain technology development projects and the development and scaling of our cloud solutions. In particular, research and development expenses have fluctuated based on the timing of personnel additions, capitalized costs and related spending on product development. Increases in our selling and marketing expenses primarily reflect personnel additions and various sales and marketing initiatives, the timing of which may fluctuate from quarter to quarter. We anticipate our operating expenses will continue to increase in future periods as we invest in the long-term growth of our business.

We have used stock-based compensation programs as a component of overall compensation expense for certain of our employees. We recorded stock-based compensation expense of \$147.9 million and \$9.5 million in 2020 and 2019, respectively. Prior to the Offering, certain of these programs required the appreciation in value of our common stock underlying the related awards to be recorded as compensation expense at each measurement date for services rendered by participants over the requisite service period for such awards. Beginning in the fourth quarter 2019 and continuing up to the Offering date of July 28, 2020, we recorded significant increases in compensation expense associated with these programs due to the value of our common stock rising significantly as our proximity to an initial public offering became more likely. As the awards associated with these programs either converted to equity-based awards or were redeemed upon the occurrence of the Offering, compensation expense is no longer required to be recorded for the appreciation in value of our common stock at each measurement date. At the Offering date, there was \$44.3 million in unrecognized compensation expense for unvested converted awards that will be recognized over the remaining service period of one to four years. In addition, in connection with the Offering, we granted equity awards to certain of our employees, consultants and directors with a fair value of approximately \$15.1 million, of which \$4.4 million was recorded as stock-based compensation expense in 2020, with the balance being recorded over the requisite service period of one to four years. We expect that our stock-based compensation expense will be significantly higher relative to historical periods for the foreseeable future, and as a result, historical financial information is not necessarily indicative of our future results.

Historical patterns should not be considered a reliable indicator of our future performance.

Use and Reconciliation of Non-GAAP Financial Measures

In addition to our results determined in accordance with GAAP, we have calculated non-GAAP cost of revenues, non-GAAP gross profit, non-GAAP gross margin, non-GAAP research and development expense, non-GAAP selling and marketing expense, non-GAAP general and administrative expense, non-GAAP operating income, non-GAAP net income, Adjusted EBITDA, Adjusted EBITDA margin, free cash flow and free cash flow margin, which are each non-GAAP financial measures. We have provided tabular reconciliations of each of these non-GAAP financial measures to its most directly comparable GAAP financial measure.

Management uses these non-GAAP financial measures to understand and compare operating results across accounting periods, for internal budgeting and forecasting purposes, and to evaluate financial performance and liquidity. Our non-GAAP financial measures are presented as supplemental disclosure as we believe they provide useful information to

investors and others in understanding and evaluating our results, prospects, and liquidity period-over-period without the impact of certain items that do not directly correlate to our operating performance and that may vary significantly from period to period for reasons unrelated to our operating performance, as well as comparing our financial results to those of other companies. Our definitions of these non-GAAP financial measures may differ from similarly titled measures presented by other companies and therefore comparability may be limited. In addition, other companies may not publish these or similar metrics. Thus, our non-GAAP financial measures should be considered in addition to, not as a substitute for, or in isolation from, the financial information prepared in accordance with GAAP financial measures, and should be read in conjunction with the consolidated financial statements included in this Annual Report on Form 10-K

We calculate these non-GAAP financial measures as follows:

- Non-GAAP cost of revenues, software subscriptions is determined by adding back to GAAP cost of revenues, software subscriptions, the stock-based compensation expense, and depreciation and amortization of capitalized software costs and acquired intangible assets included in cost of revenues for the respective periods.
- Non-GAAP cost of revenues, services is determined by adding back to GAAP cost of revenues, services, the stock-based compensation expense included in cost of revenues for the respective periods.
- Non-GAAP gross profit is determined by adding back to GAAP gross profit the stock-based compensation expense, and depreciation and amortization of capitalized software costs and acquired intangible assets included in cost of revenues for the respective periods.
- Non-GAAP gross margin is determined by adding back to GAAP gross margin the impact of stock-based compensation expense, and depreciation and amortization of capitalized software costs and acquired intangible assets included in cost of revenues as a percentage of revenues for the respective periods.
- Non-GAAP research and development expense and non-GAAP general and administrative expenses are determined by adding back to GAAP research and development expense and GAAP general and administrative expense the stock-based compensation expense and severance expense included in the applicable expense categories for the respective periods.
- Non-GAAP selling and marketing expense is determined by adding back to GAAP selling and marketing expense the stock-based compensation expense and the amortization of acquired intangible assets included in selling and marketing expense for the respective periods.
- Non-GAAP operating income is determined by adding back to GAAP operating income or loss the stock-based compensation expense, depreciation and amortization of capitalized software costs and acquired intangible assets, and severance expense included in GAAP operating income or loss for the respective periods.
- Non-GAAP net income is determined by adding back to GAAP income or loss before income taxes the stock-based compensation expense, depreciation and amortization of capitalized software costs and acquired intangible assets – cost of subscription revenues, amortization of acquired intangible assets – selling and marketing expense, and severance expense included in GAAP income or loss before income taxes for the respective periods to determine non-GAAP income or loss before income taxes. Non-GAAP income or loss before income taxes is then adjusted for income taxes calculated using the respective statutory tax rates for applicable jurisdictions, which for purposes of this determination were assumed to be 25.5%, 2.0% and 2.0% for 2020, 2019 and 2018, respectively.
- Adjusted EBITDA is determined by adding back to GAAP net income or loss the net interest income or expense, income taxes, depreciation and amortization of property and equipment, depreciation and amortization of capitalized software costs and acquired intangible assets – cost of subscription revenues, amortization of acquired intangible assets – selling and marketing expense, asset impairments, stock-based compensation expense, severance expense and transaction costs included in GAAP net income or loss for the respective periods.

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- Adjusted EBITDA margin is determined by dividing Adjusted EBITDA by total revenues for the respective periods.
- Free cash flow is determined by adjusting net cash provided by operating activities by adding back cash used for the redemption of Converted SARs redeemed in connection with the Offering and reducing it for purchases of property and equipment and capitalized software additions for the respective periods.
- Free cash flow margin is determined by dividing free cash flow by total revenues for the respective periods.

We encourage investors and others to review our financial information in its entirety, not to rely on any single financial measure and to view these non-GAAP financial measures in conjunction with the related GAAP financial measures.

Refer to “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Key Business Metrics” for further discussion and reconciliation of Adjusted EBITDA, Adjusted EBITDA margin, free cash flow and free cash flow margin to the related GAAP financial measures.

The following schedules reflect all other non-GAAP financial measures and reconcile such non-GAAP financial measures to the related GAAP financial measures:

(Dollars in thousands)	For the Year Ended		
	December 31,		
	2020	2019	2018
Non-GAAP cost of revenues, software subscriptions	\$ 69,992	\$ 60,119	\$ 51,469
Non-GAAP cost of revenues, services	\$ 38,239	\$ 31,700	\$ 25,988
Non-GAAP gross profit	\$ 266,434	\$ 229,681	\$ 194,946
Non-GAAP gross margin	71.1 %	71.4 %	71.6 %
Non-GAAP research and development expense	\$ 39,646	\$ 29,611	\$ 23,244
Non-GAAP selling and marketing expense	\$ 69,691	\$ 66,235	\$ 55,876
Non-GAAP general and administrative expense	\$ 78,502	\$ 65,349	\$ 55,046
Non-GAAP operating income	\$ 67,374	\$ 58,917	\$ 53,534
Non-GAAP net income	\$ 47,876	\$ 56,805	\$ 50,901

	For the Year Ended December 31,		
	2020	2019	2018
(Dollars in thousands)			
Non-GAAP Cost of Revenues, Software Subscriptions:			
Cost of revenues, software subscriptions	\$ 105,676	\$ 77,259	\$ 68,945
Stock-based compensation expense	(14,663)	(946)	(512)
Depreciation and amortization of capitalized software and acquired intangible assets – cost of subscription revenues	(21,021)	(16,194)	(16,964)
Non-GAAP cost of revenues, software subscriptions	<u>\$ 69,992</u>	<u>\$ 60,119</u>	<u>\$ 51,469</u>
Non-GAAP Cost of Revenues, Services:			
Cost of revenues, services	\$ 59,711	\$ 33,119	\$ 26,753
Stock-based compensation expense	(21,472)	(1,419)	(765)
Non-GAAP cost of revenues, services	<u>\$ 38,239</u>	<u>\$ 31,700</u>	<u>\$ 25,988</u>
Non-GAAP Gross Profit:			
Gross profit	\$ 209,278	\$ 211,122	\$ 176,705
Stock-based compensation expense	36,135	2,365	1,277
Depreciation and amortization of capitalized software and acquired intangible assets - cost of subscription revenues	21,021	16,194	16,964
Non-GAAP gross profit	<u>\$ 266,434</u>	<u>\$ 229,681</u>	<u>\$ 194,946</u>
Non-GAAP Gross Margin:			
Gross margin	55.9 %	65.7 %	64.9 %
Stock-based compensation expense as a percentage of revenues	9.6 %	0.7 %	0.5 %
Depreciation and amortization of capitalized software and acquired intangible assets – cost of subscription revenues as a percentage of revenues	5.6 %	5.0 %	6.2 %
Non-GAAP gross margin	<u>71.1 %</u>	<u>71.4 %</u>	<u>71.6 %</u>
Non-GAAP Research and Development Expense:			
Research and development expense	\$ 54,340	\$ 30,557	\$ 23,755
Stock-based compensation expense	(14,694)	(946)	(511)
Non-GAAP research and development expense	<u>\$ 39,646</u>	<u>\$ 29,611</u>	<u>\$ 23,244</u>
Non-GAAP Selling and Marketing Expense:			
Selling and marketing expense	\$ 99,418	\$ 68,127	\$ 56,898
Stock-based compensation expense	(29,551)	(1,892)	(1,022)
Amortization of acquired intangible assets – selling and marketing expense	(176)	—	—
Non-GAAP selling and marketing expense	<u>\$ 69,691</u>	<u>\$ 66,235</u>	<u>\$ 55,876</u>
Non-GAAP General and Administrative Expense:			
General and administrative expense	\$ 149,057	\$ 71,014	\$ 58,947
Stock-based compensation expense	(67,524)	(4,257)	(2,298)
Severance expense	(3,031)	(1,408)	(1,603)
Non-GAAP general and administrative expense	<u>\$ 78,502</u>	<u>\$ 65,349</u>	<u>\$ 55,046</u>
Non-GAAP Operating Income:			
(Loss) income from operations	\$ (104,758)	\$ 31,855	\$ (2,833)
Stock-based compensation expense	147,904	9,460	5,108
Depreciation and amortization of capitalized software and acquired intangible assets - cost of subscription revenues	21,021	16,194	16,964
Amortization of acquired intangible assets – selling and marketing expense	176	—	—
Severance expense	3,031	1,408	1,603
Impairment of asset	—	—	32,692
Non-GAAP operating income	<u>\$ 67,374</u>	<u>\$ 58,917</u>	<u>\$ 53,534</u>
Non-GAAP Net Income:			
(Loss) income before income taxes	\$ (107,869)	\$ 30,902	\$ (4,427)
Stock-based compensation expense	147,904	9,460	5,108
Depreciation and amortization of capitalized software and acquired intangible assets - cost of subscription revenues	21,021	16,194	16,964
Amortization of acquired intangible assets – selling and marketing expense	176	—	—
Severance expense	3,031	1,408	1,603
Impairment of asset	—	—	32,692
Non-GAAP income before income taxes	64,263	57,964	51,940
Income tax adjustment at statutory rate	16,387	1,159	1,039
Non-GAAP net income	<u>\$ 47,876</u>	<u>\$ 56,805</u>	<u>\$ 50,901</u>

Liquidity and Capital Resources

As of December 31, 2020, we had cash and cash equivalents of \$303.1 million and retained earnings of \$21.9 million. Prior to July 31, 2020, our primary sources of capital had been from sales of our solutions and proceeds from bank lending facilities. On July 31, 2020, we received \$423.0 million in proceeds, net of underwriting fees and commissions, from the sale of 23,812,216 shares of our Class A common stock and used a portion of the proceeds to pay off the \$175.0 million term loan facility. As a result, we have no outstanding bank debt after such redemption. The net proceeds remaining after payment of Offering costs are being used for working capital and other corporate purposes.

We believe that our existing cash resources and our \$100 million bank line of credit will be sufficient to meet our capital requirements and fund our operations for at least the next 12 months. However, if these sources are insufficient to satisfy our liquidity requirements, we may seek to sell additional equity or debt securities or borrow from our banks. If we raise additional funds by issuing equity securities, our stockholders will experience dilution. Debt financing, if available, may involve covenants restricting our operations or our ability to incur additional debt. Any debt financing or additional equity that we raise may contain terms that are not favorable to us or our stockholders. Additional financing may not be available at all, or in amounts or on terms unacceptable to us.

Historical Cash Flows

Years Ended December 31, 2020 and 2019

The following table presents a summary of our cash flows for the periods indicated:

(Dollars in thousands)	Year Ended December 31,		Year-Over-Year Change	
	2020	2019		
Net cash provided by operating activities	\$ 59,543	\$ 92,498	\$ (32,955)	(35.6)%
Net cash used in investing activities	(44,375)	(37,560)	(6,815)	18.1 %
Net cash provided by (used in) financing activities	213,632	(30,629)	244,261	(797.5)%
Effect of foreign exchange rate changes	(22)	12	(34)	(283.3)%
Net increase in cash, cash equivalents and restricted cash	\$ 228,778	\$ 24,321	\$ 204,457	840.7 %

Operating Activities. Cash provided by operating activities was \$59.5 million in 2020 compared to \$92.5 million in 2019, a decrease of \$33.0 million. This decrease was primarily attributable to \$22.9 million in cash payments for redemption of SARs converted to stock options in connection with the Offering where such cash flows are required under GAAP to be classified as operating consistent with the original SARs' liability classification. The remaining decrease in operating cash flows of \$10.1 million was a result of an increase in costs associated with increased development activity associated with nascent technologies and comparatively lower cash generated through changes in operating assets and liabilities, which included changes in accounts receivable and deferred revenues as a result of timing, sales mix and differences in customer payment terms.

Investing Activities. Cash used in investing activities was \$44.4 million in 2020 compared to \$37.6 million in 2019, an increase of \$6.8 million. This increase was primarily related to the acquisition of a controlling interest in Systax, partially offset by a \$5.4 million decrease in cash consumed to support on-premise capitalized software additions in 2020 compared to 2019. This decrease in on-premise capitalized software development costs is associated with the continued shift in our development efforts to cloud-based solutions. Investments in cloud-based solutions increased by \$4.5 million in 2020 over 2019 and are included in internal use software as additions to property and equipment. These increased investments in cloud-based solutions offset the reductions in investments in other property and equipment due to delays as a result of the COVID-19 pandemic.

Financing Activities. Cash provided by (used in) financing activities was \$213.6 million in 2020 compared to \$(30.6) million in 2019, an increase of \$244.2 million. This increase was primarily due to \$423.0 million in net proceeds received from the Offering, partially offset by \$117.6 million of increased distributions paid to stockholders prior to the Offering and a \$45.7 million increase in net repayments of indebtedness.

Years Ended December 31, 2019 and 2018

The following table presents a summary of our cash flows for the periods indicated:

(Dollars in thousands)	Year Ended December 31,		Year-Over-Year Change	
	2019	2018		
Net cash provided by operating activities	\$ 92,498	\$ 80,449	\$ 12,049	15.0 %
Net cash used in investing activities	(37,560)	(33,314)	(4,246)	12.7 %
Net cash used in financing activities	(30,629)	(30,697)	68	(0.2)%
Effect of foreign exchange rate changes	12	(402)	414	(103.0)%
Net increase in cash, cash equivalents and restricted cash	\$ 24,321	\$ 16,036	\$ 8,285	51.7 %

Operating Activities. Cash provided by operating activities was \$92.5 million in 2019 compared to \$80.4 million in 2018, an increase of \$12.1 million. This increase was primarily due to increased net income of \$4.5 million, after adding back the 2018 asset impairment of \$32.7 million, increases in stock-based compensation of \$4.4 million and a net increase in cash from operating assets and liabilities of \$3.6 million.

Investing Activities. Cash used in investing activities was \$37.6 million in 2019 compared to \$33.3 million in 2018, an increase of \$4.2 million. This increase is due to investments focused on productivity enhancement associated with process automation and implementation of new tools.

Financing Activities. Cash used in financing activities was \$30.6 million in 2019 compared to \$30.7 million in 2018, a decrease of \$0.1 million. This decrease was primarily due to an increase in principal repayments of bank debt of \$2.3 million, offset by an increase in cash collected with respect to customer funds obligations of \$2.6 million.

Indebtedness

On March 31, 2020, the Company entered into a credit agreement with a bank, which was subsequently amended on April 3, 2020 to permit another bank to be a party to the agreement, consisting of a \$175.0 million term loan (the "Term Loan") and a \$100.0 million committed line of credit (the "Line of Credit") (collectively, the "Credit Agreement").

Net proceeds from the Term Loan after payment of financing fees of \$2.9 million and repayment of the amounts outstanding under a previous credit agreement of \$61.7 million were used to fund a portion of the \$123.0 million distribution made to stockholders on May 29, 2020. As required by the terms of the Credit Agreement, we repaid the Term Loan principal with the net proceeds of the Offering.

The Line of Credit matures in March 2025 and had no outstanding borrowings at December 31, 2020. The Company has the option to select an applicable interest rate at either the bank base rate plus an applicable margin (the "Base Rate Option") or the London Interbank Offered Rate ("LIBOR") plus an applicable margin (the "LIBOR Option"). The applicable margins are determined by certain financial covenant performance as defined in the Credit Agreement. At December 31, 2020 the Base Rate Option and LIBOR Option applicable to Line of Credit borrowings were 3.25% and 2.00%, respectively.

The Credit Agreement is collateralized by certain assets of the Company and contains financial and operating covenants that we are in compliance with as of December 31, 2020.

For more information on our indebtedness see Note 7 to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

Funds Held for Customers and Customer Funds Obligations

We maintain trust accounts with financial institutions, which allows our customers to outsource their tax remittance functions to us. We have legal ownership over the accounts utilized for this purpose. Funds held for customers represent cash and cash equivalents that, based upon our intent, are restricted solely for satisfying the obligations to remit funds relating to our tax remittance services. Funds held for customers are not commingled with our operating funds.

Customer funds obligations represent our contractual obligations to remit collected funds to satisfy customer tax payments. Customer funds obligations are reported as a current liability on our consolidated balance sheets as the obligations are expected to be settled within one year. Cash flows related to changes in customer funds obligations are presented as cash flows from financing activities.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements, as defined by applicable regulations of the SEC, that are reasonably likely to have a current or future material effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Contractual Obligations and Commitments

Our contractual obligations and commitments as of December 31, 2020 are summarized in the table below:

(In thousands)	Payments Due by Year				
	Total	Less Than 1 year	1-3 Years	3-5 Years	More Than 5 Years
Long-term debt	\$ —	\$ —	\$ —	\$ —	\$ —
Capital leases	1,145	915	230	—	—
Operating leases	35,796	5,442	8,977	8,846	12,531
Purchase Commitment Liability ⁽¹⁾	9,750	1,147	3,628	4,975	—
Purchase obligations	14,478	7,220	6,296	962	—
Total	\$ 61,169	\$ 14,724	\$ 19,131	\$ 14,783	\$ 12,531

- ⁽¹⁾ On January 7, 2020, the Company acquired a 60% controlling interest in Systax, a provider of Brazilian transaction tax content and software. The Company has a contractual purchase commitment to acquire the remaining 40% equity interest incrementally between 2021 through 2024. Future purchase commitment payments for these incremental acquisition amounts are based on a multiple of Systax revenue and earnings before interest, depreciation, amortization and income taxes performance at the end of 2020, 2022 and 2023, whereby the Company will have full ownership after the final transaction in 2024. See Notes 1 and 2 to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

Critical Accounting Policies and Estimates

The preparation of these consolidated financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements, as well as the reported amounts of revenue and expenses during the reporting periods. These estimates, assumptions and judgments are necessary because future events and their effects on our consolidated financial statements cannot be determined with certainty, and are made based on our historical experience and on other assumptions that we believe to be reasonable under the circumstances. These estimates may change as new events occur or additional information is obtained, and we may periodically be faced with uncertainties, the outcomes of which are not within our control and may not be known for a prolonged period of time. Because the use of estimates is inherent in the financial reporting process, actual results could materially differ from those estimates.

The policies and estimates discussed below are considered by management to be critical to an understanding of our consolidated financial statements because their application places the most significant demands on management's judgment. Specific risks for these critical accounting policies are described in the following sections. For all of these policies, we caution that future events rarely develop exactly as forecast, and such estimates routinely require adjustment. We have reviewed these critical accounting policies and estimates and related disclosures with our Audit Committee.

