



FISCAL YEAR 2024 ANNUAL REPORT

Executive Officers

David DeStefano, President, Chief Executive Officer & Chairperson

John Schwab, Chief Financial Officer

Bryan Rowland, Senior Vice President & General Counsel

Board of Directors

Eric Andersen
Operating partner at PeakEquity

David DeStefano
President, Chief Executive Officer & Chairperson of Vertex, Inc.

Bradley Gayton
Former Senior Vice President, General Counsel of the Coca-Cola Company

Philip Saunders
Chief Executive Officer of Relativity

J. Richard Stamm
Former partner at PricewaterhouseCoopers LLP

Amanda Westphal Radcliffe
Director of Vertex, Inc.

Stephanie Westphal Thompson
Director of Vertex, Inc.

Stockholder and Corporate Information

Annual Meeting of Stockholders

Wednesday, June 11, 2025
9:00 a.m., Eastern Time
Via live webcast

Class A Common Stock Listing

Nasdaq: VERX

Corporate Headquarters

2301 Renaissance Blvd.,
King of Prussia, PA 19406

Independent Registered Public Accounting Firm

Crowe LLP

Available Information

We make available free of charge under the Investor Relations section of our website, ir.vertexinc.com, filings we make with the Securities and Exchange Commission (SEC) and other information about the company. Filings we make with the SEC may also be accessed free of charge on the SEC's publicly available website, www.sec.gov.

A copy of Vertex, Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2024, including financial statements and schedules thereto, but not including exhibits, as filed with the SEC, will be sent to any stockholder of record on April 16, 2025 without charge upon written request addressed to:

Vertex, Inc.
Attention: Secretary
2301 Renaissance Blvd.
King of Prussia, PA 19406

A reasonable fee will be charged for copies of exhibits.

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, 2024

OR

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

For the transition period from to

Commission File Number: 001-39413

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

☒ Accelerated filer

☐ Small reporting company

☐ Emerging growth company

Indicate by check mark whether 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 ☒

Indicate by check mark whether the registrant has included in the filing reflect the correction of an error to previously issued financial statements. ☐

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

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of Vertex, Inc. as of June 30, 2024, totaled approximately \$2,080,796,194. Such value excludes common stock held by executive officers, directors and 10% or greater stockholders as of June 30, 2024. The identification of 10% or greater stockholders as of June 30, 2024, is based on Schedule 13G and amended Schedule 13G reports publicly filed before June 30, 2024. This calculation does not reflect a determination that such parties are affiliates for any other purposes.

As of February 21, 2025, the registrant had 71,702,437 shares of Class A common stock, \$0.001 par value per share, and 86,480,641 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 2025 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, 2024.

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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 statements 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

Throughout this Annual Report on Form 10-K, Vertex, Inc. and its subsidiaries together are called “Vertex,” “the Company,” “we,” “us,” or “our,” unless otherwise noted. References in this Annual Report on Form 10-K to a particular “year,” or “fiscal,” mean our fiscal year, which ends on December 31.

Item 1. Business

Overview

Vertex is a leading provider of enterprise tax technology solutions. Our software, content, and services help customers stay in compliance with indirect taxes that occur in taxing jurisdictions all over the world.

Collectively, indirect taxes refer to taxes that are collected and remitted to the government by an entity other than the one being taxed. As an example, sales tax is paid by a person or entity that is purchasing a product or service, but it is collected and remitted by the company or entity selling that product or service. This contrasts with direct taxes, such as income tax, which are paid directly by the entity being taxed.

Indirect taxes, such as sales tax, use tax, and value-added tax (“VAT”) are complex. In the United States (“U.S.”) alone, Vertex tax content addresses indirect taxes for over 20,000 unique taxing jurisdictions. Compounding the complexity, rules, regulations, and indirect tax rates are constantly changing. For a company doing business in multiple jurisdictions, compliance with these taxes is a significant challenge and one they encounter in literally every sale or purchase transaction they execute on a daily basis.

Vertex helps companies with complex tax operations to automate their 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 and enabling greater confidence in meeting indirect tax obligations by helping to mitigate the risk of non-compliance.

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 by entering new geographies, enhancing their distribution channels, adding eCommerce capabilities, or transforming their digital footprint, they increase their exposure to 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 4,900 direct customers, including the majority of the Fortune 500, and provide our customers with tax support in over 195 countries and territories. Our software enables tax determination, compliance and reporting, tax data management and document management, and analytics and insights with powerful pre-built integrations to core business applications used by most companies, particularly those applications that have a significant impact on global commerce transactions. Our software is fueled by over 900 million data-driven effective tax rules and supports indirect tax compliance in more than 20,000 jurisdictions worldwide. Our solutions can be deployed in the cloud, on-premise environments, or at the network edge, all with implementation services available to enable optimal customer outcomes and satisfy unique business requirements.