Our discussion of critical accounting policies and estimates is intended to supplement, not duplicate, our summary of significant accounting policies so that readers will have greater insight into the uncertainties involved in applying our critical accounting policies and estimates. For a summary of our significant accounting policies, see Note 1 to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

Revenue Recognition

Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration expected to be received in exchange for those products or services. We enter into contracts that can include various combinations of products and services, which are generally capable of being distinct and accounted for as separate performance obligations. Revenue is recognized net of allowance for subscription and non-renewal cancellations and any taxes collected from customers, which are subsequently remitted to governmental authorities.

Licenses for on-premise software subscriptions provide the customer with a right to use the software as it exists when made available to the customer. Customers purchase a subscription to these licenses, which includes the related software and tax content updates and product support. The updates and support, which are part of the subscription agreement, are essential to the continued utility of the software. Therefore, we have determined the software and the related updates and support to be a single performance obligation. Accordingly, when on-premise software is licensed, the revenue associated with this combined performance obligation is recognized ratably over the license term as these subscription services are provided for the duration of the license term. Revenue recognition begins on the later of the beginning of the subscription period or the date the software is made available to the customer to download. Our on-premise software subscription prices in the initial subscription year are higher than standard renewal prices. The excess initial year price over the renewal price ("new sale premium") is considered to be a material right. We recognize revenue associated with the material right over the estimated period of benefit to the customer, generally three years.

Cloud-based subscriptions allow customers to use Company-hosted software over the contract period without taking possession of the software. The cloud-based offerings also include related updates and support. All services within the cloud-based contracts would consistently provide a benefit to the customer during the subscription period, thus the associated revenue is recognized ratably over the subscription period. Revenue recognition begins on the later of the beginning of the subscription period or the date the customer is provided access to the cloud-based services.

Revenue from deliverable-based services is recognized as services are delivered. Revenue from fixed fee services is recognized as services are performed using the percentage of completion input method.

We have elected the "right to invoice" practical expedient for revenue related to services that are billed on an hourly basis, which enables revenue to be recognized as the services are performed.

We have determined that the methods applied to measuring our progress toward complete satisfaction of performance obligations recognized over time are a faithful depiction of our transfer of control of software and services to customers.

Significant Judgments

Contracts with customers often include promises to transfer multiple products and services to a customer. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. Identification of the amortization periods of material rights and contract costs requires significant judgment by management.

Contract Balances

Timing of revenue recognition may differ from the timing of invoicing customers. A receivable, or contract asset, is recorded in the consolidated balance sheet when customers are billed related to revenue to be collected and recognized for subscription agreements as there is an unconditional right to invoice and receive payment in the future related to these subscriptions. A receivable and related revenue may also be recorded in advance of billings to the extent services have been performed and we have a right under the contract to bill and collect for such performance. Subscription-based customers are generally invoiced at the beginning of each annual subscription period. A contract liability is recorded as deferred revenue on the consolidated balance sheet when subscription-based customers are billed in advance of performance obligations being satisfied, and revenue is recognized subsequent to invoicing ratably over the subscription period or over the amortization period of material rights.

Deferred sales commissions earned by our sales force and certain sales incentive programs and vendor referral agreements are considered incremental and recoverable costs of obtaining a contract with a customer. An asset is recognized for these incremental contract costs and reflected as deferred commissions in the consolidated balance sheet.

These contract costs are amortized on a straight-line basis over a period consistent with the transfer of the associated product and services to the customer, which is generally three years. Amortization of these costs are included in selling and marketing expense in the consolidated statements of comprehensive income (loss). We periodically review these contract assets to determine whether events or changes in circumstances have occurred that could impact the period of benefit of these assets. There were no contract asset impairment losses recorded for the periods presented.

Payment Terms

Payment terms and conditions vary by contract, although our terms generally include a requirement of payment within 30 days. In instances where the timing of revenue recognition differs from the timing of payment, we have determined that our contracts do not include a significant financing component. The primary purpose of invoicing terms is to provide customers with simplified and predictable ways of purchasing products and services, not to receive financing from customers or to provide customers with financing.

Stock-Based Compensation

We apply the provisions of ASC 718, Compensation—Stock Compensation, for the award of equity-based instruments. The provisions of ASC 718 require a company to measure the fair value of stock-based compensation as of the grant date of the award. Stock-based compensation expense reflects the cost of employee services received in exchange for the awards.

SARs are accounted for as liabilities under ASC 718 and, as such, we recognize stock-based compensation expense by remeasuring the value of the SARs at the end of each reporting period and accruing the portion of the requisite service rendered at that date. Prior to July 2, 2020, the date management determined the Company was considered to have become a public entity, we measured SARs based on their intrinsic value which reflected the difference between the fair value of the former Class B common stock at the reporting date less the grant date fair value of the underlying shares as this was the value the SAR participant could derive from exercise of the SAR award. Prior to the Offering, the fair value of the Company's common stock was determined periodically by the board of directors with the assistance of management and a third-party valuation firm. Upon becoming a public entity, and up to the effective date of the Offering, outstanding SARs were remeasured using the fair value-based method under ASC 718. See Note 10 to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K for discussion of the impact of the resulting change in accounting policy.

Stock-based compensation expense for new stock options issued under the 2020 Plan after the Offering is measured based on the grant date fair value of the award and is estimated using the Black-Scholes model. Compensation cost is recognized on a straight-line basis over the requisite service or performance period associated with the award.

Stock-based compensation expense for RSAs and RSUs is based on the fair value of the Company's underlying common stock on the date of grant. Compensation cost is recognized on a straight-line basis over the requisite service or performance period associated with the award.

The ESPP permits participants to purchase Class A common stock through payroll deductions, up to a specified percentage of their eligible compensation or a lump sum contribution amount for the initial offering period (July 28 to November 30, 2020), subject to the plan's maximum purchase provisions during the specified offering periods. The plan is a compensatory plan as it allows participants to purchase stock at a 15% discount from the lower of the fair value of the Class A common on the first or last day of the ESPP offering period (the "ESPP discount"). The ESPP is accounted for as an equity-classified award. Stock-based compensation expense for the ESPP is measured based on the fair value of the ESPP award at the start of the offering period. The fair value is comprised of the value of the ESPP discount and the value associated with the variability in the Class A common stock price during the offering period (the "Call/Put"), which is estimated using the Black-Scholes model. Compensation cost is recognized on a straight-line basis over the respective offering period.

The Company has elected to recognize award forfeitures as they occur.

Common Stock Valuations

Prior to the Offering, the fair value of the common stock underlying the SAR Awards was determined by the board of directors with assistance from management and an independent third-party valuation firm. The determination of value used the market and income approaches, with an adjustment for marketability discount pertinent to private company entities in arriving at the per share fair value (the “valuation methodology”). Under the market approach, the guideline public company method is used, which estimates the fair value of the Company based on market prices of stock of guideline public companies. The income approach involves projecting the future benefits of owning an asset and estimating the present value of those future benefits by discounting them based upon the time value of money and the investment risks associated with ownership. At the end of 2019, due to the consideration by the board of directors of pursuing the Offering, the valuation methodology began to consider the impact of such an event on the value of the Company’s common stock underlying the awards. As the Company approached the Offering effective date, this resulted in increases in the value of the SAR Awards which resulted in corresponding increases to compensation expense for the year ended December 31, 2020 which exceeded historical results. For additional information, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations - Seasonality and Quarterly Trends.”

Following the closing of the Offering, the fair value per share of our common stock for purposes of determining stock-based compensation will be the closing price of our common stock as reported on the applicable grant date.

Software Development Costs

Internal-Use Software

We follow ASC 350-40, *Goodwill and Other, Internal-Use Software*, to account for development costs incurred for the costs of computer software developed or obtained for internal use. ASC 350-40 requires such costs to be capitalized once certain criteria are met. Capitalized internal-use software costs are primarily comprised of direct labor, related expenses and initial software licenses. ASC 350-40 includes specific guidance on costs not to be capitalized, such as overhead, general and administrative and training costs. Internal-use software includes software utilized for cloud-based services as well as software for internal systems and tools. Costs are capitalized once the project is defined, funding is committed and it is confirmed the software will be used for its intended purpose. Capitalization of these costs concludes once the project is substantially complete and the software is ready for its intended purpose. Post-configuration training and maintenance costs are expensed as incurred. Internal-use software available for its intended use is included in internal-use software developed in property and equipment in the consolidated balance sheets once available for its intended use. Depreciation expense for internal-use software utilized for cloud-based customer solutions and for software for internal systems and tools is included in cost of revenues, software subscriptions and depreciation and amortization, respectively, in the consolidated statements of comprehensive income (loss).

We review the carrying value of internal-use software, for impairment whenever events or changes in circumstances indicate that the carrying amount of such software may not be fully recoverable. Whenever such events or circumstances are present, an impairment loss equal to the excess of the asset carrying value over its fair value, if any, is recorded.

Software Developed for Sale

The costs incurred for the development of computer software to be sold, leased or otherwise marketed are capitalized in accordance with ASC 985-20, *Costs of Software to be Sold, Leased or Marketed*, when technological feasibility has been established. Technological feasibility generally occurs when all planning, design, coding and testing activities are completed that are necessary to establish that the product can be produced to meet its design specifications, including functions, features and technical performance requirements. The establishment of technological feasibility is an ongoing assessment of judgment by management with respect to certain external factors, including, but not limited to, anticipated future revenues, estimated economic life and changes in technology. Capitalized software includes direct labor and related expenses for software development for new products and enhancements to existing products and acquired software.

Amortization of capitalized software development costs begins when the product is available for general release. Amortization is provided on a product-by-product basis using the straight-line method over periods between three to five years. Unamortized capitalized software development costs determined to be in excess of the net realizable value of the product are expensed immediately.

Capitalized software costs are subject to an ongoing assessment of recoverability based on anticipated future revenues and changes in software technologies at least annually and whenever events or circumstances make it more likely than not that impairment may have occurred. In the event of impairment, unamortized capitalized software costs are compared to the net realizable value of the related product and the carrying value of the related assets are written down to the net realizable value to the extent the unamortized capitalized costs exceed such value. The net realizable value is the estimated future gross revenues from the related product reduced by the estimated future costs of completing and disposing of such product, including the costs of providing related maintenance and customer support.

Goodwill

Goodwill represents the excess of the purchase price over the fair value of net tangible and intangible assets acquired in a business combination. We evaluate goodwill for impairment annually at October 1 and whenever events or circumstances make it more likely than not that impairment may have occurred.

The Company has determined that its business comprises one reporting unit. We have the option to first assess qualitative factors to determine whether events or circumstances indicate it is more likely than not that the fair value of a reporting unit is greater than its carrying amount, in which case a quantitative impairment test is not required.

As provided for by ASU 2017-04, *Simplifying the Test for Goodwill Impairment*, the quantitative goodwill impairment test is performed by comparing the fair value of the reporting unit with its carrying amount, including goodwill. If the fair value of the reporting unit exceeds its carrying amount, goodwill is not impaired. An impairment loss is recognized for any excess of the carrying amount of the reporting unit's goodwill over the fair value up to the amount of goodwill allocated to the reporting unit. Income tax effects from any tax-deductible goodwill on the carrying amount of the reporting unit are considered when measuring the goodwill impairment loss, if applicable.

Income taxes

On July 27, 2020, the Company's S-Corporation election (the "S Election") was terminated by the Company's stockholders in connection with the Offering. As a result, the Company will now be taxed at the corporate level as a C-Corporation for U.S. federal and state income tax purposes. Prior to July 27, 2020, as the Company was taxed as an S-Corporation for U.S. federal income tax purposes and for most states, net income or loss was allocated to the stockholders and was included on their individual income tax returns. In certain states, the Company was taxed at the corporate level. Accordingly, the income tax provision or benefit was based on taxable income allocated to these states. In certain foreign jurisdictions, the Company was taxed at the corporate level. Similar to states, the income tax provision or benefit was based on taxable income sourced to these foreign jurisdictions.

Certain foreign subsidiaries in which we own greater than 50% of the equity by measure of vote or value are treated as controlled foreign companies ("CFCs") for U.S. federal income tax purposes and most states under the IRS foreign tax regulations. The income and loss from these entities is reported on the Company's U.S. federal and some state income tax returns when the foreign earnings are repatriated or deemed to be repatriated to the U.S. In conjunction with the termination of the S Election, certain direct and indirect wholly owned foreign subsidiaries that were previously treated as disregarded entities for U.S. federal income tax purposes and most states under the Internal Revenue Service ("IRS") "check-the-box" regulations, "unchecked-the-box" to become regarded entities and as a result, became CFCs. Prior to these elections, the income and loss from these entities was reported on the Company's U.S. federal and most state income tax returns in addition to being reported on a foreign jurisdiction tax return regardless of whether or not the earnings were repatriated.

We record deferred income taxes using the liability method. We recognize deferred tax assets and liabilities for future tax consequences of events that have been previously recognized in the consolidated financial statements and tax returns. The measurement of deferred tax assets and liabilities is based on provisions of the enacted tax law. The effects of future changes in tax laws or rates are not anticipated. A valuation allowance is recorded when it is more likely than not that some or all of the deferred tax assets will not be realized.

We record uncertain tax positions in accordance with ASC 740, *Income Taxes*, on the basis of a two-step process whereby: (i) management determines whether it is more likely than not that the tax positions will be sustained based on the technical merits of the position, and (ii) for those tax positions that meet the more likely than not recognition threshold, management recognizes the largest amount of tax benefit that is greater than 50 percent likely to be realized upon ultimate settlement with the related tax authority. The impact as a result of the application of ASC 740 is reflected in the

consolidated financial statements. The Company assesses its income tax positions and records tax benefits or expense based upon management's evaluation of the facts, circumstances, and information available at the reporting date.

Recent Accounting Pronouncements

A discussion of recent accounting pronouncements is included in Note 1 to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

JOBS Act

As a company with less than \$1.07 billion in revenue during our last fiscal year, we qualify as an "emerging growth company," as defined in the JOBS Act. An emerging growth company may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include:

- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these provisions until the last day of our fiscal year following the fifth anniversary of the completion of our Offering. However, if certain events occur prior to the end of such five-year period, including if we become a "large accelerated filer," our annual gross revenues exceed \$1.07 billion, or we issue more than \$1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in this Annual Report on Form 10-K and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our stockholders may be different from what you might receive from other public reporting companies in which you hold equity interests.

In addition, under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

We had cash and cash equivalents of \$303.1 million and \$75.9 million as of December 31, 2020 and 2019, respectively. We maintain our cash and cash equivalents in deposit accounts and money market funds with financial institutions. Due to the short-term nature of these instruments, we believe that we do not have any material exposure to changes in the fair value of our investment portfolio as a result of changes in interest rates. Declines in interest rates, however, would reduce future interest income.

The Company has no outstanding bank debt at December 31, 2020. Any debt we incur in the future may bear interest at variable rates.

Foreign Currency Exchange Rate Risk

Our revenues and expenses are primarily denominated in U.S. dollars. For our foreign operations, the majority of our revenues and expenses are denominated in other currencies, such as the Canadian Dollar, Euro, British Pound, Swedish Krona, Indian Rupee and Brazilian Real. Decreases in the relative value of the U.S. dollar as compared to these currencies may negatively affect our revenues and other operating results as expressed in U.S. dollars. For the years ended December 31, 2020, 2019 and 2018, approximately 1% of our revenues were generated in currencies other than U.S. dollars in each respective period.

We have experienced and will continue to experience fluctuations in our net income (loss) as a result of transaction gains or losses related to revaluing certain current asset and current liability balances that are denominated in currencies other than the functional currency of the entities in which they are recorded. We have historically recognized immaterial amounts of foreign currency gains and losses in each of the periods presented. We may in the future hedge selected significant transactions denominated in currencies other than the U.S. dollar as we expand our international operations and our risk grows. For example, our acquisition of the controlling interest in Systax in January 2020 and the future purchase commitments associated with this acquisition are expected to increase our exposure to fluctuations of the Brazilian Real over time. In May 2020, we entered into a series of foreign currency forward contracts to hedge a portion of our exposure to adverse fluctuations in the Brazilian Real associated with these future purchase commitments. Fluctuations in the value of these forward contracts are reflected in interest expense, net in the consolidated statements of comprehensive income (loss). At December 31, 2020, outstanding foreign currency forward contracts provide a hedge of approximately 50% of our future purchase commitment liability.

Inflation

In the past three years, we do not believe that inflation had a material effect on our business, financial condition or results of operations. If our costs were to become subject to significant inflationary pressures, we may not be able to fully offset such higher costs through price increases. Our inability or failure to do so could harm our business, financial condition and results of operations.

Item 8. Financial Statements and Supplementary Data

The information required by this item is presented at the end of this report beginning on page F-1.

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

None.

Item 9A. Controls and Procedures

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect that there are resource constraints and that management is required to apply judgement in evaluating the benefits of possible controls and procedures relative to their costs.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures. Solely as a result of the material weakness described below, our principal executive officer and principal financial officer concluded that, as of December 31, 2020, our disclosure controls and procedures were not effective.

We have performed additional analyses, reconciliations, and other post-closing procedures and have concluded that, notwithstanding the material weakness in our internal control over financial reporting, the audited consolidated financial statements for the periods covered by and included in this Annual Report on Form 10-K fairly present, in all material respects, our financial position, results of operations and cash flows for the periods presented in conformity with GAAP.

Description of Material Weakness

As previously disclosed in our Quarterly Reports on Form 10-Q for the quarters ended June 30, 2020 and September 30, 2020, we identified a material weakness in our internal control over financial reporting during the two-year period ended December 31, 2019 due to an insufficient process for the provision and governance of user access to financially significant systems that resulted in a lack of segregation of duties related to journal entries and cash disbursements.

A material weakness is a control deficiency, or combination of control deficiencies, that results in a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis.

Our management, with oversight from our Audit Committee, is in the process of remediating this material weakness. During 2020, we implemented changes to our user access governance practices to prevent individuals from having the ability to create and post journal entries or create a vendor and prepare checks, and we believe these measures have addressed the lack of segregation of duties related to cash disbursements. To date, we have also implemented changes to our user access governance practices to prevent individuals from having the ability to create and post journal entries and have implemented a periodic review cycle for user access. However, this material weakness will not be considered remediated until the applicable controls operate for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively.

Remediation of Previously Reported Material Weaknesses

We previously identified two other material weaknesses in our internal control over financial reporting during the two-year period ended December 31, 2019 due to (i) the lack of an effective review control over the completeness and accuracy of significant conclusions regarding the impact of the new revenue recognition guidance prescribed by ASC 606 and (ii) incorrect applications of software capitalization models and untimely identification of impairments of capitalized software development costs. These material weaknesses resulted in errors that were not timely identified in conjunction with the issuance of our financial statements as of and for the years ended December 31, 2018 and 2019. These errors led to adjustments reflected in our 2019 and 2018 audited consolidated financial statements. We evaluated these errors under both quantitative and qualitative standards.

Due to the action taken by the Company to implement new controls and procedures, management has concluded that the material weaknesses related to revenue recognition and capitalized software development costs were remediated as of December 31, 2020. To remediate these material weaknesses, we:

- implemented additional and more precise review controls over revenue recognition;
- instituted additional and more precise review controls over implementation of new accounting pronouncements, particularly where management seeks input from outside consultants with respect to implementation of those accounting pronouncements that are complex;
- increased the education and training available to our management regarding new and revised accounting standards, including ASC 606; and
- instituted a control in which senior members of our finance, accounting, technology and product teams meet quarterly and review all new software projects, existing software assets that have changes in projected use and/or pipeline, and business and market conditions that could affect classification or impairment of capitalized software development costs.

Exemption from Management’s Report on Internal Control Over Financial Reporting

This Annual Report on Form 10-K does not include a report of management’s assessment regarding internal control over financial reporting or an attestation report of our independent registered public accounting firm due to a transition period established by rules of the SEC for newly public companies.

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 the relevant information from our definitive Proxy Statement for our 2021 Annual Meeting of Shareholders, which will be filed not later than 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 the relevant information from our definitive Proxy Statement for our 2021 Annual Meeting of Shareholders, which will be filed not later than 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 the relevant information from our definitive Proxy Statement for our 2021 Annual Meeting of Shareholders, which will be filed not later than 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 the relevant information from our definitive Proxy Statement for our 2021 Annual Meeting of Shareholders, which will be filed not later than 120 days after the end of the fiscal year ended December 31, 2020.

Item 14. Principal Accountant Fees and Services

The information required by this item is incorporated by reference to the relevant information from our definitive Proxy Statement for our 2021 Annual Meeting of Shareholders, which will be filed not later than 120 days after the end of the fiscal year ended December 31, 2020.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) The following documents are filed as part of the Annual Report on Form 10-K:

(1) Consolidated Financial Statements

The financial statements filed as part of this Annual Report on Form 10-K are listed in the “Index to Consolidated Financial Statements” beginning on page F-1 of this Annual Report on Form 10-K.

(2) Financial Statement Schedules

All schedules are omitted because the information required to be set forth therein is not applicable or is presented in the consolidated financial statements or notes thereto beginning on page F-1 of this Annual Report on Form 10-K.

(3) Exhibits

The documents listed in the Index to Exhibits beginning on page E-1 of this Annual Report on Form 10-K are incorporated by reference or are filed with this Annual Report on Form 10-K, in each case as indicated therein (numbered in accordance with Item 601 of Regulation S-K).

Item 16. Form 10-K Summary

None.

INDEX TO EXHIBITS

The following exhibits are filed as part of this Annual Report on Form 10-K.

<u>Exhibit Number</u>	<u>Exhibit Description</u>	<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed Herewith</u>	<u>Furnished Herewith</u>
3.1	Form of Amended and Restated Certificate of Incorporation of Vertex, Inc.	S-1/A	a2242082zex-3_1	3.1	07/20/20		
3.2	Form of Amended and Restated Bylaws of Vertex, Inc.	S-1/A	a2242082zex-3_1	3.2	07/20/20		
4.1	Specimen Stock Certificate evidencing the shares of Class A common stock.	S-1/A	a2242119zex-4_1	4.1	07/24/20		
4.2	Form of Third Amended and Restated Stockholders' Agreement.	S-1/A	a2242119zex-4_1	4.2	07/24/20		
4.3	Description of Capital Stock					X	
5.1	Opinion of Latham & Watkins LLP.	S-1/A	a2242082zex-3_1	5.1	07/20/20		
10.1	Credit Agreement by and among Vertex, Inc., the guarantors party thereto, PNC Bank, National Association, and the lenders party thereto, dated as of March 31, 2020.	S-1	a2241987zs-1	10.1	07/02/20		
10.2	First Amendment to Loan Documents, by and among Vertex, Inc., the guarantors party thereto, the lenders party thereto and PNC Bank, National Association, dated as of April 3, 2020.	S-1	a2241987zs-1	10.2	07/02/20		
10.3#	Form of Indemnification Agreement between Vertex, Inc. and each of its Executive Officers and Directors.	S-1/A	a2242082zex-3_1	10.3	07/20/20		
10.4	2007 Stock Appreciation Plan.	S-1	a2241987zs-1	10.4	07/02/20		
10.5#	Form of Executive Employment Agreement, as amended and restated, by and between Vertex, Inc. and Lisa Butler.	S-1/A	a2242082zex-3_1	10.5	07/20/20		
10.6#	Executive Employment Agreement, as amended and restated, by and between Vertex, Inc. and David DeStefano.	S-1/A	a2242082zex-3_1	10.6	07/20/20		
10.7#	Form of Executive Employment Agreement, as amended and restated, by and between Vertex, Inc. and Bryan Rowland.	S-1/A	a2242082zex-3_1	10.7	07/20/20		
10.8#	Form of Executive Employment Agreement, as amended and restated, by and between Vertex, Inc. and John Schwab.	S-1/A	a2242082zex-3_1	10.8	07/20/20		
10.9	Form of S Corporation Termination and Tax Sharing Agreement.	S-1/A	a2242082zex-3_1	10.9	07/20/20		
10.10#	Vertex Inc. & Subsidiaries 2010 Long-Term Rewards Plan.	S-1/A	a2242082zex-3_1	10.10	07/20/20		
10.11#	Vertex Inc. & Subsidiaries 2018 Long-Term Rewards Plan.	S-1/A	a2242082zex-3_1	10.11	07/20/20		
10.12#	Form of Stock Option Amendment Agreement.	S-1/A	a2242082zex-3_1	10.12	07/20/20		
10.13#	Form of Option Award Agreement under 2020 Incentive Award Plan for Amended Options.	S-1/A	a2242082zex-3_1	10.13	07/20/20		

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<u>Exhibit Number</u>	<u>Exhibit Description</u>	<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed Herewith</u>	<u>Furnished Herewith</u>
10.14#	Form of Option Award Agreement under 2020 Incentive Award Plan for Amended Stock Appreciation Rights.	S-1/A	a2242082zex-3_1	10.14	07/20/20		
10.15#	Vertex, Inc. 2020 Incentive Award Plan.	S-1/A	a2242082zex-3_1	10.15	07/20/20		
10.16#	Form of Option Award Agreement under 2020 Incentive Award Plan.	S-1/A	a2242082zex-3_1	10.16	07/20/20		
10.17#	Form of Restricted Stock Award Agreement under 2020 Incentive Award Plan.	S-1/A	a2242082zex-3_1	10.17	07/20/20		
10.18#	Form of Restricted Stock Unit Award Agreement under 2020 Incentive Award Plan.	S-1/A	a2242082zex-3_1	10.18	07/20/20		
10.19#	Form of Stock Award Agreement under 2020 Incentive Award Plan.	S-1/A	a2242082zex-3_1	10.19	07/20/20		
21.1	List of Subsidiaries	S-1/A	a2242082zex-3_1	21.1	07/20/20		
23.1	Consent of Crowe LLP					X	
31.1	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X	
31.2	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X	
32.1	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002						X
32.2	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002						X
101.INS	XBRL Instance Document						X
101.SCH	XBRL Taxonomy Extension Schema Document						X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document						X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document						X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document						X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document						X

Indicates a management contract or compensatory plan.

VERTEX, INC. AND SUBSIDIARIES

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Report of Independent Registered Public Accounting Firm

Shareholders and the Board of Directors of Vertex, Inc.
King of Prussia, Pennsylvania

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Vertex, Inc. (the "Company") as of December 31, 2020 and 2019, the related consolidated statements of comprehensive income (loss), changes in equity, and cash flows for each of the three years in the period ended December 31, 2020, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 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 accounting principles generally accepted in the United States of America.

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 Public Company Accounting Oversight Board (United States) ("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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

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.

/s/ Crowe LLP

We have served as the Company's auditor since 2019.

New York, New York
March 15, 2021

Vertex, Inc. and Subsidiaries
Consolidated Balance Sheets
(Amounts in thousands, except per share data)

	December 31,	
	2020	2019
Assets		
Current assets:		
Cash and cash equivalents	\$ 303,051	\$ 75,903
Funds held for customers	9,222	7,592
Accounts receivable, net of allowance of \$8,592, and \$7,515	77,159	70,367
Prepaid expenses and other current assets	13,259	11,695
Total current assets	<u>402,691</u>	<u>165,557</u>
Property and equipment, net of accumulated depreciation	56,557	54,727
Capitalized software, net of accumulated amortization	31,989	32,075
Goodwill and other intangible assets	18,711	—
Deferred commissions	11,743	11,196
Deferred income tax asset	29,974	219
Other assets	3,263	849
Total assets	<u>\$ 554,928</u>	<u>\$ 264,623</u>
Liabilities and Equity		
Current liabilities:		
Current portion of long-term debt	\$ 882	\$ 50,804
Accounts payable	8,876	10,729
Accrued expenses	19,176	13,308
Distributions payable	2,700	13,183
Customer funds obligations	9,235	7,553
Accrued salaries and benefits	17,326	15,195
Accrued variable compensation	22,372	22,237
Deferred compensation, current	2,057	8,935
Deferred revenue	207,560	191,745
Deferred rent and other	939	840
Purchase Commitment Liability, current	845	—
Total current liabilities	<u>291,968</u>	<u>334,529</u>
Deferred compensation, net of current portion	5,010	18,530
Deferred revenue, net of current portion	14,702	14,046
Long-term debt, net of current portion	225	682
Purchase Commitment Liability, net of current portion	8,905	—
Deferred other liabilities	8,632	9,268
Total liabilities	<u>329,442</u>	<u>377,055</u>
Commitments and contingencies (Note 12)		
Options for redeemable shares	—	17,344
Stockholders' equity (deficit):		
Preferred shares, \$0.001 par value, 30,000 and 0 shares authorized; 0 and 0 shares issued and outstanding	—	—
Class A voting common stock, \$0.001 par value, 0 and 600 shares authorized; 0 and 300 shares issued; 0 and 147 shares outstanding	—	—
Class B non-voting common stock, \$0.001 par value, 0 and 299,400 shares authorized; 0 and 162,297 shares issued; 0 and 120,270 shares outstanding	—	54
Class A voting common stock, \$0.001 par value, 300,000 and 0 shares authorized; 26,327 and 0 shares issued and outstanding	26	—
Class B voting common stock, \$0.001 par value, 150,000 and 0 shares authorized; 120,117 and 0 shares issued and outstanding	120	—
Additional paid in capital	206,541	—
Retained earnings (accumulated deficit)	21,926	(90,701)
Accumulated other comprehensive loss	(3,127)	(491)
Treasury stock	—	(38,638)
Total stockholders' equity (deficit)	<u>225,486</u>	<u>(129,776)</u>
Total liabilities and equity	<u>\$ 554,928</u>	<u>\$ 264,623</u>

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

Vertex, Inc. and Subsidiaries
Consolidated Statements of Comprehensive Income (Loss)
(Amounts in thousands, except per share data)

	For the Year Ended December 31,		
	2020	2019	2018
Revenues:			
Software subscriptions	\$ 316,763	\$ 275,629	\$ 235,663
Services	57,902	45,871	36,740
Total revenues	<u>374,665</u>	<u>321,500</u>	<u>272,403</u>
Cost of revenues:			
Software subscriptions	105,676	77,259	68,945
Services	59,711	33,119	26,753
Total cost of revenues	<u>165,387</u>	<u>110,378</u>	<u>95,698</u>
Gross profit	<u>209,278</u>	<u>211,122</u>	<u>176,705</u>
Operating expenses:			
Research and development	54,340	30,557	23,755
Selling and marketing	99,418	68,127	56,898
General and administrative	149,057	71,014	58,947
Depreciation and amortization	11,018	8,996	7,937
Impairment of asset	—	—	32,692
Other operating expense (income), net	203	573	(691)
Total operating expenses	<u>314,036</u>	<u>179,267</u>	<u>179,538</u>
(Loss) income from operations	<u>(104,758)</u>	<u>31,855</u>	<u>(2,833)</u>
Interest expense, net	3,111	953	1,594
(Loss) income before income taxes	<u>(107,869)</u>	<u>30,902</u>	<u>(4,427)</u>
Income tax (benefit) expense	<u>(28,932)</u>	<u>(155)</u>	<u>1,679</u>
Net (loss) income	<u>(78,937)</u>	<u>31,057</u>	<u>(6,106)</u>
Other comprehensive loss (income) from foreign currency translation adjustments and revaluations, net of tax	2,636	(5)	355
Total comprehensive (loss) income	<u>\$ (81,573)</u>	<u>\$ 31,062</u>	<u>\$ (6,461)</u>
Net (loss) income attributable to Class A stockholders, basic	<u>\$ (6,660)</u>	<u>\$ 23</u>	<u>\$ (16)</u>
Net (loss) income per Class A share, basic	<u>\$ (0.60)</u>	<u>\$ 0.20</u>	<u>\$ (0.08)</u>
Weighted average Class A common stock, basic	<u>11,096</u>	<u>118</u>	<u>210</u>
Net (loss) income attributable to Class A stockholders, diluted	<u>\$ (6,660)</u>	<u>\$ 965</u>	<u>\$ (16)</u>
Net (loss) income per Class A share, diluted	<u>\$ (0.60)</u>	<u>\$ 0.25</u>	<u>\$ (0.08)</u>
Weighted average Class A common stock, diluted	<u>11,096</u>	<u>3,861</u>	<u>210</u>
Net (loss) income attributable to Class B stockholders, basic	<u>\$ (72,277)</u>	<u>\$ 31,034</u>	<u>\$ (6,090)</u>
Net (loss) income per Class B share, basic	<u>\$ (0.60)</u>	<u>\$ 0.26</u>	<u>\$ (0.05)</u>
Weighted average Class B common stock, basic	<u>120,415</u>	<u>120,417</u>	<u>120,417</u>
Net (loss) income attributable to Class B stockholders, diluted	<u>\$ (72,277)</u>	<u>\$ 30,092</u>	<u>\$ (6,090)</u>
Net (loss) income per Class B share, diluted	<u>\$ (0.60)</u>	<u>\$ 0.25</u>	<u>\$ (0.05)</u>
Weighted average Class B common stock, diluted	<u>120,415</u>	<u>120,417</u>	<u>120,417</u>
Pro forma information (unaudited) (Note 1):			
Loss before income taxes	\$ (107,869)		
Pro forma provision for income tax benefit	(27,507)		
Pro forma net loss	<u>\$ (80,362)</u>		
Pro forma net loss attributable to Class A stockholders	<u>\$ (6,780)</u>		
Weighted average Class A common stock, basic and diluted	<u>11,096</u>		
Pro forma net loss per Class A share, basic and diluted	<u>\$ (0.61)</u>		
Pro forma net loss attributable to Class B stockholders	<u>\$ (73,582)</u>		
Weighted average Class B common stock, basic and diluted	<u>120,415</u>		
Pro forma net loss per Class B share, basic and diluted	<u>\$ (0.61)</u>		

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

Vertex, Inc. and Subsidiaries
Consolidated Statements of Changes in Equity
(Amounts in thousands)

	Before Recapitalization				After Recapitalization				Additional Paid In Capital	Retained Earnings (Accumulated Deficit)	Accumulated Other Comprehensive Loss	Treasury Shares Issued	Treasury Stock	Total Stockholders' Equity (Deficit)	Options for Redeemable Shares
	Outstanding Class A Shares	Class A Common Stock	Outstanding Class B Shares	Class B Common Stock	Outstanding Class A Shares	Class A Common Stock	Outstanding Class B Shares	Class B Common Stock							
Balance, January 1, 2018	147	\$ —	120,270	\$ 54	—	\$ —	—	\$ —	\$ —	\$ (41,977)	\$ (141)	41,283	\$(36,520)	\$ (78,584)	\$ 13,554
Remeasurement of options for redeemable shares	—	—	—	—	—	—	—	—	—	(1,027)	—	—	—	(1,027)	1,027
Exercise of stock options, net	—	—	402	—	—	—	—	—	—	(12)	—	—	—	(12)	—
Purchase of treasury stock	—	—	(402)	—	—	—	—	—	—	—	—	402	(1,277)	(1,277)	—
Distributions declared	—	—	—	—	—	—	—	—	—	(38,916)	—	—	—	(38,916)	—
Foreign currency translation adjustments and revaluations	—	—	—	—	—	—	—	—	—	—	(355)	—	—	(355)	—
Net loss	—	—	—	—	—	—	—	—	—	(6,106)	—	—	—	(6,106)	—
Balance, December 31, 2018	147	—	120,270	54	—	—	—	—	—	(88,038)	(496)	41,685	(37,797)	(126,277)	14,581
Remeasurement of options for redeemable shares	—	—	—	—	—	—	—	—	—	(2,763)	—	—	—	(2,763)	2,763
Exercise of stock options, net	—	—	225	—	—	—	—	—	—	(100)	—	—	—	(100)	—
Purchase of treasury stock	—	—	(225)	—	—	—	—	—	—	—	—	225	(841)	(841)	—
Distributions declared	—	—	—	—	—	—	—	—	—	(30,857)	—	—	—	(30,857)	—
Foreign currency translation adjustments and revaluations	—	—	—	—	—	—	—	—	—	—	5	—	—	5	—
Net loss	—	—	—	—	—	—	—	—	—	31,057	—	—	—	31,057	—
Balance, December 31, 2019	147	—	120,270	54	—	—	—	—	—	(90,701)	(491)	41,910	(38,638)	(129,776)	17,344
Distributions declared	—	—	—	—	—	—	—	—	—	(132,901)	—	—	—	(132,901)	—
Exercise of stock options prior to Offering	—	—	173	—	—	—	—	—	—	53	—	—	—	53	—
Reclassification of accumulated S Corporation earnings	—	—	—	—	—	—	—	—	(354,291)	354,291	—	—	—	—	—
Remeasurement of options for redeemable shares	—	—	—	—	—	—	—	—	(21,954)	(29,879)	—	—	—	(51,833)	51,833
Reclassification of options for redeemable shares	—	—	—	—	—	—	—	—	69,177	—	—	—	—	69,177	(69,177)
Recapitalization prior to Offering	(147)	—	(120,443)	(54)	173	—	120,417	120	(38,704)	—	—	(41,910)	38,638	—	—
Reclassification of SAR liability to equity in connection with Offering	—	—	—	—	—	—	—	—	143,519	—	—	—	—	143,519	—
Auto-exercised stock options in connection with Offering	—	—	—	—	564	1	—	—	(13,809)	—	—	—	—	(13,808)	—
Shares issued in connection with Offering, net of Offering costs	—	—	—	—	23,812	24	—	—	416,778	—	—	—	—	416,802	—
Exercise of stock options in connection with the Offering	—	—	—	—	510	—	—	—	(7,023)	—	—	—	—	(7,023)	—
Vested restricted stock issued in connection with Offering	—	—	—	—	19	—	—	—	361	—	—	—	—	361	—
Exercise of stock options subsequent to Offering, net	—	—	—	—	890	1	—	—	1,687	—	—	—	—	1,688	—
Stock-based compensation expense from equity-classified awards under the 2020 Plan	—	—	—	—	—	—	—	—	12,576	—	—	—	—	12,576	—
Shares issued under ESPP	—	—	—	—	59	—	—	—	957	—	—	—	—	957	—
Distributions paid or payable in connection with Tax Sharing Agreement	—	—	—	—	—	—	—	—	(2,733)	—	—	—	—	(2,733)	—
Class B shares exchanged for Class A shares	—	—	—	—	300	—	(300)	—	—	—	—	—	—	—	—
Foreign currency translation adjustments and revaluations, net of tax	—	—	—	—	—	—	—	—	—	—	(2,636)	—	—	(2,636)	—
Net loss	—	—	—	—	—	—	—	—	—	(78,937)	—	—	—	(78,937)	—
Balance, December 31, 2020	—	\$ —	—	\$ —	26,327	\$ 26	120,117	\$ 120	\$ 206,541	\$ 21,926	\$ (3,127)	—	\$ —	\$ 225,486	\$ —

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



Vertex, Inc. and Subsidiaries
Consolidated Statements of Cash Flows
(Amounts in thousands)

	For the Year Ended December 31,		
	2020	2019	2018
Cash flows from operating activities:			
Net (loss) income	\$ (78,937)	\$ 31,057	\$ (6,106)
Adjustments to reconcile net (loss) income to net cash provided by operating activities:			
Depreciation and amortization	32,215	25,190	24,901
Impairment of asset	—	—	32,692
Provision for subscription cancellations and non-renewals, net of deferred allowance	259	1,232	237
Amortization of deferred financing costs	373	266	266
Write-off of deferred financing costs	1,387	—	—
Stock-based compensation expense	147,904	9,460	5,108
Deferred income tax (benefit) provision	(29,643)	(848)	847
Redemption of Converted SARs	(22,889)	—	—
Other	107	43	52
Changes in operating assets and liabilities:			
Accounts receivable	(6,762)	(10,116)	(16,958)
Prepaid expenses and other current assets	(1,541)	(809)	524
Deferred commissions	(547)	(2,366)	(3,154)
Accounts payable	(1,842)	3,868	3,397
Accrued expenses	4,568	2,539	1,566
Accrued and deferred compensation	(632)	5,318	2,060
Deferred revenue	17,557	27,168	35,196
Other	(2,034)	496	(179)
Net cash provided by operating activities	<u>59,543</u>	<u>92,498</u>	<u>80,449</u>
Cash flows from investing activities:			
Acquisition of business, net of cash acquired (Note 2)	(11,570)	—	—
Property and equipment additions	(20,955)	(20,339)	(21,053)
Capitalized software additions	(11,850)	(17,221)	(12,261)
Net cash used in investing activities	<u>(44,375)</u>	<u>(37,560)</u>	<u>(33,314)</u>
Cash flows from financing activities:			
Net increase in customer funds obligations	1,681	4,276	1,711
Proceeds from line of credit	12,500	—	—
Principal payments on line of credit	(12,500)	—	—
Proceeds from long-term debt	175,000	—	—
Principal payments on long-term debt	(226,251)	(5,566)	(3,284)
Payments for deferred financing costs, net	(2,436)	—	—
Proceeds from issuance of shares in connection with Offering	423,024	—	—
Payments for offering costs	(6,222)	—	—
Payments for taxes on exercised stock options	(14,813)	—	—
Purchase of treasury stock	—	(841)	(1,277)
Proceeds from purchases of stock under ESPP	957	—	—
Proceeds from exercise of stock options	8,808	68	177
Distributions to stockholders	(146,116)	(28,566)	(28,024)
Net cash provided by (used in) financing activities	<u>213,632</u>	<u>(30,629)</u>	<u>(30,697)</u>
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(22)	12	(402)
Net increase in cash, cash equivalents and restricted cash	<u>228,778</u>	<u>24,321</u>	<u>16,036</u>
Cash, cash equivalents and restricted cash, beginning of period	83,495	59,174	43,138
Cash, cash equivalents and restricted cash, end of period	<u>\$ 312,273</u>	<u>\$ 83,495</u>	<u>\$ 59,174</u>
Reconciliation of cash, cash equivalents and restricted cash to the Consolidated Balance Sheets, end of period:			
Cash and cash equivalents	\$ 303,051	\$ 75,903	\$ 55,838
Restricted cash—funds held for customers	9,222	7,592	3,336
Total cash, cash equivalents and restricted cash, end of period	<u>\$ 312,273</u>	<u>\$ 83,495</u>	<u>\$ 59,174</u>

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

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements
(Amounts in thousands, except per share data)

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Business

Vertex, Inc. (“Vertex”) and its direct and indirect wholly owned subsidiaries (collectively, the “Company”) operate as solutions providers of state, local and value added tax calculation, compliance and analytics, offering software products which are sold through software license and software as a service (“cloud”) subscriptions. The Company also provides implementation and training services in connection with its software license and cloud subscriptions, transaction tax returns outsourcing, and other tax-related services. The Company sells to customers located throughout the United States of America (“U.S.”) and internationally.

Basis of Consolidation

The consolidated financial statements are prepared in accordance with accounting principles generally accepted in the U.S. (“U.S. GAAP”) and include the accounts of the Company. All intercompany transactions have been eliminated in consolidation.

On January 7, 2020, the Company acquired a 60% controlling interest in Systax Sistemas Fiscais LTDA (“Systax”), a provider of Brazilian transaction tax content and software. Systax is considered a Variable Interest Entity (“VIE”) and its accounts have been included in the consolidated financial statements from the acquisition date. Systax was determined to be a VIE as Vertex is the primary beneficiary of the equity interests in Systax and participates significantly in the variability in the fair value of Systax’s net assets. Although Vertex does not have full decision-making authority as it is shared with the minority interest owners, as the minority interest owners are considered a related party, Vertex is considered the most closely associated party to Systax and is required to consolidate. Systax’s assets may only be used to settle its own obligations and this will continue until such time as Vertex owns 100% of the VIE. As of December 31, 2020, the consolidated net assets of Systax, inclusive of goodwill and intangible assets recognized under purchase accounting, were \$18,721. Vertex is at risk to the extent of its current 60% ownership of Systax, which risk will increase over time in proportion to increases in percentage ownership as Vertex exercises its future share purchase commitment through 2024. See Note 2.

Registration of Company Stock and Initial Public Offering

On July 28, 2020, the Company filed its amended and restated certificate of incorporation with the Delaware Secretary of State to: (i) effect a three-for-one forward stock split (the “Stock Split”); (ii) establish a new capital structure for the Company (the “New Capital Structure”); and (iii) effect a share exchange (the “Share Exchange”) (collectively, the “Recapitalization”). The Stock Split resulted in each one share owned by a stockholder being exchanged for three shares of common stock, and the number of shares of the Company’s common stock issued and outstanding was increased proportionately based on the Stock Split. After the Stock Split, the Share Exchange occurred, resulting in stockholders of record exchanging their existing Class A and Class B common stock (“former Class A” and “former Class B”, respectively) for newly created shares of Class A and Class B common stock (“Class A” and “Class B”, respectively) issued in connection with the New Capital Structure. The effect of the Stock Split and the Share Exchange are recognized retrospectively in the consolidated financial statements.

The Company’s Registration Statement on Form S-1 with the Securities and Exchange Commission (“SEC”) was declared effective on July 28, 2020, resulting in the Class A shares being registered and available for trading on the NASDAQ exchange (the “Offering”).

On July 31, 2020, the Company received \$423,024 in proceeds from the sale of 23,812 shares of Class A at a public offering price of \$19.00 per share, net of underwriting fees, and used a portion of the proceeds to pay off \$175,000 in

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)

(Amounts in thousands, except per share data)

outstanding debt. The net proceeds remaining after payment of Offering costs are being used for working capital and other corporate purposes.

Segments

The Company operates its business as one operating segment. Operating segments are defined as components of an enterprise about which separate financial information is evaluated regularly by the chief operating decision maker ("CODM"), the Company's Chief Executive Officer, in deciding how to allocate resources and assess performance. The Company's CODM allocates resources and assesses performance based upon discrete financial information at the consolidated level.

For the years ended December 31, 2020, 2019 and 2018 approximately 5%, 4% and 4%, respectively, of the Company's revenues were generated outside of the U.S. As of December 31, 2020, \$287 of the Company's property and equipment assets were held outside of the U.S. As of December 31, 2019, none of the Company's property and equipment assets were held outside the U.S.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to credit risk consist principally of cash and cash equivalents, funds held for customers, accounts receivable and investment securities.

The Company maintains the majority of its cash and cash equivalent balances and funds held for customers in four banks. These amounts exceed federally insured ("FDIC") limits. The Company periodically evaluates the creditworthiness of the banks. The Company has not experienced any losses in these accounts and believes they are not exposed to significant credit risk on such accounts.

The Company does not require collateral from its customers. Allowances are maintained for subscription cancellations. Credit risk related to accounts receivable is limited due to the industry and geographic diversity within the Company's customer base. No single customer accounted for more than 10% of revenues for the years ended December 31, 2020, 2019 and 2018.

Fair Value Measurement

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at a measurement date. A three-level fair value hierarchy (the "Fair Value Hierarchy") prioritizes the inputs used to measure fair value. The Fair Value Hierarchy requires the Company to maximize the use of observable inputs and minimize the use of unobservable inputs. Classification in the Fair Value Hierarchy is based on the lowest of the following levels that is significant to the measurement:

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

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

Level 3: Inputs are unobservable inputs based on the Company's assumptions and valuation techniques used to measure assets and liabilities at fair value. The inputs require significant management judgment or estimation.

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)

(Amounts in thousands, except per share data)

The Company's assessment of the significance of an input to a fair value measurement requires judgment, which may affect the determination of fair value and the measurement's classification within the Fair Value Hierarchy. The Company may exercise considerable judgment when estimating fair value, particularly when evaluating what assumptions market participants would likely make. The use of different assumptions or estimation methodologies could have a material effect on the estimated fair values.

Use of Estimates

The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, equity, revenues and expenses during the reporting period. Significant estimates used in preparing these consolidated financial statements include: (i) the estimated allowance for subscription cancellations, (ii) the reserve for self-insurance, (iii) assumptions related to achievement of technological feasibility for software developed for sale, (iv) product life cycles, (v) estimated useful lives and potential impairment of long-lived assets, intangible assets and goodwill, (vi) determination of the fair value of tangible and intangible assets acquired, liabilities assumed and consideration transferred in an acquisition, (vii) amortization period of material rights and deferred commissions (viii) valuation of the Company's stock used to measure stock-based compensation awards, (ix) Black-Scholes-Merton option pricing model ("Black-Scholes model") input assumptions used to determine the fair value of stock-based compensation awards, and (x) the potential outcome of future tax consequences of events that have been recognized in the consolidated financial statements or tax returns. Actual results may differ from these estimates.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with an initial maturity date of three months or less to be cash equivalents. Funds held as investments in money market funds are included within cash and cash equivalents.

In accordance with ASU No. 2016-18, *Restricted Cash*, the Company presents changes in restricted cash in the cash flow statement.

Funds Held for Customers

Funds held for customers in the consolidated balance sheets represents customer funds advanced for transaction tax returns outsourcing. Funds held for customers are restricted for the sole purpose of remitting such funds to satisfy obligations on behalf of such customers and are deposited at FDIC-insured institutions. Customer obligations are included in current liabilities in the consolidated balance sheets, as the obligations are expected to be settled within one year.

Property and Equipment

Property and equipment are stated at cost or fair value when acquired and presented net of accumulated depreciation. Normal maintenance and repairs are charged to expense, while major renewals and betterments are capitalized. Assets under capital leases are recorded at the lower of the present value of the minimum lease payments or the fair value of the assets and are depreciated over the shorter of the asset's useful life or lease term.

Depreciation and amortization are computed straight-line over the estimated useful lives of the assets, as follows:

Leasehold improvements	1 - 12 years
Internal-use software developed	3 - 5 years
Computer software purchased	3 - 7 years
Equipment	3 - 10 years
Furniture and fixtures	7 - 10 years

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
(Amounts in thousands, except per share data)

Software Development Costs

Internal-Use Software

The Company follows Accounting Standard Codification (“ASC”) 350-40, *Goodwill and Other, Internal-Use Software*, to account for development costs incurred for the costs of computer software developed or obtained for internal use. ASC 350-40 requires such costs to be capitalized once certain criteria are met. Capitalized internal-use software costs are primarily comprised of direct labor, related expenses and initial software licenses. ASC 350-40 includes specific guidance on costs not to be capitalized, such as overhead, general and administrative and training costs. Internal-use software includes software utilized for cloud-based solutions as well as software for internal systems and tools. Costs are capitalized once the project is defined, funding is committed and it is confirmed the software will be used for its intended purpose. Capitalization of these costs concludes once the project is substantially complete and the software is ready for its intended purpose. Post-configuration training and maintenance costs are expensed as incurred. Internal-use software is included in internal-use software developed in property and equipment in the consolidated balance sheets once available for its intended use. Depreciation expense for internal-use software utilized for cloud-based customer solutions and for software for internal systems and tools is included in cost of revenues, software subscriptions and depreciation and amortization, respectively, in the consolidated statements of comprehensive income (loss).

Software Developed for Sale

The costs incurred for the development of computer software to be sold, leased, or otherwise marketed are capitalized in accordance with ASC 985-20, *Costs of Software to be Sold, Leased or Marketed*, when technological feasibility has been established. Technological feasibility generally occurs when all planning, design, coding and testing activities are completed that are necessary to establish that the product can be produced to meet its design specifications, including functions, features and technical performance requirements. The establishment of technological feasibility is an ongoing assessment of judgment by management with respect to certain external factors, including, but not limited to, anticipated future revenues, estimated economic life and changes in technology. Capitalized software includes direct labor and related expenses for software development for new products and enhancements to existing products and acquired software.

Amortization of capitalized software development costs begins when the product is available for general release. Amortization is provided on a product-by-product basis using the straight-line method over periods between 3 to 5 years. Unamortized capitalized software development costs determined to be in excess of the net realizable value of the product are expensed immediately.

Capitalized software costs are subject to an ongoing assessment of recoverability based on anticipated future revenues and changes in software technologies at least annually at December 31, and whenever events or circumstances make it more likely than not that impairment may have occurred. In the event of impairment, unamortized capitalized software costs are compared to the net realizable value of the related product and the carrying value of the related assets are written down to the net realizable value to the extent the unamortized capitalized costs exceed such value. The net realizable value is the estimated future gross revenues from the related product reduced by the estimated future costs of completing and disposing of such product, including the costs of providing related maintenance and customer support.

Assessment of Long-Lived Assets

The Company reviews the carrying value of long-lived assets, including internal-use software, for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be fully recoverable. Whenever such events or circumstances are present, an impairment loss equal to the excess of the asset carrying value over its fair value, if any, is recorded.

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Notes to Consolidated Financial Statements (continued)
(Amounts in thousands, except per share data)

Business Combinations

Upon acquisition of a company, the Company determines if the transaction is a business combination, which is accounted for using the acquisition method of accounting. Under the acquisition method, once control is obtained of a business, the assets acquired, liabilities assumed, consideration transferred and amounts attributed to noncontrolling interests, are recorded at fair value. The Company uses its best estimates and assumptions to assign fair value to the tangible and intangible assets acquired, liabilities assumed, consideration transferred and amounts attributed to noncontrolling interests at the acquisition date. One of the most significant estimates relates to the determination of the fair value of these assets and liabilities. The determination of the fair values is based on estimates and judgments made by management. The Company's estimates of fair value are based upon assumptions it believes to be reasonable, but which are inherently uncertain and unpredictable. Measurement period adjustments to these values as of the acquisition date are reflected at the time identified, up through the conclusion of the measurement period, which is the time at which all information for determination of the values of assets acquired, liabilities assumed, consideration transferred and noncontrolling interests is received, and is not to exceed one year from the acquisition date (the "Measurement Period"). The Company may record adjustments to the fair value of these tangible and intangible assets acquired, liabilities assumed, consideration transferred and noncontrolling interests, with the corresponding offset to goodwill. Additionally, uncertain tax positions and tax-related valuation allowances are initially recorded in connection with a business combination as of the acquisition date. The Company continues to collect information and reevaluate these estimates and assumptions periodically and record any adjustments to preliminary estimates to goodwill, provided the Company is within the Measurement Period, with any adjustments to amortization of new or previously recorded identifiable intangibles being recorded to the consolidated statements of comprehensive income (loss) in the period in which they arise. In addition, if outside of the Measurement Period, any subsequent adjustments to the acquisition date fair values are recorded to the consolidated statements of comprehensive income (loss) in the period in which they arise.

Goodwill

Goodwill represents the excess of the purchase price over the fair value of net tangible and intangible assets acquired in a business combination. The Company evaluates goodwill for impairment annually at October 1 and whenever events or circumstances make it more likely than not that impairment may have occurred.

During the fourth quarter of 2020, the Company initiated a change in its method of applying an accounting principle and changed the date of its annual impairment test from December 31 to October 1. The change from our fiscal year end to such earlier date was preferable to management in order to afford additional time to more effectively administer the assessment, including to facilitate interactions with third-party specialists, and in order to complete the year end closing process in a timelier fashion. Management has assessed that the change had no impact on the consolidated financial statements as of and for the year ended December 31, 2020. Had this change in accounting principle been applied in periods prior to 2020, it would have had no impact as the Company had no recognized goodwill.

The Company has determined that its business comprises one reporting unit. The Company has the option to first assess qualitative factors to determine whether events or circumstances indicate it is more likely than not that the fair value of a reporting unit is greater than its carrying amount, in which case a quantitative impairment test is not required.

As provided for by Accounting Standards Update ("ASU") 2017-04, *Simplifying the Test for Goodwill Impairment*, the quantitative goodwill impairment test is performed by comparing the fair value of the reporting unit with its carrying amount, including goodwill. If the fair value of the reporting unit exceeds its carrying amount, goodwill is not impaired. An impairment loss is recognized for any excess of the carrying amount of the reporting unit's goodwill over the fair value up to the amount of goodwill allocated to the reporting unit. Income tax effects from any tax-deductible goodwill on the carrying amount of the reporting unit are considered when measuring the goodwill impairment loss, if applicable.

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Notes to Consolidated Financial Statements (continued)
(Amounts in thousands, except per share data)

Deferred Financing Costs

The Company capitalizes costs related to obtaining, renewing or extending loan agreements and amortizes these costs on a straight-line basis, which approximates the effective interest method, over the life of the loan. Deferred financing costs related to outstanding borrowings under bank debt are reflected as a reduction of current portion of long-term debt and long-term debt, net of current portion. Deferred financing costs related to undrawn debt are reflected in other assets in the consolidated balance sheets in accordance with ASC 835-30, *Interest—Imputation of Interest*.

Stock-Based Compensation

On the effective date of the Offering, the Company adopted the 2020 Incentive Award Plan (the “2020 Plan”) and the 2020 Employee Stock Purchase Plan (the “ESPP”), which provides for the award of stock appreciation rights (“SARs”) stock options (“options”), restricted stock awards (“RSAs”), restricted stock units (“RSUs”), and participation in the ESPP (collectively, the “awards”), which are subject to guidance set forth in ASC 718, *Compensation—Stock Compensation*, (“ASC 718”) for the award of equity-based instruments.

The provisions of ASC 718 require a company to measure the fair value of stock-based compensation as of the grant date of the award. Stock-based compensation expense reflects the cost of employee services received in exchange for the awards.

SARs are accounted for as liabilities under ASC 718 and, as such, the Company recognizes stock-based compensation expense by remeasuring the value of the SARs at the end of each reporting period and accruing the portion of the requisite service rendered at that date. Prior to July 2, 2020, the date management determined the Company was considered to have become a public entity, the Company measured SARs based on their intrinsic value which reflected the difference between the fair value of the Company’s former Class B common stock at the reporting date less the grant date fair value of the underlying shares as this was the value the SAR participant could derive from exercise of the SAR award. Prior to the Offering, the fair value of the Company’s common stock was determined periodically by the board of directors (the “Board”) with the assistance of management and a third-party valuation firm. Upon becoming a public entity, and up to the effective date of the Offering, management remeasured outstanding SARs using the fair value-based method under ASC 718. See Note 10 for discussion of the impact of the resulting change in accounting policy. Outstanding SARs are included in deferred compensation, current and deferred compensation, net of current portion in the consolidated balance sheets.

Stock-based compensation expense for new options issued under the 2020 Plan after the Offering is measured based on the grant date fair value of the award and is estimated using the Black-Scholes model. Compensation cost is recognized on a straight-line basis over the requisite service or performance period associated with the award.

Stock-based compensation expense for RSAs and RSUs is based on the fair value of the Company’s underlying common stock on the date of grant. Compensation cost is recognized on a straight-line basis over the requisite service or performance period associated with the award.

The ESPP permits participants to purchase Class A common stock through payroll deductions, up to a specified percentage of their eligible compensation or a lump sum contribution amount for the initial offering period (July 28 to November 30, 2020), subject to the plan’s maximum purchase provisions during the specified offering periods. The plan is a compensatory plan as it allows participants to purchase stock at a 15% discount from the lower of the fair value of the Class A common on the first or last day of the ESPP offering period (the “ESPP discount”). The ESPP is accounted for as an equity-classified award. Stock-based compensation expense for the ESPP is measured based on the fair value of the ESPP award at the start of the offering period. The fair value is comprised of the value of the ESPP discount and the value associated with the variability in the Class A common stock price during the offering period (the “Call/Put”), which is

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
(Amounts in thousands, except per share data)

estimated using the Black-Scholes model. Compensation cost is recognized on a straight-line basis over the respective offering period.

The Company has elected to recognize award forfeitures as they occur.

Operating Leases and Deferred Rent

Rent expense for operating leases is recognized on a straight-line basis over the period of the related lease. For lease agreements that include future specific rent increases, rent concessions and/or tenant improvement allowances, the difference between the rent payments and the straight-line rent expense is included in deferred rent liability in the consolidated balance sheets.

Self-insurance

The Company is self-insured for the majority of its health insurance costs, including medical claims subject to certain stop-loss provisions. Management periodically reviews the adequacy of the Company's stop-loss insurance coverage. The Company records an estimate of claims incurred but not reported, based on management's judgment and historical experience. Self-insurance accruals are \$1,766 and \$1,473 at December 31, 2020 and 2019, respectively, and are reflected in accrued salaries and benefits in the consolidated balance sheets. Material differences may result in the amount and timing of insurance expense if actual experience differs significantly from management's estimates.

Revenue Recognition

Revenue from contracts with customers

On January 1, 2018, the Company adopted ASU 2014-09, *Revenue from Contracts with Customers*, ("ASC 606"). Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration expected to be received in exchange for those products or services. The Company enters into contracts that can include various combinations of products and services, which are generally capable of being distinct, and accounted for as separate performance obligations. Revenue is recognized net of allowance for subscription and non-renewal cancellations and any taxes collected from customers, which are subsequently remitted to governmental authorities.

Nature of goods and services

Licenses for on-premise software subscriptions provide the customer with a right to use the software as it exists when made available to the customer. Customers purchase a subscription to these licenses, which includes the related software and tax content updates (collectively "updates") and product support. The updates and support, which are part of the subscription agreement, are essential to the continued utility of the software; therefore, the Company has determined the software and the related updates and support to be a single performance obligation. Accordingly, when on-premise software is licensed, the revenue associated with this combined performance obligation is recognized ratably over the license term as these subscriptions are provided for the duration of the license term. Revenue recognition begins on the later of the beginning of the subscription period or the date the software is made available to the customer to download. The Company's on-premise software subscription prices in the initial subscription year are higher than standard renewal prices. The excess initial year price over the renewal price ("new sale premium") is a material right that provides customers with the right to this reduced renewal price. The Company recognizes revenue associated with this material right over the estimated period of benefit to the customer, which is generally three years.

Cloud-based subscriptions allow customers to use Company-hosted software over the contract period without taking possession of the software. The cloud-based offerings also include related updates and support. Cloud-based contracts

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Notes to Consolidated Financial Statements (continued)

(Amounts in thousands, except per share data)

consistently provide a benefit to the customer during the subscription period; thus, the associated revenue is recognized ratably over the related subscription period. Revenue recognition begins on the later of the beginning of the subscription period or the date the customer is provided access to the cloud-based solutions.

Revenue from deliverable-based services is recognized as services are delivered. Revenue from fixed fee services is recognized as services are performed using the percentage of completion input method.

The Company has elected the "right to invoice" practical expedient for revenue related to services that are billed on an hourly basis, which enables revenue to be recognized as the services are performed.

The Company has determined that the methods applied to measuring its progress toward complete satisfaction of performance obligations recognized over time are a faithful depiction of the transfer of control of software subscriptions and services to customers.

Significant Judgments

Contracts with customers often include promises to transfer multiple products and services to a customer. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. Identification of the amortization periods of material rights and contract costs requires significant judgement by management.

Disaggregation of revenue

The table reflects revenue by major source for the following periods:

	For the Year Ended December 31,		
	2020	2019	2018
Sources of revenues:			
Software subscriptions	\$ 316,763	\$ 275,629	\$ 235,663
Services	57,902	45,871	36,740
Total revenues	<u>\$ 374,665</u>	<u>\$ 321,500</u>	<u>\$ 272,403</u>

Contract balances

Timing of revenue recognition may differ from the timing of invoicing customers. A receivable is recorded in the consolidated balance sheets when customers are billed related to revenue to be collected and recognized for subscription agreements as there is an unconditional right to invoice and receive payment in the future related to these subscriptions. A receivable and related revenue may also be recorded in advance of billings to the extent services have been performed and the Company has a right under the contract to bill and collect for such performance. Subscription-based customers are generally invoiced annually at the beginning of each annual subscription period. Accounts receivable is presented net of an allowance for potentially uncollectible accounts and estimated cancellations of software license and cloud-based subscriptions (the "allowance") of \$8,592 and \$7,515 at December 31, 2020 and 2019, respectively. The allowance is

Vertex, Inc. and Subsidiaries
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based on management's assessment of uncollectible accounts on a specific identification basis, with the estimate of potential cancellations being determined based on management's review of historical cancellation rates.

The beginning and ending balances of accounts receivable, net of allowance, are as follows:

	For the Year Ended December 31,	
	2020	2019
Balance, beginning of period	\$ 70,367	\$ 62,235
Balance, end of period	77,159	70,367
Increase, net	<u>\$ 6,792</u>	<u>\$ 8,132</u>

A contract liability is recorded as deferred revenue on the consolidated balance sheets when customers are billed in advance of performance obligations being satisfied, and revenue is recognized after invoicing ratably over the subscription period or over the amortization period of material rights. Deferred revenue is reflected net of a related deferred allowance for subscription cancellations (the "deferred allowance") of \$6,432 and \$5,614 at December 31, 2020 and 2019, respectively. The deferred allowance represents the portion of the allowance for subscription cancellations associated with deferred revenue.

The beginning and ending balances of and changes to the allowance and the deferred allowance are as follows:

	For the Year Ended December 31,					
	2020		2019		2018	
	Balance	Net Change	Balance	Net Change	Balance	Net Change
Allowance balance, January 1	\$ (7,515)		\$ (5,527)		\$ (4,320)	
Allowance balance, December 31	(8,592)		(7,515)		(5,527)	
Change in allowance		\$ 1,077		\$ 1,988		\$ 1,207
Deferred allowance balance, January 1	5,614		4,858		3,888	
Deferred allowance balance, December 31	6,432		5,614		4,858	
Change in deferred allowance		(818)		(756)		(970)
Net amount charged to revenues		<u>\$ 259</u>		<u>\$ 1,232</u>		<u>\$ 237</u>

The amount of revenue recognized during the years ended December 31, 2020, 2019 and 2018 that was included in the opening deferred revenue balance of the same fiscal year was approximately \$191,745, \$163,939, and \$135,190, respectively. The portion of deferred revenue expected to be recognized in revenue beyond one year is included in deferred revenue, net of current portion in the consolidated balance sheets.

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The table provides information about the balances of and changes to deferred revenue for the following periods:

	As of December 31,		
	2020	2019	
Balances:			
Deferred revenue, current	\$ 207,560	\$ 191,745	
Deferred revenue, non-current	14,702	14,046	
Total deferred revenue	<u>\$ 222,262</u>	<u>\$ 205,791</u>	
	For the Year Ended December 31,		
	2020	2019	2018
Changes to deferred revenue:			
Beginning balance	\$ 205,791	\$ 178,703	\$ 139,059
Additional amounts deferred	391,136	348,588	312,047
Revenues recognized	(374,665)	(321,500)	(272,403)
Ending balance	<u>\$ 222,262</u>	<u>\$ 205,791</u>	<u>\$ 178,703</u>

Deferred revenue at December 31, 2020 will be recognized as follows for all future years:

Year Ending December 31,		
2021		\$ 207,560
2022		11,441
2023		3,261
Total		<u>\$ 222,262</u>

Contract costs

Deferred sales commissions earned by the Company's sales force and certain sales incentive programs and vendor referral agreements are considered incremental and recoverable costs of obtaining a contract with a customer. An asset is recognized for these incremental contract costs and reflected as deferred commissions in the consolidated balance sheets. These contract costs are amortized on a straight-line basis over a period consistent with the transfer of the associated product and services to the customer, which is generally three years. Amortization of these costs are included in selling and marketing expense in the consolidated statements of comprehensive income (loss). The Company periodically reviews these contract assets to determine whether events or changes in circumstances have occurred that could impact the period of benefit of these assets. There were no impairment losses recorded for the periods presented.

The table provides information about the changes to contract cost balances as of and for the following periods:

	For the Year Ended December 31,		
	2020	2019	2018
Changes to deferred commissions:			
Beginning balance	\$ 11,196	\$ 8,830	\$ 5,676
Additions	8,291	10,140	8,691
Amortization	(7,744)	(7,774)	(5,537)
Ending balance	<u>\$ 11,743</u>	<u>\$ 11,196</u>	<u>\$ 8,830</u>

Payment terms

Payment terms and conditions vary by contract, although the Company's terms generally include a requirement of payment within 30 days. In instances where the timing of revenue recognition differs from the timing of payment, the

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)

(Amounts in thousands, except per share data)

Company has determined that its contracts do not include a significant financing component. The primary purpose of invoicing terms is to provide customers with simplified and predictable ways of purchasing products and services, not to receive financing from customers or to provide customers with financing.

Cost of Revenues

Cost of revenues, software subscriptions include the direct cost to develop, host and distribute software products, the direct cost to provide customer support, and amortization of costs capitalized for software developed for sale, for internal-use software utilized for cloud-based subscriptions and for acquired intangible assets. Cost of revenues, services include the direct costs of implementation, training, transaction tax returns outsourcing and other tax-related services.

Reimbursable Costs

Reimbursable costs passed through and invoiced to customers of the Company are recorded as services revenues with the associated expenses recorded as cost of revenues, services in the consolidated statements of comprehensive income (loss). These amounts were \$199, \$1,107 and \$902 for the years ended December 31, 2020, 2019 and 2018, respectively.

Research and Development

Research and development costs consist primarily of personnel and related expenses for research and development activities including salaries, benefits and other compensation. Research and development costs are expensed as incurred in accordance with ASC 730, *Research and Development*, and are included in the consolidated statements of comprehensive income (loss).

Advertising

Advertising expense is recorded as incurred and is reflected in selling and marketing expense in the consolidated statements of comprehensive income (loss). Total advertising expense was \$11,069, \$11,921 and \$8,956 for the years ended December 31, 2020, 2019 and 2018, respectively.

Foreign Currency

The Company transacts business in various foreign currencies. Management has concluded that the local country's currency is the functional currency of its foreign operations. Consequently, operating activities outside the U.S. are translated into U.S. Dollars using average exchange rates, while assets and liabilities of operations outside the U.S. are translated into U.S. Dollars using exchange rates at the balance sheet date. The effects of foreign currency translation adjustments are included in stockholders' equity (deficit) as a component of accumulated other comprehensive loss in the consolidated balance sheets. Related periodic movements in exchange rates are included in other comprehensive income (loss) in the consolidated statements of comprehensive income (loss). Other operating expense (income), net in the consolidated statements of comprehensive income (loss) includes net foreign exchange transaction losses of \$155, \$84 and \$121 for the years ended December 31, 2020, 2019 and 2018, respectively.

Income Taxes

On July 27, 2020, the Company's S-Corporation election (the "S Election") was terminated by the Company's stockholders in connection with the Offering. As a result, Vertex will now be taxed at the corporate level as a C-Corporation for U.S. federal and state income tax purposes. In connection with the S Election termination, the Company entered into an agreement with the S-Corporation stockholders pursuant to which the Company has indemnified them for unpaid income tax liabilities and may be required to make future payments in material amounts to them attributable to incremental income taxes resulting from an adjustment to S-Corporation related taxable income that arises after the

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Notes to Consolidated Financial Statements (continued)

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effective date of the S Election termination (the “Tax Sharing Agreement”). In addition, the Tax Sharing Agreement indemnifies the S-Corporation stockholders for any interest, penalties, losses, costs or expenses arising out of any claim under the agreement. Correspondingly, the S-Corporation stockholders have indemnified the Company with respect to unpaid tax liabilities (including interest and penalties) to the extent that such unpaid tax liabilities are attributable to a decrease in S-Corporation stockholders’ taxable income for any period and a corresponding increase in our taxable income for any period.

Prior to July 27, 2020, as Vertex was taxed as an S-Corporation for U.S. federal income tax purposes and for most states, net income or loss was allocated to the stockholders and was included on their individual income tax returns. Historically the Company distributed amounts to the stockholders to satisfy their tax liabilities resulting from allocated net income or loss. In certain states, Vertex was taxed at the corporate level. Accordingly, the income tax provision or benefit was based on taxable income allocated to these states. In certain foreign jurisdictions, Vertex subsidiaries were taxed at the corporate level. Similar to states, the income tax provision or benefit is based on taxable income sourced to these foreign jurisdictions.

Certain foreign subsidiaries in which we own greater than 50% of the equity by measure of vote or value are treated as controlled foreign companies (“CFCs”) for U.S. federal income tax purposes and most states under the IRS foreign tax regulations. The income and loss from these entities is reported on the Company’s U.S. federal and some state income tax returns when the foreign earnings are repatriated or deemed to be repatriated to the U.S. In conjunction with the termination of the S Election, certain direct and indirect wholly owned foreign subsidiaries that were previously treated as disregarded entities for U.S. federal income tax purposes and most states under the Internal Revenue Service (“IRS”) “check-the-box” regulations, “unchecked-the-box” to become regarded entities and as a result, became CFCs. Prior to these elections, the income and loss from these entities was reported on the Company’s U.S. federal and most state income tax returns in addition to being reported on a foreign jurisdiction tax return regardless of whether or not the earnings were repatriated.

The Company records deferred income taxes using the liability method. The Company recognizes deferred tax assets and liabilities for future tax consequences of events that have been previously recognized in the Company’s consolidated financial statements and tax returns. The measurement of deferred tax assets and liabilities is based on provisions of the enacted tax law. The effects of future changes in tax laws or rates are not anticipated. A valuation allowance is recorded when it is more likely than not that some or all of the deferred tax assets will not be realized.

The Company records uncertain tax positions in accordance with ASC 740, *Income Taxes*, on the basis of a two-step process whereby: (i) management determines whether it is more likely than not that the tax positions will be sustained based on the technical merits of the position, and (ii) for those tax positions that meet the more likely than not recognition threshold, management recognizes the largest amount of tax benefit that is greater than 50 percent likely to be realized upon ultimate settlement with the related tax authority. The impact as a result of the application of ASC 740 is reflected in the consolidated financial statements. The Company assesses its income tax positions and records tax benefits or expense based upon management’s evaluation of the facts, circumstances, and information available at the reporting date.

The Company recorded a \$24,944 deferred tax asset during the year ended December 31, 2020 as a result of the conversion from an S-Corporation to a C-Corporation. The deferred tax asset is primarily due to future stock-based compensation deductions for tax purposes resulting from SARs that were previously issued by the Company, converted to options and immediately exercised upon the effective date of the Offering. The exercise of these options has resulted in a net operating loss for the C-Corporation short tax year beginning July 27, 2020 and ending December 31, 2020. Based on Management’s evaluation of the positive and negative evidence, it is more likely than not that the Company will realize these benefits on future U.S. tax returns.

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Total Comprehensive Income (Loss)

Total comprehensive income (loss) consists of net income (loss) and other comprehensive income (loss). Other comprehensive income (loss) refers to revenues, expenses, gains and losses that under U.S. GAAP are recorded as elements of stockholders' equity (deficit) but are excluded from net income. Other comprehensive income (loss) is comprised of foreign currency translation adjustments and revaluations.

Earnings Per Share ("EPS")

The Company has two classes of common stock outstanding and thus calculates EPS following the two-class method. This method allocates earnings for the respective periods between the two classes of common stock in proportion to the weighted average shares outstanding for each class of common stock as a percentage of total weighted average shares of both classes of common stock outstanding. Neither the Class A nor Class B common stock has any liquidity or dividend preferences and are both considered to be participating securities. Basic and diluted net income (loss) per share attributable to common stockholders is calculated using the treasury stock method. The basic net income (loss) per share attributable to Class A common stockholders includes RSAs, RSUs and ESPP shares once vesting or purchase contingencies are resolved and the related shares are deemed to be outstanding. The diluted net income (loss) per share attributable to Class A common stockholders is computed by giving effect to all potential dilutive common stock equivalents outstanding for the period. For purposes of this calculation, all options to purchase shares of Class A common stock, RSAs, and RSUs are considered common stock equivalents. Additionally, the portion of ESPP shares for which the Company has received payments but for which the related shares are not yet issued and outstanding are also considered common stock equivalents. In periods of net loss available to common stockholders, diluted calculations are equal to basic calculations because the inclusion of common stock equivalents would be anti-dilutive.

In accordance with ASC 260, *Earnings Per Share*, the historical EPS was retrospectively restated similar to the treatment of a stock split to reflect the Share Exchange for all periods presented prior to the Offering as management concluded that there was no economic value attributable to the exchange of shares in connection with the Recapitalization. Class A common stock issued in connection with the Offering are reflected in the weighted average share calculation from their issuance date.

Unaudited Pro Forma Income Taxes

A pro forma income tax provision has been disclosed in the accompanying consolidated financial statements as if the Company was a taxable corporation for the entirety of the year ended December 31, 2020. The Company has computed pro forma entity level income tax expense using an estimated effective tax rate of 25.5%, inclusive of all applicable U.S. federal, state, local and foreign income taxes.

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
(Amounts in thousands, except per share data)

Unaudited Pro Forma Earnings Per Share

The Company has presented pro forma earnings per share for the year ended December 31, 2020 to reflect the pro forma adjustment to income taxes resulting from the conversion to a C-Corporation effective July 27, 2020.

	For the Year Ended December 31, 2020
Class A common stock:	(unaudited)
Numerator:	
Pro forma net loss attributable to all stockholders	\$ (80,362)
Class A common stock as a percentage of total shares outstanding	8.44 %
Pro forma net loss attributable to Class A stockholders	<u>\$ (6,780)</u>
Denominator:	
Weighted average Class A common stock, basic and diluted	<u>11,096</u>
Pro forma net loss per Class A share, basic and diluted	<u>\$ (0.61)</u>
	For the Year Ended December 31, 2020
Class B common stock:	(unaudited)
Numerator:	
Pro forma net loss attributable to all stockholders	\$ (80,362)
Class B common stock as a percentage of total shares outstanding	91.56 %
Pro forma net loss attributable to Class B stockholders	<u>\$ (73,582)</u>
Denominator:	
Weighted average Class B common stock, basic and diluted	<u>120,415</u>
Pro forma net loss per Class B share, basic and diluted	<u>\$ (0.61)</u>

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
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Supplemental Cash Flow Disclosures

Supplemental cash flow disclosures are as follows for the respective periods:

	For the Year Ended December 31,		
	2020	2019	2018
Cash paid for:			
Interest	\$ 2,461	\$ 1,766	\$ 1,853
Income taxes	\$ 588	\$ 945	\$ 668
Non-cash investing and financing activities:			
Distributions payable	\$ —	\$ 13,183	\$ 10,892
Estimated distributions payable under Tax Sharing Agreement	\$ 2,700	\$ —	\$ —
Purchase Commitment Liability at acquisition date (Note 2)	\$ 12,592	\$ —	\$ —
Remeasurement of options for redeemable shares	\$ 51,833	\$ 2,763	\$ 1,027
Conversion of SARs in connection with the Offering	\$ 129,710	\$ —	\$ —
Exchange of Amended Options in connection with the Offering	\$ 69,177	\$ —	\$ —
Exercised options exchanged in lieu of income taxes	\$ —	\$ 184	\$ 209
Equipment acquired through capital leases	\$ 646	\$ 1,904	\$ —

Recently Issued Accounting Pronouncements

As an "emerging growth company," the Jumpstart Our Business Startups Act (the "JOBS Act") allows the Company to delay adoption of new or revised accounting pronouncements applicable to public companies until such pronouncements are made applicable to private companies. The Company has elected to delay adoption of certain new or revised accounting standards. As a result, the Company's financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective date for new or revised accounting standards that are applicable to public companies.

In February 2016, the FASB issued ASU No. 2016-02, *Leases*. This standard amends several aspects of lease accounting, including requiring lessees to recognize operating leases with a term greater than one year on their balance sheet as a right-of-use asset, and a corresponding lease liability, measured at the present value of the future minimum lease payments. The standard is effective for public entities for fiscal years beginning after December 15, 2018, and after December 15, 2020 for all other companies, with early adoption permitted. The Company intends to adopt this standard effective January 1, 2021 using the modified retrospective transition method and therefore will not restate comparative periods. The Company plans to elect the "package of three" practical expedients permitted under the transition guidance, which among other things, allows a carry forward of the historical lease classification conclusions. The Company expects to recognize, among other adjustments, operating lease assets totaling approximately \$24,000 and operating lease liabilities of approximately \$33,000 on the consolidated balance sheet at January 1, 2021 as a result of the implementation of this standard. We do not expect this standard to materially impact our earnings upon adoption. As implementation of this standard results in adjustments to and reclassifications of assets and liabilities which are non-cash in nature, there will be no impact on the Company's cash flows in connection with the adoption of this standard.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, ("ASU 2016-13") which replaces the existing incurred loss impairment model with an expected credit loss model and requires financial assets, including trade receivables, measured at amortized cost to be presented at the net amount expected to be collected. ASU 2016-13 is effective for annual periods, and interim periods within those years, beginning after December 15, 2019, for business entities that are public and meet the definition of an SEC filer (excluding smaller reporting companies), and after December 15, 2022 for all other entities. Adoption of this guidance requires using a modified retrospective approach through a cumulative-effect adjustment to retained earnings

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(Amounts in thousands, except per share data)

as of the effective date to align existing credit loss methodology with the new standard. The Company has assessed the impact of ASU 2016-13 and has determined that the adoption of this standard, effective January 1, 2021, will not have any impact on the Company's consolidated financial statements.

In December 2019, the FASB issued ASU Update No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*, ("ASU 2019-12") which simplifies the accounting for income taxes. ASU 2019-12 removes certain exceptions for performing intraperiod tax allocations, recognizing deferred taxes for investments, and calculating income taxes in interim periods. The guidance also simplifies the accounting for franchise taxes, transactions that result in a step-up in the tax basis of goodwill, and the effects of enacted changes in tax laws or rates in interim periods. The guidance in ASU 2019-12 is required for annual reporting periods, including interim periods within those annual periods, beginning after December 15, 2020, for business entities that are public, and after December 15, 2021, including interim periods within those annual periods for all other entities, with early adoption permitted. The Company has elected to adopt this guidance effective January 1, 2021. While the Company is continuing to assess the potential impacts of ASU 2019-12, it does not expect ASU 2019-12 to have a material effect on its financial statements.

Risks and Uncertainties

In December 2019, a novel strain of coronavirus ("COVID-19") appeared. In March 2020, the World Health Organization declared the outbreak of COVID-19 to be a pandemic. The COVID-19 pandemic is having widespread, rapidly evolving and unpredictable impacts on global society, economies, financial markets and business practices. To protect the health and well-being of Company employees and customers, substantial modifications were made to employee travel policies, our offices were closed and employees advised to work from home, and conferences and other marketing events were cancelled or shifted to virtual-only. The COVID-19 pandemic has impacted and may continue to adversely impact Company operations, including employees, customers and partners, and there is substantial uncertainty in the nature and degree of its continued effects over time.

The Company did not experience any significant reductions in sales, revenues or collections in the year ended December 31, 2020 as a result of COVID-19. The uncertainty caused by the COVID-19 pandemic could, however, impact Company billings to new customers beyond 2020 as the pandemic continues to generate economic uncertainty, and it may also negatively impact Company efforts to maintain or expand revenues from existing customers as they continue to evaluate certain long-term projects and budget constraints. In addition to the potential impact on sales, the Company may see delays in collections in 2021 as the pandemic continues to generate economic uncertainty. However, these delays are not expected to materially impact the business, and thus the Company has not recorded an additional allowance for doubtful accounts in connection with any delays. The Company believes it has ample liquidity and capital resources to continue to meet its operating needs and its ability to continue to service its debt or other financial obligations is not currently impaired.

The extent to which the COVID-19 pandemic impacts the business going forward will depend on numerous evolving factors that cannot reliably be predicted, including the duration and scope of the pandemic; governmental, business, and individuals' actions in response to the pandemic; and the impact on economic activity, including the possibility of recession or financial market instability. These factors may adversely impact consumer, business and government spending on technology as well as customers' ability to pay for Company products and services on an ongoing basis. This uncertainty also affects management's accounting estimates and assumptions, which could result in greater variability in a variety of areas that depend on these estimates and assumptions, including estimated allowance for subscription cancellations, product life cycles and estimated useful lives and potential impairment of long-lived assets, intangible assets and goodwill.

Reclassifications

Certain amounts in the prior period financial statements have been reclassified to conform to the presentation of the current period financial statements. These reclassifications had no effect on previously reported comprehensive income or loss.

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Notes to Consolidated Financial Statements (continued)
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2. BUSINESS COMBINATIONS

On January 7, 2020, the Company acquired a 60% controlling interest in Systax, a provider of Brazilian transaction tax content and software. Cash consideration for the purchase was \$12,374 and was funded through borrowings under a revolving line of credit. This acquisition provides the Company with full access to a sizeable database of Brazilian tax content that is critical to supporting its global multi-national customers' business expansion into Brazil.

The Company has a contractual purchase commitment to acquire the remaining 40% equity interest from the original Systax Quotaholders incrementally between 2021 through 2024. Future purchase commitment payments for these incremental acquisition amounts are based on a multiple of Systax revenue and earnings before interest, depreciation, amortization and income taxes ("EBITDA") performance at the end of 2020, 2022 and 2023, whereby the Company will have full ownership after the final transaction in 2024. Management has determined these future purchase commitments to be a forward contract, resulting in the Company being required to estimate and record an estimated future purchase commitment amount (the "Purchase Commitment Liability") in connection with recording the initial purchase. The fair value of the Purchase Commitment Liability was initially estimated to be \$14,344 at the acquisition date based on information available at that time. Subsequently, during the fourth quarter of 2020 and based on the receipt of additional information and analysis, the fair value of the Purchase Commitment Liability at the acquisition date was finalized to be \$12,592, thereby necessitating an adjustment to goodwill. This amount will fluctuate as a result of changes in foreign currency exchange rates and is reflected in Purchase Commitment Liability in the consolidated balance sheet at December 31, 2020. Adjustments to the settlement date value that arise as a result of remeasurement at future balance sheet dates will be recorded as interest expense related to financing costs in the consolidated statements of comprehensive income (loss) in the period the change is identified.

The acquisition was accounted for as a business combination and the total purchase price was allocated to the assets acquired and liabilities assumed based on their estimated fair values on the acquisition date, with the excess being recorded as goodwill. The preliminary values recorded were adjusted within the Measurement Period upon the receipt of further information that become available regarding the fair values of these amounts as of the acquisition date, and such adjusted values are reflected in the tables below. Any subsequent adjustments to these values not associated with determination of their fair values on the acquisition date will be recorded in the consolidated statements of comprehensive income (loss) in the period the change is identified.

The following table reflects the purchase price for Systax:

	<u>January 7, 2020</u>
Cash paid to Systax Quotaholders at closing	\$ 11,626
Cash held in escrow for benefit of Systax Quotaholders	748
Initial cash consideration	12,374
Purchase Commitment Liability	12,592
Less cash acquired	(56)
Total	<u>\$ 24,910</u>

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Notes to Consolidated Financial Statements (continued)
(Amounts in thousands, except per share data)

The following table presents the allocation of the purchase price to the assets acquired and liabilities assumed as recorded in the Company's consolidated balance sheet as of the acquisition date:

	<u>January 7, 2020</u>
Accounts receivable	\$ 495
Property and equipment	112
Other current assets	14
Goodwill	21,089
Other intangible assets	3,650
Accounts payable	(358)
Accrued expenses	(92)
Total	<u>\$ 24,910</u>

The excess of the purchase consideration over the net assets acquired is recorded as goodwill and primarily reflects the value of expected future synergies, the existence of intangible assets not recognized under U.S. GAAP such as the value of the assembled workforce and other market factors. Goodwill is deductible for tax purposes.

The Company has included the financial results of Systax in the consolidated statement of comprehensive income (loss) from the date of acquisition in accordance with ASC 810 due to the Company having a controlling financial interest in Systax. Systax revenue and net loss for the year ended December 31, 2020 reflected in the consolidated statement of comprehensive income (loss) were \$4,430 and \$(1,089), respectively.

The transaction costs associated with the acquisition were \$504 and were recorded in general and administrative expense in the year ended December 31, 2019.

3. FINANCIAL INSTRUMENTS AND FAIR VALUE MEASUREMENTS

Our financial instruments subject to fair value measurements include cash and cash equivalents, funds held for customers, accounts receivable, accounts payable, accrued expenses, debt, and derivatives.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The Company has investments in money market accounts, which are included in cash and cash equivalents on the consolidated balance sheets. Fair value inputs for these investments are considered Level 1 measurements within the Fair Value Hierarchy since money market account fair values are known and observable through daily published floating net asset values. The fair value of the Company's investments in money market accounts, being the same as their carrying value, were \$168,330 and \$61,644 at December 31, 2020 and 2019, respectively.

Assets and Liabilities for Which Fair Value is Only Disclosed

The residual carrying amount of cash and cash equivalents and the carrying amount of funds held for customers were the same as their respective fair values and are considered Level 1 measurements.

The carrying amounts for accounts receivable, accounts payable, accrued expenses and debt approximate their relative fair values due to their short-term nature and are considered Level 2 measurements.

Non-recurring Fair Value Measurements

The Systax acquisition was accounted for as a business combination and the total purchase price was allocated to the net assets acquired and liabilities assumed based on their estimated fair values. The fair values of identifiable intangible

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Notes to Consolidated Financial Statements (continued)

(Amounts in thousands, except per share data)

assets were determined by an income approach, with application of an appropriate underlying method, such as a multi-period excess earnings, cost savings and or relief from royalty method, which we consider to be Level 3 measurements. The fair value of property and equipment was determined at the individual asset level using a combination of cost, sales and income approaches, which we consider to be Level 3 measurements. The fair values of all other identifiable assets acquired and liabilities assumed were primarily based on their carrying values, which we consider to be Level 2 measurements.

The Company's obligation with respect to future purchase commitments to the Systax Quotaholders was determined to be a forward contract necessitating initial recognition based on fair value. We estimated the initial fair value of our Purchase Commitment Liability using a Monte Carlo simulation, which we consider to be a Level 3 measurement. The significant assumptions used in the Monte Carlo simulation include, among other variables, forecasted cash flow projections consistent with those used to support the overall purchase price, selection of comparable companies, asset volatility and discount rate determinations and the total number of simulations to compute. Subsequent remeasurements of the Purchase Commitment Liability, as and if required, are not expected to be based on fair value.

Derivatives and Hedging Activities

We may periodically engage in hedging activities to reduce our exposure to foreign currency exchange rates. Our hedging activities are typically designed to manage specific risks according to our strategies, which may change from time to time.

In May 2020, we entered into a series of foreign currency forward contracts to hedge a portion of our exposure to adverse fluctuations in the Brazilian Real associated with our Purchase Commitment Liability. Such forward contracts, which do not qualify for hedge accounting and are not material to our consolidated financial statements, are remeasured at fair value on a recurring basis and classified within other assets in our consolidated balance sheets and with changes in estimated fair value recognized as interest expense in our consolidated statements of comprehensive income or loss. Our fair value determinations are based on foreign currency exchange rates in active markets, which we consider to be Level 2 measurements within the Fair Value Hierarchy.

4. PROPERTY AND EQUIPMENT

The major components of property and equipment are as follows:

	As of December 31,	
	2020	2019
Leasehold improvements	\$ 20,907	\$ 20,887
Equipment	41,410	40,639
Computer software purchased	11,620	11,232
Internal-use software developed:		
Cloud-based customer solutions	65,423	51,442
Internal systems and tools	25,349	23,957
Furniture and fixtures	7,674	7,455
In-process internal-use software	3,304	791
	175,687	156,403
Less accumulated depreciation	(119,130)	(101,676)
Property and equipment, net	<u>\$ 56,557</u>	<u>\$ 54,727</u>

Depreciation expense for property and equipment, excluding all internal-use software developed and capital leases, was \$7,833, \$7,386 and \$7,279 for the years ended December 31, 2020, 2019 and 2018, respectively. Depreciation for

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Notes to Consolidated Financial Statements (continued)

(Amounts in thousands, except per share data)

property and equipment, excluding internal-use software developed for cloud-based customer solutions, is reflected in depreciation and amortization in the consolidated statements of comprehensive income (loss).

Assets under capital leases of \$1,360 and \$1,455, net of accumulated depreciation of \$1,370 and \$627, at December 31, 2020 and 2019, respectively, are included in property and equipment in the consolidated balance sheets. Depreciation expense for assets held under capital leases was \$743, \$565 and \$40 for the years ended December 31, 2020, 2019 and 2018, respectively, and is included in depreciation and amortization in the consolidated statements of comprehensive income (loss).

The major components of internal-use software developed are as follows:

	As of December 31,	
	2020	2019
Internal-use software developed	\$ 90,772	\$ 75,399
Less accumulated depreciation	(65,090)	(53,852)
	25,682	21,547
In-process internal-use software	3,304	791
Internal-use software developed, net	<u>\$ 28,986</u>	<u>\$ 22,338</u>

Amounts capitalized for internal-use software developed and included in property and equipment additions on the consolidated statements of cash flows are as follows:

	For the Year Ended December 31,		
	2020	2019	2018
Cloud-based customer solutions	\$ 14,710	\$ 10,179	\$ 14,345
Internal systems and tools	3,176	4,860	2,484
Total	<u>\$ 17,886</u>	<u>\$ 15,039</u>	<u>\$ 16,829</u>

In-process internal-use software developed is not depreciated until it is available for its intended use. Depreciation expense for internal-use software developed for cloud-based customer solutions for the years ended December 31, 2020, 2019 and 2018 was \$8,818, \$7,982 and \$11,707, respectively, and is included in cost of revenues, software subscriptions in the consolidated statements of comprehensive income (loss). Depreciation expense for internal-use software developed for internal systems and tools for the years ended December 31, 2020, 2019 and 2018 was \$2,442, \$1,045 and \$618, respectively, and is included in depreciation and amortization in the consolidated statements of comprehensive income (loss). Research and development costs associated with internal-use software developed for cloud-based customer solutions were \$10,518, \$10,765 and \$11,038 for the years ended December 31, 2020, 2019 and 2018, respectively, and is included in research and development in the consolidated statements of comprehensive income (loss).

Amortization expense of internal-use software developed, excluding in-process internal-use software not yet available for its intended use, at December 31, 2020 is as follows for all future years:

Year Ending December 31,	Internal Systems and Tools	Cloud-Based Customer Solutions
2021	\$ 2,362	\$ 10,534
2022	2,049	6,795
2023	957	2,443
2024	473	—
2025	69	—
Total	<u>\$ 5,910</u>	<u>\$ 19,772</u>

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During the year ended December 31, 2018, the Company recorded an impairment of capitalized internal-use software previously utilized to provide cloud-based solutions to customers of \$32,692, net of accumulated amortization of \$11,907, due to a product strategy shift that resulted in this service no longer being offered to customers after 2018. The software was deemed to be fully impaired due to the net book value of the software exceeding expected future cash flows. This amount is included in impairment of assets in the 2018 consolidated statement of comprehensive income (loss).

5. CAPITALIZED SOFTWARE

Capitalized software includes acquired software and direct labor and related expenses for software developed for sale for new products and enhancements to existing products. Software development costs capitalized for the years ended December 31, 2020, 2019 and 2018 were \$11,850, \$17,221 and \$12,261, respectively.

The major components of capitalized software are as follows:

	As of December 31,	
	2020	2019
Capitalized software	\$ 63,071	\$ 47,862
Less accumulated amortization	(32,217)	(20,281)
	30,854	27,581
In-process capitalized software	1,135	4,494
Capitalized software, net	<u>\$ 31,989</u>	<u>\$ 32,075</u>

Capitalized software amortization expense for the years ended December 31, 2020, 2019 and 2018 was \$11,936, \$8,212 and \$5,257, respectively, and is included in cost of revenues, software subscriptions in the consolidated statements of comprehensive income (loss).

In-process capitalized software at December 31, 2020 was not available for general release to customers as of the balance sheet date and therefore not included in the table below. Amortization expense of capitalized software available for general release to customers as of December 31, 2020 is as follows for all future years:

<u>Year Ending December 31,</u>	
2021	\$ 11,811
2022	8,596
2023	5,974
2024	3,783
2025	690
Total	<u>\$ 30,854</u>

6. GOODWILL AND OTHER INTANGIBLE ASSETS

At December 31, 2020, goodwill and other intangible assets were as follows:

Goodwill	\$ 16,329
Other intangible assets, net	2,382
	<u>\$ 18,711</u>

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Notes to Consolidated Financial Statements (continued)
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The changes in the carrying amount of goodwill for the year ended December 31, 2020 are as follows:

Balance, January 1, 2020	\$ —
Acquisition of Systax (Note 2)	21,089
Foreign currency translation adjustments	(4,760)
Balance, December 31, 2020, net	16,329
Accumulated impairment losses	—
Balance, December 31, 2020, gross	<u>\$ 16,329</u>

During the year ended December 31, 2020, the Company recognized various amortizable intangible assets in connection with the acquisition of Systax (Note 2), including relating to customer relationships, technology and tradenames. The following tables provide additional information for our other intangible assets, which are individually not material to our consolidated financial statements:

	Weighted Average Amortization Period (Years)	As of December 31, 2020		
		Gross Value	Accumulated Amortization	Carrying Value
Other intangible assets	5.5	\$ 2,825	\$ 443	\$ 2,382

	For the Year Ended December 31, 2020		
	Cost of Revenues, Software Subscriptions	Selling and Marketing Expense	Total Expense
Amortization of acquired intangible assets	\$ 267	\$ 176	\$ 443

The following table presents estimated future amortization of intangible assets:

Year Ending December 31,	
2021	\$ 616
2022	500
2023	500
2024	499
2025	267
Total	<u>\$ 2,382</u>

7. DEBT

Credit Agreement

On March 31, 2020, the Company entered into a credit agreement with a bank, which was subsequently amended on April 3, 2020 to permit another bank to be a party to the agreement, consisting of a \$175,000 term loan (the “Term Loan”) and a \$100,000 committed line of credit (the “Line of Credit”) (collectively, the “Credit Agreement”).

Net proceeds from the Term Loan after payment of financing fees of \$2,904 and repayment of aggregate amounts outstanding under a previous credit agreement of \$61,656, were used to fund a portion of the \$123,185 distribution made to the stockholders on May 29, 2020 (see Note 8).

A portion of the Offering proceeds was used to repay the \$175,000 Term Loan in full on July 31, 2020. The Company received a refund of \$468 of financing fees as a result of repayment of the Term Loan within 90 days of execution of the

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Credit Agreement, which was recorded as a reduction of deferred financing costs associated with the Term Loan. The Company wrote off the remaining balance of deferred financing costs associated with the Term Loan of \$1,174, which was recorded as interest expense in the consolidated statement of comprehensive income (loss) for the year ended December 31, 2020.

The Line of Credit matures in March 2025 and had no outstanding borrowings at closing or at December 31, 2020. The Company has the option to select an applicable interest rate at either the bank base rate plus an applicable margin (the “Base Rate Option”) or the LIBOR plus an applicable margin (the “LIBOR Option”). The applicable margins are determined by certain financial covenant performance as defined in the Credit Agreement. At December 31, 2020, the Base Rate Option and LIBOR Option applicable to Line of Credit borrowings were 3.25% and 2.00%, respectively.

The Credit Agreement is collateralized by certain assets of the Company and contains financial and operating covenants. The Company was in compliance with these covenants at December 31, 2020.

Prior Credit Agreement

At December 31, 2019, the Company had a credit agreement consisting of a term loan (the “Prior Term Loan”) with an outstanding principal balance of \$50,375 and a \$40,000 committed line of credit (the “Prior Line of Credit”) with no outstanding borrowings (collectively, the “Prior Credit Agreement”).

The Prior Term Loan required quarterly principal payments over five years, with a balloon payment in November 2020. The Prior Line of Credit was due to expire on November 1, 2020. As a result of the Prior Term Loan becoming due in November 2020, the balance outstanding of \$50,375 was included in current portion of long-term debt on the consolidated balance sheet at December 31, 2019.

Unamortized deferred financing costs of \$221 at December 31, 2019 were included as a reduction in current portion of long-term debt in the consolidated balance sheet. Amortization expense of deferred financing costs on the Prior Term Loan was \$44 and \$266 for the year ended December 31, 2020 and 2019, respectively, which was recorded as interest expense in the consolidated statements of comprehensive income (loss). The Company wrote off the remaining unamortized deferred financing costs associated with the Prior Term Loan of \$177, which was recorded as interest expense in the consolidated statement of comprehensive income (loss) for the year ended December 31, 2020.

Capital Leases

Capital lease obligations were \$1,107 and \$1,332 at December 31, 2020 and 2019, respectively, and are included in current portion of long-term debt and long-term debt, net of current portion in the consolidated balance sheets.

Future minimum capital lease payments as of December 31, 2020 are as follows:

Year Ending December 31,	
2021	\$ 915
2022	230
Total	1,145
Less amount representing interest	38
Present value of minimum lease payments	1,107
Less current portion	882
Capital lease obligations, net of current portion	<u>\$ 225</u>

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Notes to Consolidated Financial Statements (continued)
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8. STOCKHOLDERS' EQUITY (DEFICIT)

Termination of S-Corporation status

In connection with termination of the Company's S-Corporation status effective July 27, 2020, the Company had an accumulated deficit of \$354,291 pertaining to the S-Corporation shareholders which was reclassified to additional paid in capital upon such termination.

Common Stock

In connection with the Recapitalization, the Company: (i) effected the three-for-one Stock Split, which is reflected retrospectively in the consolidated financial statements; (ii) established the New Capital Structure; and (iii) effected the Share Exchange.

Prior to the Share Exchange, the Company had 147 shares of former Class A common stock and 120,443 shares of former Class B common stock outstanding. Members of a family (the "Family") owned 99.9% of all outstanding shares of both former classes of common stock, which was comprised of 100% of the former Class A common stock and 120,270 shares of the former Class B common stock. The remaining 173 shares of former Class B common stock were owned by non-Family members. There were no dividend or liquidation preference differences between the former Class A and former Class B shares.

In connection with establishing the New Capital Structure, the shareholders authorized 450,000 shares of common stock, par value \$0.001 per share, and 30,000 shares of preferred stock, par value \$0.001 per share. Common stock is divided into two classes, Class A with one vote per share, and Class B with ten votes per share. The rights of the holders of Class A and Class B are identical, except with respect to voting and conversion rights. Upon transfer of Class B shares to a non-Family member, such shares will automatically convert to an equivalent number of Class A shares with the respective voting rights attributable to such new shares. Authorized Class A and Class B shares are 300,000 and 150,000 shares, respectively. There are no dividend or liquidation preference differences between Class A and Class B.

In connection with the Share Exchange, the Family members exchanged each share of former Class A and former Class B for the equivalent number of Class B shares established as part of the New Capital Structure. In addition, the non-Family members exchanged their former Class B shares for an equivalent number of Class A shares established as part of the New Capital Structure. No funds were exchanged in connection with the Share Exchange and the aggregate number of shares outstanding both immediately prior to and after the Share Exchange remained the same at 120,590. In addition, common stock equivalents, all of which were held by non-Family members and which were previously exercisable into former Class B shares, became exercisable into Class A shares established as part of the New Capital Structure.

In April 2020, Vertex issued 173 shares of former Class B common stock in connection with the exercise of options by option holders for cash of \$53. These shares were exchanged for Class A common stock in connection with the Recapitalization on July 28, 2020. Also, on July 28, 2020, the Company sold 23,812 shares of Class A in connection with the Offering for \$423,024, net of underwriting fees. Offering costs paid from these proceeds aggregated \$6,222 and are reflected as a reduction of additional paid in capital in stockholders' equity. In addition, the Company issued 510 shares of Class A in connection with the exercise of options by option holders, net of 381 shares returned to the Company in lieu of payment of the exercise price and taxes due on these exercises. In connection with the Offering, the Company also issued an aggregate 564 shares of Class A related to the conversion of SARs into options and the immediate exercise of these options into shares, net of 860 shares returned to the Company in lieu of payment of the exercise price and taxes due on these exercises. The Company also issued 890 Class A shares in connection with the exercise of outstanding options and 19 Class A shares in connection with RSAs granted at the Offering, which vested immediately. A stockholder exchanged 300 shares of Class B common stock for an equivalent number of shares of Class A common stock during the year ended December 31, 2020.

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)

(Amounts in thousands, except per share data)

In April 2019, Vertex issued 225 shares of former Class B common stock in connection with the exercise of options by option holders for cash of \$68, net of 51 shares that were immediately returned to Vertex upon exercise in lieu of payment of income taxes payable by the option holders.

At December 31, 2019 the Company held repurchased shares (“Treasury Stock”) aggregating 41,910 which are carried at cost and included in Treasury Stock in the consolidated balance sheet. Such amount is comprised of 41,757 shares of former Class B common stock and 153 shares of former Class A common stock. In connection with the Recapitalization, the Treasury Stock was retired and amounts associated with the Treasury Stock were reclassified to additional paid in capital. At December 31, 2020, there was no Treasury Stock.

The Board declared distributions of \$4,010 (\$0.03 per share) and \$123,185 (\$1.02 per share) during the three months ended March 31 and June 30, 2020, respectively, and \$5,706 (\$0.05 per share) through July 25, 2020, pro rata to stockholders of former Class A and former Class B common stock. The Board declared aggregate pro rata distributions to stockholders of former Class A and former Class B common stock of \$30,857 (\$0.11 per share) and \$38,916 (\$0.09 per share) during the year ended December 31, 2019 and 2018, respectively

During the three months ended December 31, 2020, the Company distributed \$33 in December 2020 to the former S-Corporation shareholders and additionally recognized an estimated liability of \$2,700 to be distributed to the former S-Corporation shareholders for income taxes related to the allocation of taxable income to the S-Corporation short tax period ended July 26, 2020, each in connection with obligations under the Tax Sharing Agreement. The Company is required to settle this liability for the 2020 S-Corporation short tax period on or before July 30, 2021. All obligations of the Company under the Tax Sharing Agreement are satisfied by adjustments of additional paid in capital.

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Notes to Consolidated Financial Statements (continued)
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9. EARNINGS PER SHARE

The table below illustrates the calculation of basic and diluted net (loss) income per common share for the Class A common and Class B common for the periods reflected below. The weighted average shares outstanding have been retrospectively restated to reflect the Share Exchange for all periods prior to the Offering, resulting in the Class A shares representing non-Family-owned shares and Class B representing Family-owned shares for all periods presented. See Note 8 for further information on the Share Exchange.

	<u>For the Year Ended December 31,</u>		
	<u>2020</u>	<u>2019</u>	<u>2018</u>
Class A common stock:			
Numerator, basic:			
Net (loss) income attributable to all stockholders	\$ (78,937)	\$ 31,057	\$ (6,106)
Class A common stock as a percentage of total shares outstanding, basic	8.44 %	0.08 %	0.26 %
Net (loss) income attributable to Class A stockholders, basic	<u>\$ (6,660)</u>	<u>\$ 23</u>	<u>\$ (16)</u>
Numerator, diluted:			
Net (loss) income attributable to all stockholders	\$ (78,937)	\$ 31,057	\$ (6,106)
Class A common stock as a percentage of total shares outstanding, diluted	8.44 %	3.11 %	0.26 %
Net (loss) income attributable to Class A stockholders, diluted	<u>\$ (6,660)</u>	<u>\$ 965</u>	<u>\$ (16)</u>
Denominator, basic and diluted:			
Weighted average Class A common stock, basic	11,096	118	210
Dilutive effect of common stock equivalents*	—	3,743	—
Weighted average Class A common stock, diluted	<u>11,096</u>	<u>3,861</u>	<u>210</u>
Net (loss) income per Class A share, basic	<u>\$ (0.60)</u>	<u>\$ 0.20</u>	<u>\$ (0.08)</u>
Net (loss) income per Class A share, diluted	<u>\$ (0.60)</u>	<u>\$ 0.25</u>	<u>\$ (0.08)</u>

* The following weighted-average outstanding shares of common stock equivalents were excluded from the computation of diluted net loss per share attributable to Class A stockholders because the impact of including them would have been anti-dilutive: 7,158 and 4,013 for the year ended December 31, 2020 and 2018, respectively.

	<u>For the Year Ended December 31,</u>		
	<u>2020</u>	<u>2019</u>	<u>2018</u>
Class B common stock:			
Numerator, basic:			
Net (loss) income attributable to all stockholders	\$ (78,937)	\$ 31,057	\$ (6,106)
Class B common stock as a percentage of total shares outstanding, basic	91.56 %	99.92 %	99.74 %
Net (loss) income attributable to Class B stockholders, basic	<u>\$ (72,277)</u>	<u>\$ 31,034</u>	<u>\$ (6,090)</u>
Numerator, diluted:			
Net (loss) income attributable to all stockholders	\$ (78,937)	\$ 31,057	\$ (6,106)
Class B common stock as a percentage of total shares outstanding, diluted	91.56 %	96.89 %	99.74 %
Net (loss) income attributable to Class B stockholders, diluted	<u>\$ (72,277)</u>	<u>\$ 30,092</u>	<u>\$ (6,090)</u>
Denominator, basic and diluted:			
Weighted average Class B common stock, basic	120,415	120,417	120,417
Dilutive effect of common stock equivalents	—	—	—
Weighted average Class B common stock, diluted	<u>120,415</u>	<u>120,417</u>	<u>120,417</u>
Net (loss) income per Class B share, basic	<u>\$ (0.60)</u>	<u>\$ 0.26</u>	<u>\$ (0.05)</u>
Net (loss) income per Class B share, diluted	<u>\$ (0.60)</u>	<u>\$ 0.25</u>	<u>\$ (0.05)</u>

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
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10. EMPLOYEE BENEFIT AND DEFERRED COMPENSATION PLANS

401(k) Plan

The Company maintains a 401(k) plan that covers eligible employees subject to certain age and length of service requirements. The Company matches up to 3% of eligible compensation during the period in which an eligible participant contributes to the plan. Matching contributions were \$4,011, \$3,419 and \$2,893 for the years ended December 31, 2020, 2019 and 2018, respectively. In addition, a discretionary profit-sharing contribution of 3% of eligible compensation for eligible employees was approved and aggregated \$4,035, \$3,363 and \$2,886 for the years ended December 31, 2020, 2019 and 2018, respectively, and is reflected in accrued salaries and benefits in the consolidated balance sheets.

Long-Term Rewards Plan

The Company has a long-term rewards (“LTR”) plan for certain key employees which provides for compensation-related to growth in certain financial measures over a three-year period (the “Reward Performance Period”), subject to achieving an annual minimum net income target (the “Net Income Target”) during each year of the Reward Performance Period. Each year, eligible LTR plan participants receive an individual target award opportunity (“Award Opportunity”) for a new three-year Reward Performance Period (i.e., target award grant made in 2018 is for years 2018 through 2020). Compensation earned for growth in the financial measures over each Reward Performance Period is paid in cash in the year following the end of the respective Reward Performance Period, assuming the Net Income Target was achieved in the final year of the Reward Performance Period. Estimated compensation is recorded during each year of a Reward Performance Period (“accrued LTR Award Opportunities”).

Compensation expense included \$3,027, \$2,462 and \$2,012 for the years ended December 31, 2020, 2019 and 2018, respectively, for open Reward Performance Periods. Amounts paid to participants in 2020 for the Reward Performance Period starting in 2017 of \$2,717 is reflected in deferred compensation, current in the consolidated balance sheet as of December 31, 2019. Amounts estimated to be paid in 2021 for performance through December 31, 2020 for the Reward Performance Period starting in 2018 of \$1,987 is reflected in deferred compensation, current in the consolidated balance sheet as of December 31, 2020. The remaining balances of accrued LTR Award Opportunities for open Reward Performance Periods of \$2,772 and \$1,812 as of December 31, 2020 and 2019, respectively, are reflected in deferred compensation, net of current portion, in the consolidated balance sheets.

After December 31, 2020, no new LTR Award Opportunities will be granted under the LTR plan as future long-term awards will only be made under the 2020 Plan.

Stock-Based Award Plans

On the effective date of the Offering, the Company adopted the 2020 Plan and the ESPP.

The 2020 Plan provides the ability to grant cash and equity-based incentive awards to eligible employees, directors and service providers in order to attract, retain and motivate those that make important contributions to the Company. The 2020 Plan provides for the award of stock options, RSAs, RSUs, SARs and other cash compensation. The Company granted 694 RSAs and 10 RSUs on the effective date of the Offering.

The ESPP provides eligible employees with rights during each six-month ESPP offering period to purchase shares of the Company’s Class A common at the ESPP discount through payroll deductions, or through lump sum payments during the initial offering period (July 28 to November 30, 2020). Amounts withheld or received from participants are reflected in accrued salaries and benefits in the consolidated balance sheets until such shares are purchased. Amounts withheld from participants for the offering period ending May 31, 2021 aggregated \$246 as of December 31, 2020.

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Notes to Consolidated Financial Statements (continued)

(Amounts in thousands, except per share data)

Stock-based award plan events and related activity are described further below.

Prior to the adoption of the 2020 Plan, the Company had a SAR plan for the purpose of providing incentives to key members of management and consultants to contribute to the growth and financial success of the Company. As a result of the Offering, SAR participants were offered the option to either redeem their SARs upon the occurrence of the Offering or amend their SARs pursuant to which, upon effectiveness of the 2020 Plan, such SARs would become options to purchase shares of Class A common stock under the 2020 Plan (the “SAR Exchange Offer”). All SAR participants eligible to receive the SAR Exchange Offer accepted and had their outstanding SARs, which aggregated 12,038, converted to options with equivalent terms under the 2020 Plan at the Offering effective date (the “Converted SARs”). This was considered a modification of these SAR awards as described further below. The SAR plan was retired (“Retired SAR Plan”) and any future SARs will be granted under the 2020 Plan. This activity is described further below.

Prior to the adoption of the 2020 Plan, the Company had options outstanding to purchase 3,676 shares of former Class B common stock. Upon the effectiveness of the Offering, these options were amended and exchanged for options to purchase an equivalent number of Class A shares at the same exercise price and vesting, subject to many of the terms of the 2020 Plan. These options remain subject to expiration in connection with a Triggering Event under the terms of the original option agreements (the “Amended Options”). This activity is described further below.

The following table reflects the exchanges and new issuances of stock-based awards in connection with the Offering:

	Units Outstanding July 27, 2020	Units (Exchanged) Issued in Connection with Offering	Units Outstanding July 28, 2020 (Prior to Exercises)
SARs	12,086	(12,038)	48
Amended Options	3,676	(3,676)	—
2020 Plan options	—	15,714	15,714
RSAs	—	694	694
RSUs	—	10	10

Compensation expense and additional information pertaining to stock-based awards is described further below.

2020 Plan

An aggregate of 16,500 shares of our Class A common stock was initially available for issuance under the 2020 Plan. The number of shares initially available for issuance will be increased annually on January 1 of each calendar year beginning in 2021 and ending in and including 2030, equal to the lesser of (i) 4% of the shares of Class A and Class B common stock outstanding on the final day of the immediately preceding calendar year and (ii) a smaller number of shares as determined by the Board. No more than 3,000 shares of Class A common may be issued under the 2020 Plan upon the exercise of incentive stock options. Shares available under the 2020 Plan may consist of authorized but unissued shares, shares purchased on the open market, or treasury shares. If an award under the 2020 Plan expires, lapses or is terminated, exchanged for cash, surrendered, repurchased, or canceled without having been fully exercised or forfeited, any unused shares subject to the award will again be available for new grants under the 2020 Plan. Awards granted under the 2020 Plan in substitution for any options or other stock or stock-based awards granted by an entity before the entity’s merger or consolidation with or acquisition by the Company of the entity’s property or stock will not reduce the shares available for grant under the 2020 Plan but will count against the maximum number of shares that may be issued upon the exercise of incentive stock options. As of December 31, 2020, 1,869 shares of our Class A common were available for issuance under the 2020 Plan. No incentive stock options that would be subject to the 3,000 Class A share limit were issued or outstanding under the 2020 Plan at December 31, 2020.

Awards issued under the 2020 Plan vest based on service criteria established by the Board. The Company has elected to account for forfeitures as they occur rather than estimate forfeitures at date of grant.

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(Amounts in thousands, except per share data)

Retired SAR Plan

The Retired SAR Plan enabled the Company to grant awards (“SAR Awards”) as a fixed number of shares of former Class B common stock (“SAR Units”). SAR Units outstanding aggregated 12,276 at December 31, 2019. SAR Units were issued at the equivalent of the fair value of the equivalent number of shares of the Company’s former Class B common stock on the grant date (“Base Value”), as determined by the Board with assistance from management and an independent third-party valuation provider, and compensation recorded based upon the appreciation of the SAR Units in excess of the Base Value over the requisite service period. SAR Awards were exercisable upon 50% vesting or upon the occurrence of a triggering event.

Prior to the SAR Exchange Offer being made, vested SAR Units were redeemable upon the occurrence of a triggering event which included: (i) expiration of the term of the SAR Award; (ii) a change of control of the Company whereby stockholders holding at least 50% of the voting stock of the Company sell their shares; (iii) a merger of the Company with an unrelated third-party; (iv) an initial public offering; and (v) death, disability or retirement of a SAR participant.

SAR participants were limited to exercising no more than 25% of their vested SAR Units in any given year. SAR Awards generally vested 50% and 100% after two years and five years, respectively, from the grant date, or as determined by the Board. Maximum contractual terms ranged from ten years to the term of employment of the participant. SAR Awards were settled in cash only, not through the issuance of shares. SAR Award exercises were limited each year to the proportion of the vested SAR Units to the total SAR Units outstanding multiplied by adjusted net cash from operating activities (the “Liquidity Pool”), which was defined as cash from operating activities less cash paid for property and equipment and capitalized software for a given period.

The SAR Exchange Offer resulted in eligible SAR participants amending their SAR Units pursuant to which, upon effectiveness of the Company’s 2020 Plan, such SAR Units were exchanged for options under the 2020 Plan. Effective July 13, 2020, the SAR Exchange Offer period ended and all SAR participants eligible to receive the offer accepted and had their outstanding SAR Units converted to options with equivalent terms under the 2020 Plan on the effective date of the plan upon the Offering. This was considered an accounting modification of these SAR Awards.

Converted SARs with either no expiration date or that expired during calendar year 2020 were converted to options and automatically exercised into shares (the “Auto Exercise New Options”) on the effective date of the Offering. Shares issued in connection with the Auto Exercise New Options were net of the number of shares of common stock necessary to satisfy the aggregate exercise price and the tax withholding obligation of such options of \$13,835. The Auto Exercise New Option participants also had the ability to require the Company to repurchase all or a portion of these on the Offering effective date for cash based on the Offering price of \$19.00 per share, which aggregated \$9,054. The aggregate of these amounts of \$22,889 is reflected as a reduction of cash provided by operating activities as these payment requirements arose when the original SARs were liability-classified prior to their conversion and exercise.

Management continued to record changes in the intrinsic value of the SAR Units in 2020 up to July 2, 2020, the date on which management determined the Company was considered to have become a public entity. Management measured the change in accounting policy of \$2,422 in accordance with ASC 718 during the year ended December 31, 2020, which included \$1,299 of vested Converted SARs that were recognized as compensation expense during this period, with the remaining \$1,122 of unvested Converted SARs being recognized as compensation expense over the remaining service period of one to five years through 2025. The additional incremental increase in fair value of the Converted SARs after July 2, 2020 and up to the time of the exchange on the Offering effective date resulting from the modification was recorded as compensation expense. The fair value of the Converted SARs, estimated using the Black-Scholes model, was \$197,708, of which \$153,366 was vested as of the Offering date. Management recorded additional compensation expense of \$57,079 for vested Converted SARs from July 1 to the Offering effective date, which included the \$1,299 impact of the change in accounting of vested Converted SARs. The remaining \$44,342 of unvested Converted SAR liability, which includes the \$1,122 of unvested Converted SARs in connection with the change in accounting policy on July 2, 2020, will be recognized

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as compensation expense over the remaining service period of one to five years through 2025. Upon modification, the Converted SARs are no longer being recorded as a liability under ASC 718 and the accumulated liability balance, net of amounts for payment of tax withholding and redemption, was reclassified to stockholders' equity. No incremental compensation expense arose in connection with the SAR modification.

The assumptions used in the Black-Scholes model to determine the fair value of the Converted SARs on the modification date are as follows:

Fair market value of common stock (per share)	\$	19.00
Volatility		36.70 %
Expected term (years)		6.5
Expected dividend yield		— %
Risk-free interest rate		0.40 %

As of the modification date, the Company lacked sufficient historical data on the volatility of its stock price. Selected volatility is representative of expected future volatility and was based on the historical and implied volatility of comparable publicly traded companies over a similar expected term. The expected term represents the term of the Converted SARs, which ranges from within one year to ten years. The Company does not expect to pay dividends after the Offering. The risk-free interest rate was based on the rate for a U.S. Treasury zero-coupon issue with a term that closely approximates the expected term of the SAR grants.

Prior to the Offering, the fair value of the common stock underlying the SAR Awards was determined by the Board with assistance from management and an independent third-party valuation firm. The determination of value used the market and income approaches, with an adjustment for marketability discount pertinent to private company entities in arriving at the per share fair value (the "valuation methodology"). Under the market approach, the guideline public company method is used, which estimates the fair value of the Company based on market prices of stock of guideline public companies. The income approach involves projecting the future benefits of owning an asset and estimating the present value of those future benefits by discounting them based upon the time value of money and the investment risks associated with ownership. At the end of 2019, due to the consideration by the Board of pursuing the Offering, the valuation methodology began to consider the impact of such an event on the value of the Company's common stock underlying the awards. As the Company approached the Offering effective date, this resulted in increases in the value of the SAR Awards which resulted in corresponding increases to compensation expense for the year ended December 31, 2020 which exceeded historical results.

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The below table represents SAR activity for the following periods:

	Units			Range of Grant Values
	Vested	Nonvested	Total	
Outstanding at January 1, 2019	5,889	4,782	10,671	\$ 0.92–\$3.17
Granted	297	2,112	2,409	\$ 3.73
Exercised	(609)	—	(609)	\$ 1.31–\$2.50
Forfeited	—	(195)	(195)	\$ 2.13–\$2.50
Vested	630	(630)	—	
Outstanding at December 31, 2019	6,207	6,069	12,276	\$ 0.92–\$3.73
Granted	21	681	702	\$ 4.70
Exercised	(877)	—	(877)	\$ 1.31–\$2.50
Forfeited	—	(63)	(63)	\$ 2.50
Vested	1,410	(1,410)	—	
Converted	(6,761)	(5,277)	(12,038)	\$ 0.92–\$4.70
Outstanding at December 31, 2020	—	—	—	—

Prior to July 2, 2020, the weighted average grant date intrinsic value of the SARs on grant date was zero as the Company's Board granted all awards at a price per share not less than the per share fair value of the Company's former Class B common stock underlying such awards on the date of grant.

Accrued SAR Awards of \$5,790 as of December 31, 2019, representing SAR Units scheduled for redemption and 25% of the vested SAR Units eligible for exercise within 12-months of the balance sheet date are reflected in deferred compensation, current in the consolidated balance sheets. The remaining balance of accrued SAR Awards of \$16,506 at December 31, 2019 is reflected as deferred compensation, net of current portion, in the consolidated balance sheet. We had approximately \$3,900 of total unrecognized compensation expense for unvested SAR awards at December 31, 2019.

At the Offering effective date, the liability for total recognized compensation for vested SAR Awards of \$143,519 was reclassified to additional paid in capital as these awards were reclassified to equity-based awards on this date subject to the terms of the 2020 Plan. Unrecognized compensation for unvested SAR awards of \$44,342 will be recognized as compensation expense under the 2020 Plan over the respective service periods of one to five years.

Amended Options

On July 20, 2020, the Amended Options resulted from the Board amending the outstanding options to provide for their exchange for options to purchase an equivalent number of Class A shares available under the 2020 Plan at the same exercise price, vesting and term. The amendment of the options was deemed an accounting modification. No incremental compensation was recorded in connection with this modification as it was determined that the value of the Amended Options was the same both before and after the modification. The Amended Options remain exercisable upon: (i) the option holder no longer serving as an employee of the Company or a member of the Board; (ii) the Grantee's death or disability; (iii) the occurrence of a Partial Triggering Event (as defined below); or (iv) the occurrence of a Triggering Event (as defined below). Prior to being amended, the option agreements provided employee option holders with the ability to exercise a portion of their options between April 15 and April 30 of each year based upon the fair value of the Class B common stock as of December 31 of the prior calendar year, provided that certain Company performance is achieved. Upon amendment, the options are instead now subject to restrictions on trading during certain periods ("blackout dates"). Option holders are permitted to satisfy tax withholding obligations incurred in connection with the exercise by exchanging exercised options in lieu of payment of income taxes paid by the Company on their behalf.

In the event of the sale of at least 50% of the Company's stock or all the assets of the Company ("Triggering Event") in a single or multiple transactions, the option holders have the right to exercise their options and sell their related shares

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Notes to Consolidated Financial Statements (continued)

(Amounts in thousands, except per share data)

in connection with the transactions. Unexercised options expire after a Triggering Event. In the event of a sale of at least 25% of the Company’s assets to an unrelated third-party in a single or multiple transactions (“Partial Triggering Event”), the option holders have the right to exercise a portion of their options pro rata based on the sales price and sell their related shares in connection with the transaction. Unexercised options remaining after a Partial Triggering Event remain outstanding. In addition, in the event stockholders owning at least 51% of the outstanding stock of the Company (the “selling stockholders”) sell a portion of their stock to an unrelated third-party, the option holders have the right to exercise and sell an amount of options in the same proportion as the selling stockholders (a “tag-along right”). The option holders may also be required to exercise all their outstanding options and sell all related shares in the event the selling stockholders sell at least 51% of their ownership to an unrelated third-party (a “drag-along right”).

Prior to the amendment, the options permitted holders to put their exercised shares back to the Company, thus the options were classified as temporary equity and included in “Options for Redeemable Shares” on the consolidated balance sheets. The Company recorded increases in the value of Options for Redeemable Shares of \$51,833, \$2,763 and \$1,027 during the years ended December 31, 2020, 2019 and 2018, respectively. The option holders’ ability to put the exercised Amended Option shares to the Company in order to attain liquidity was exchanged for the right by the holders to exercise these options and sell the related shares on the NASDAQ exchange. As a result of this put right no longer being applicable, the options were no longer considered temporary equity and were reclassified to stockholders’ equity in the amount of \$69,177 during the year ended December 31, 2020.

The following table summarizes activity for the Amended Options from January 1, 2019:

Amended Option Activity	Units	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Outstanding at January 1, 2019	4,125	\$ 0.20	*	\$ 14,581
Exercised	(276)	\$ 0.25		\$ 957
Outstanding at December 31, 2019	3,849	\$ 0.19	*	\$ 17,344
Exercised through June 30	(173)	\$ 0.30		\$ 759
Amendment and exchange of options	(3,676)	\$ 0.19	*	\$ 69,177
Outstanding at December 31, 2020	—			

*Options have indefinite contractual lives

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Options under 2020 Plan

The Company issued no options under the 2020 Plan through December 31, 2020 other than those associated with the Converted SARs and the Amended Options previously discussed. The following table summarizes activity for options outstanding under the 2020 Plan:

<u>2020 Plan Option Activity</u>	<u>Units</u>	<u>Weighted Average Exercise Price</u>	<u>Weighted Average Remaining Contractual Life (Years)</u>	<u>Aggregate Intrinsic Value</u>
Outstanding at January 1, 2020	—	—		
Issued in connection with Converted SARs	12,038	\$ 2.76		
Issued in connection with Amended Options	3,676	\$ 0.19	*	
Total options granted	15,714	\$ 2.16		
Forfeited	(156)	\$ 3.29		
Exercised	(3,682)	\$ 1.21		\$ 70,137
2020 Plan options outstanding at December 31, 2020	<u>11,876</u>	<u>\$ 2.44</u>	<u>5.29</u>	<u>\$ 384,883</u>
2020 Plan options exercisable at December 31, 2020	<u>6,943</u>	<u>\$ 1.74</u>	<u>3.59</u>	<u>\$ 229,911</u>

*Amended Options have indefinite contractual lives

The detail of options outstanding, vested and exercisable under the 2020 Plan as of December 31, 2020 is as follows:

<u>Exercise Prices</u>	<u>Options Outstanding</u>		<u>Options Vested and Exercisable</u>	
	<u>Units</u>	<u>Weighted Average Life (Years)</u>	<u>Units</u>	<u>Weighted Average Life (Years)</u>
\$0.15 to \$0.71	2,552	—	2,552	—
\$2.15	1,115	4.1	1,115	4.1
\$2.50	2,816	5.4	1,808	5.4
\$2.67	817	6.2	377	6.2
\$3.17	1,563	7.3	813	7.3
\$3.73	2,330	8.7	278	8.6
\$4.70	683	9.1	—	—
	<u>11,876</u>		<u>6,943</u>	

The Board intends all options granted to be exercisable at a price per share not less than the per share fair market value of the Company's Class A common stock underlying the options on the date of grant. Compensation expense for new option awards issued subsequent to the Offering to participants under the 2020 Plan are measured based on the grant date fair value of the awards and recognized in the consolidated statements of comprehensive income (loss) over the period during which the participant is required to perform the requisite services. The vesting period is generally one to four years. The grant date fair value of options is estimated using the Black-Scholes model. No new options were granted subsequent to the Offering through December 31, 2020. Unrecognized compensation expense associated with the Converted SARs was \$33,671 at December 31, 2020 and is expected to be recognized over a weighted average period of approximately 3.4 years.

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(Amounts in thousands, except per share data)

Restricted Stock Units

The Company issued RSUs to eligible participants during the year ended December 31, 2020. The following table summarizes RSU activity for the year ended December 31, 2020:

	Units	Weighted Average Grant Date Fair Value Per Share
Outstanding at January 1, 2020	—	\$ —
Granted	101	23.80
Outstanding at December 31, 2020	101	\$ 23.80

Stock-based compensation cost for RSUs is measured based on the fair value of the Company's underlying common stock on the date of grant and aggregated \$2,400 in the year ended December 31, 2020. This cost will be recognized on a straight-line basis in the consolidated statements of comprehensive income (loss) over the period during which the participant is required to perform services in exchange for the award, which is generally one to four years. During the year ended December 31, 2020 the Company recognized stock-based compensation expense of \$171 related to these awards. At December 31, 2020, \$2,229 of unrecognized compensation cost for RSUs is expected to be recognized over a weighted average period of approximately 3.4 years.

Restricted Stock Awards

The Company issued RSAs to eligible participants during the year ended December 31, 2020. The following table summarizes RSA activity for the year ended December 31, 2020:

	Units	Weighted Average Grant Date Fair Value Per Share
Outstanding at January 1, 2020	—	\$ —
Granted	694	19.00
Vested	(21)	19.00
Forfeited	(3)	19.00
Outstanding at December 31, 2020	670	\$ 19.00

Stock-based compensation cost for RSAs is measured based on the fair value of the Company's underlying common stock on the date of grant and aggregated \$13,141 during the year ended December 31, 2020. This cost will be recognized on a straight-line basis in the consolidated statements of comprehensive income (loss) over the period during which the participants are required to perform services in exchange for the award, which is generally one to four years. During the year ended December 31, 2020, the Company recognized stock-based compensation expense of \$4,284, net of forfeitures, related to these awards. At December 31, 2020, \$8,857 of unrecognized compensation cost for RSAs is expected to be recognized over a weighted average period of approximately 2.2 years.

Employee Stock Purchase Plan

The ESPP permits participants to purchase Class A common stock through payroll deductions of up to a specified percentage of their eligible compensation, provided that participants will be permitted to make lump sum contributions to the ESPP during the initial offering period (July 28 to November 30, 2020). The maximum number of shares that may be purchased by a participant during any offering period is determined by the plan administrator in advance of each offering period.

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)

(Amounts in thousands, except per share data)

On the first trading day of each offering period, each participant will automatically be granted an option to purchase shares of Class A common. The option will expire at the end of the applicable offering period and will be exercised at that time to the extent of the payroll deductions accumulated or contributions made during such offering period. The purchase price of the shares, in the absence of a contrary designation, is 85% of the lower of the fair value of the Class A common on the first or last day of the ESPP offering period. Participants may voluntarily end their participation in the plan at any time during a specified period prior to the end of the applicable offering period and will be paid their accrued payroll deductions and related contributions, if applicable, that have not yet been used to purchase shares of Class A common. If a participant withdraws from the plan during an offering period, the participant cannot rejoin until the next offering period. Participation ends automatically upon a participant's termination of employment.

A total of 1,000 shares of Class A common were initially reserved for issuance under the ESPP. The number of shares available for issuance under the ESPP will be increased annually on January 1 of each calendar year beginning in 2021 and ending in and including 2030, by an amount equal to the lesser of (i) 1% of the shares of Class A and Class B common stock outstanding on the final day of the immediately preceding calendar year and (ii) such smaller number of shares as is determined by the Board, provided that no more than 16,000 shares of Class A common stock may be issued. The ESPP is administered by a committee of the Board.

During the year ended December 31, 2020, the Company recorded stock-based compensation expense of \$326 related to the ESPP. Shares of Class A common stock purchased under the ESPP aggregated 59 for the year ended December 31, 2020. As of December 31, 2020, there was approximately \$218 of unrecognized ESPP stock-based compensation cost that is expected to be recognized on a straight-line basis over the remaining term of the offering period that ends on May 31, 2021.

The fair value of ESPP purchase rights is comprised of the value of the 15% ESPP discount and the value associated with the Call/Put over the ESPP offering period. The value of the Call/Put for the initial offering period (July 28 – November 30, 2020) and the second offering period (December 1, 2020 – May 31, 2021) was estimated using the Black-Scholes model with the following assumptions:

	Initial Offering Period	Second Offering Period
Fair market value of common stock (per share)	\$ 19.00	\$ 25.83
Volatility	35.00 %	35.00 %
Expected term (years)	0.33	0.50
Expected dividend yield	-	-
Risk-free interest rate	0.11 %	0.11 %

The Company lacks sufficient historical data on the volatility of its stock price. Selected volatility is representative of expected future volatility and was based on the historical and implied volatility of comparable publicly traded companies over a similar expected term. The expected term represents the term of the ESPP offering period, which is generally six months except for the initial offering period which was from July 28 to November 30, 2020. The Company does not expect to pay dividends after the Offering. The risk-free interest rate was based on the rate for a U.S. Treasury zero-coupon issue with a term that closely approximates the expected term of the award at the date nearest the offering term.

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
(Amounts in thousands, except per share data)

Stock-Based Compensation

The Company recognized total stock-based compensation cost related to incentive awards as follows:

	For the Year Ended December 31,		
	2020	2019	2018
Stock-based compensation expense:			
SARs and Converted SARs	\$ 143,123	\$ 9,460	\$ 5,108
Stock options	—	—	—
RSUs	171	—	—
RSAs	4,284	—	—
ESPP	326	—	—
Total stock-based compensation expense	<u>\$ 147,904</u>	<u>\$ 9,460</u>	<u>\$ 5,108</u>

The Company recognized stock-based compensation cost in the consolidated statements of comprehensive income (loss) as follows:

	For the Year Ended December 31,		
	2020	2019	2018
Stock-based compensation expense:			
Cost of revenues, software subscriptions	\$ 14,663	\$ 946	\$ 512
Cost of revenues, services	21,472	1,419	765
Research and development	14,694	946	511
Selling and marketing	29,551	1,892	1022
General and administrative	67,524	4,257	2298
Total stock-based compensation expense	<u>\$ 147,904</u>	<u>\$ 9,460</u>	<u>\$ 5,108</u>

11. RELATED PARTIES

The Company advanced amounts to certain stockholders of the Company of \$283 at December 31, 2019. These amounts are non-interest bearing as they are short-term in nature and repaid within three months. These amounts are included in prepaid expenses and other current assets in the consolidated balance sheet. No amounts were outstanding at December 31, 2020.

12. COMMITMENTS AND CONTINGENCIES

The Company leases office space under operating leases that expire at various dates through September 2028. Rent expense under all property operating leases was \$7,006, \$6,408 and \$6,291 for the years ended December 31, 2020, 2019 and 2018, respectively. These amounts are reflected in general and administrative expense in the consolidated statements of comprehensive income (loss).

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
(Amounts in thousands, except per share data)

Future minimum lease obligations as of December 31, 2020 for all operating property leases for all future years, excluding operating costs, are as follows:

<u>Year Ending December 31,</u>	
2021	\$ 5,442
2022	4,518
2023	4,459
2024	4,464
2025	4,382
Thereafter	12,531
Total	\$ 35,796

The Company may become involved in various lawsuits and legal proceedings, which arise, in the ordinary course of business. However, litigation is subject to inherent uncertainties, and an adverse result in these or other matters may arise from time to time that may harm our business. The Company is not aware of any such legal proceedings or claims that management believes will have a material adverse effect on our business, financial condition, or operating results.

13. INCOME TAXES

The Company has historically been taxed as an S-Corporation for U.S. federal income tax purposes and for income tax purposes in most states. As a result, income was not subject to U.S. federal income taxes or state income taxes in those states where the S-Corporation status is recognized. Therefore, previously, no provision or liability for federal or state income tax had been provided in the consolidated financial statements except for those states where the S-Corporation status was not recognized, or where states imposed a tax on S-Corporations. The provision for income tax in the historical periods prior to the Offering consists of these state taxes and taxes from certain foreign jurisdictions where the Company is subject to tax.

Effective July 27, 2020 the Company converted to a C-Corporation, which has resulted in net income or losses for all future periods to be taxed at the corporate level. The termination of the S-Corporation status was treated as a change in tax status resulting in the deferred tax effects of such change being recorded to income from continuing operations on the date the S-Corporation status terminated. The termination of the S-Corporation election has had a material impact on the Company's results of operations and financial condition. As such, the Company's income tax provision for periods subsequent to the C-Corporation conversion will not be comparable to periods prior to such conversion.

For U.S. corporate income tax purposes, the Company will apportion its 2020 taxable income ratably between the S-Corporation and C-Corporation periods. This allocation of income will effectively result in a blended income tax rate for the 2020 year, as only the C-Corporation earnings will be subject to both U.S. federal and state corporate income tax, while the S-Corporation earnings will only be subject to tax in those states that tax S-Corporations or do not recognize S-Corporation status.

The components of net income (loss) before income taxes, by geography, are as follows:

	<u>For the Year Ended December 31,</u>		
	<u>2020</u>	<u>2019</u>	<u>2018</u>
U.S.	\$ (107,959)	\$ 32,131	\$ (1,999)
Foreign	90	(1,229)	(2,428)
Net income (loss) before income taxes	\$ (107,869)	\$ 30,902	\$ (4,427)

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
(Amounts in thousands, except per share data)

Income tax benefit (expense) consists of the following:

	For the Year Ended December 31,		
	2020	2019	2018
Current income taxes:			
Federal	\$ —	\$ —	\$ —
State and local	(617)	(578)	(537)
Foreign	(94)	(115)	(295)
Total current	<u>(711)</u>	<u>(693)</u>	<u>(832)</u>
Deferred income taxes:			
Federal	23,931	—	—
State and local	5,780	677	(818)
Foreign	(68)	171	(29)
Total deferred	<u>29,643</u>	<u>848</u>	<u>(847)</u>
Income tax benefit (expense)	<u>\$ 28,932</u>	<u>\$ 155</u>	<u>\$ (1,679)</u>

During the year ended December 31, 2020, the Company recognized a \$55 income tax benefit in accumulated other comprehensive loss relating to recognized losses from foreign currency translation adjustments and revaluations.

The reconciliation of the effective tax rate to tax at the statutory rates for the years ended December 31 is as follows:

	2020		2019		2018	
	Total	Tax Rate	Total	Tax Rate	Total	Tax Rate
Pretax net (loss) income	\$ (107,869)		\$ 30,902		\$ (4,427)	
Taxes:						
U.S. federal income tax at statutory rate	\$ (22,652)	21.0 %	\$ 6,489	21.0 %	\$ (930)	21.0 %
State income taxes	(1,811)	1.7 %	(98)	(0.3)%	1,355	(30.6)%
Tax effect of S-Corporation status	21,325	(19.8)%	(6,489)	(21.0)%	930	(21.0)%
Impact of change in tax status	(24,944)	23.1 %	—	— %	—	— %
Stock-based compensation expense	(1,554)	1.4 %	—	— %	—	— %
Impact of foreign operations	(56)	— %	(57)	(0.2)%	324	(7.3)%
Other permanent items, net	760	(0.6)%	—	— %	—	— %
Taxes and effective tax rate	<u>\$ (28,932)</u>	<u>26.8 %</u>	<u>\$ (155)</u>	<u>(0.5)%</u>	<u>\$ 1,679</u>	<u>(37.9)%</u>

The effective tax rate in 2020 increased to 26.8% from 0.5% in 2019. For the year ended December 31, 2020, the Company recorded a \$24,944 deferred tax benefit related to the remeasurement of its U.S. deferred tax assets and liabilities due to the change in tax status from an S-Corporation to a C-Corporation.

The effective tax rate in 2019 decreased to 0.5% from 37.9% in 2018 primarily due to a \$1.0 million charge in 2018 to establish deferred taxes for assets that were transferred to the U.S. from a taxing jurisdiction that had a 0% tax rate.

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
(Amounts in thousands, except per share data)

Significant components of the Company's net deferred tax assets (liabilities) are as follows:

	As of December 31,	
	2020	2019
Deferred tax assets:		
Deferred revenue	\$ 4,013	\$ 289
State operating loss carry forwards	2,595	56
Federal and foreign loss carry forwards	13,526	217
Accrued expenses	3,952	98
Accrued variable compensation	3,272	(47)
Deferred compensation	24,933	548
Other	727	46
Deferred tax assets	53,018	1,207
Valuation allowance	(1,507)	(46)
Total deferred tax assets	51,511	1,161
Deferred tax liabilities:		
Depreciation and amortization	(19,998)	(860)
Prepaid expenses	(1,556)	(40)
Total deferred tax liabilities	(21,554)	(900)
Net deferred tax asset	\$ 29,957	\$ 261
Classification in the consolidated balance sheets:		
Deferred income tax asset	\$ 29,974	\$ 288
Deferred other liabilities	(17)	(27)
Net deferred tax asset	\$ 29,957	\$ 261

At December 31, 2020, the Company has available U.S. federal operating loss carry forwards of \$56,759, and U.S. state operating loss carry forwards of \$44,613. The federal operating loss will carryforward indefinitely and the state operating loss will expire at varying dates beginning in 2026. Management expects to fully utilize these U.S. federal and U.S. state operating loss carry forwards.

At December 31, 2020, the Company has available foreign operating losses of approximately \$4,865, some of which expire as early as 2025, and others which carry forward indefinitely. In addition, the Company has \$56 of foreign non-operating losses, which carry forward indefinitely. A valuation allowance for a portion of the foreign operating and all of the foreign non-operating losses are recorded at December 31, 2020 and 2019. During the year ended December 31, 2020, we recognized \$1,269 of incremental valuation allowances through purchase accounting related to net operating losses associated with Systax.

The Company does not assert any earnings to be permanently reinvested with respect to the undistributed earnings of its foreign subsidiaries.

The Company files tax returns as prescribed by the tax laws of the jurisdictions in which the Company operates. Under applicable U.S. federal statutes, tax years ended December 31, 2017 through December 31, 2020 remain subject to examination. Under applicable statutes, state and foreign corporate tax returns filed for the Company and its respective foreign subsidiaries for years ended December 31, 2015 through December 31, 2020 remain subject to examination by the respective authorities.

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
(Amounts in thousands, except per share data)

14. SUBSEQUENT EVENTS

On January 25, 2021, the Company acquired Tellutax, a Portland, Oregon-based edge computing technology startup for \$6,100. The acquisition was funded through cash on hand and serves to strengthen our technology roadmap and hybrid cloud strategy, enabling us to better serve customers in an increasingly hyper-connected environment. Our accounting for the Tellutax acquisition, including whether it constitutes an asset or business purchase, is preliminary.

DESCRIPTION OF CAPITAL STOCK

General

Our authorized capital stock consists of 450,000,000 shares of common stock, par value \$0.001 per share, and 30,000,000 shares of preferred stock, par value \$0.001 per share. Our common stock is divided into two classes, Class A common stock and Class B common stock. Our authorized Class A common stock consists of 300,000,000 shares and our authorized Class B common stock consists of 150,000,000 shares.

We adopted an amended and restated certificate of incorporation and amended and restated bylaws on July 28, 2020. The following description of our capital stock and provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries and are qualified by reference to the amended and restated certificate of incorporation and amended and restated bylaws.

Common Stock

We have two classes of authorized common stock: Class A common stock and Class B common stock. The rights of the holders of Class A common stock and Class B common stock are identical, except with respect to voting, conversion and transfer rights.

Voting Rights

Holders of shares of our Class A common stock are entitled to one vote for each share held of record on all matters submitted to a vote of stockholders. Holders of shares of our Class B common stock are entitled to ten votes for each share held of record on all matters submitted to a vote of stockholders. The holders of our common stock do not have cumulative voting rights in the election of directors.

Our amended and restated certificate of incorporation provides that so long as any shares of Class B common stock remain outstanding, the Company shall not, without the prior affirmative vote of the holders of a majority of the outstanding shares of Class B common stock, voting as a separate class, in addition to any other vote required by applicable law or our amended and restated certificate of incorporation, whether by amendment, or through merger, consolidation or otherwise, amend, alter, change, repeal or adopt any provision of our amended and restated certificate of incorporation inconsistent with, or otherwise alter or change, any of the voting, conversion, dividend or liquidation provision of the shares of Class B common stock or other rights, powers, preferences or privileges of the shares of Class B common stock.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-240143 on Form S-8 of Vertex, Inc. of our report dated March 15, 2021 relating to the financial statements, appearing in this Annual Report on Form 10-K.

/s/ Crowe LLP
Crowe LLP

New York, New York
March 15, 2021

CERTIFICATION

I, David DeStefano, certify that:

1. I have reviewed this Annual Report on Form 10-K of Vertex, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 15, 2021

By: /s/ David DeStefano

David DeStefano

Chief Executive Officer

(principal executive officer)

CERTIFICATION

I, John Schwab, certify that:

1. I have reviewed this Annual Report on Form 10-K of Vertex, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 15, 2021

By: /s/ John Schwab
John Schwab
Chief Financial Officer
(principal financial officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of Vertex, Inc. (the "Company") for the period ended December 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 15, 2021

By: /s/ David DeStefano

David DeStefano
Chief Executive Officer
(principal executive officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of Vertex, Inc. (the "Company") for the period ended December 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 15, 2021

By: /s/ John Schwab
John Schwab
Chief Financial Officer
(principal financial officer)