Our Solutions

Our Vertex solutions can automate the end-to-end indirect tax processes for all companies with complex tax operations and audit risk. Our software includes tax determination, compliance and reporting, tax data management and document management tools, analytics and insights, as well as pre-built integrations to major business applications. Customers can utilize 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. Companies use these solutions to 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 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 and 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.
- ***Analytics and Insights.*** Our analytics and insights tools improve data quality and provide data intelligence to optimize the end-to-end tax process and improve business outcomes.
- ***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, Shopify, 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 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.
- ***Technology Specific Solutions – Chain Flow Accelerator, SAP-specific tools.*** We offer a number of technology solutions that offer tools and enhancements to certain ecosystems, like SAP or Oracle, which are deeply integrated into their technology stack. For example, our Chain Flow Accelerator tool allows configuration of tax specific flows within the SAP stack. In addition, we offer an SAP specific tool set that provides customers the ability to maintain, analyze, and validate tax data in procure-to-pay as well as sales and billing systems that enhance its usefulness for indirect taxes as well as other business applications.
- ***Implementation 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.

- **Managed Services.** 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.
- **E-invoicing.** We offer a global solution for the end-to-end e-invoicing process. Our solution enables organizations to optimize their real-time VAT reporting and e-invoicing processes for multiple countries to enhance continuous transaction controls and support direct reporting requirements. Our solution provides a single integrated platform to streamline the creation, submission, clearance, and e-archiving of e-invoices in compliance with jurisdictional mandates.

Our Tax Content

All our software and solutions are underpinned by our proprietary content database, which currently supports over 900 million effective tax rules. Our content quality and accuracy are key components of our software subscriptions revenue and customer value and are supported by over 40 years of tax knowledge and experience. Our content quality and accuracy are critical to the longevity of our customer relationships. 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 across 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 industries such as retail, technology, and manufacturing, in addition to leading digital 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 digital 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 digital marketplace providers in North America by revenue. These customers support tens of thousands of merchants who rely on their platform for their eCommerce 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, 2024, we had 4,915 direct customers and our Annual Recurring Revenue (“ARR”) per customer was \$122,706. 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 Canada and Europe. For both the years ended December 31, 2024 and 2023, approximately 8% of our revenue was generated outside of the U.S. Additionally, no single customer represented more than 10% of our total revenue for the years ended December 31, 2024 or 2023.

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 our customers evolve through acquisitions, expand their products and services, enter new geographies, and enhance their distribution channels, we believe their need for our software, services, and content will also grow. 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 revenue-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.** 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 direct sales, indirect sales, and partnership marketing teams, and our solution development 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.
- ***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, enhanced our country-specific content database, and furthered our investment in our global compliance reporting solution. Another example in Europe includes leveraging our recent acquisition of ecosio GmbH (“ecosio”) and our e-invoicing solution to enable companies to stay compliant with current and emerging local VAT regulations, as well as positioning us to expand into new markets as individual country mandates continue to develop. 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 invest 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. Recently, we entered into an asset purchase agreement to acquire tax-specific artificial intelligence (“AI”) capabilities to more effectively manage the complexity of tax mapping. We will also be launching a product that leverages generative AI to deliver accurate and timely product and tax category mapping.

Sales and Marketing

We license our software and solutions primarily through our direct and indirect sales organization, with a focus on enterprise and midmarket 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. These 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, Shopify, 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.
- **Channel and Resellers.** We continue to expand our indirect go-to-market reach to capitalize on the significant mid-market growth opportunities. These partners include value-added resellers, service providers and original equipment manufacturer relationships with technology firms, system integrators, tax consultants and industry groups such as Avanade, Acumatica, and CPA.com. These investments enable certification, training, and enablement to deliver rapid time-to-value and scale.

Research and Development

Our research and development team consists of our architecture, software engineering, user experience, infrastructure development operations 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 with significant focus on emerging technologies such as edge computing, artificial intelligence/machine learning, data fabric/mesh platforms, blockchain, application programming interface/microservices, and containerization 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 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. Vertex received recognition in 2024 as a "Best Place to Work" from *Built In*, reflecting the value we place on our people and environment. 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 Business Resource Groups ("BRGs"), community service, and philanthropy.

As of December 31, 2024, we had over 1,900 full-time employees. Of these employees, 76% were based in the U.S., 14% based in Europe and 10% in other countries. We believe we have a strong relationship with our employees, and we have not experienced any work stoppages.

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 Reports 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.

We may face challenges in using and properly managing use of Artificial Intelligence ("AI") in our business, which could result in reputational or competitive harm, and legal liability, and could adversely and materially affect the results of our business, operations, financial condition, and cash flows.

We will be launching a product leveraging generative AI and may incorporate other AI solutions into our platform, offerings, and/or services, and these solutions may grow over time and become significant in our operations. If the content, analyses, or recommendations that our product leveraging generative AI assist in producing are or are alleged to be deficient, inaccurate, or biased, our business, operations, or financial condition may be adversely and materially affected. The use of AI applications have resulted in cybersecurity incidents that implicate the personal data of end users of such applications. Any such cybersecurity incidents related to our use of AI applications could adversely affect our reputation and operations. The legal and regulatory environment governing AI is evolving and creates uncertainty and new laws may cause us to modify our AI strategy or implementation of technology leveraging AI functionality. AI also presents emerging ethical issues and if our use of AI becomes controversial, we may experience brand or reputational harm, competitive harm, or legal liability.

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 have recently experienced efforts by a significant competitor to solicit our employees, and other competitors may take similar actions in the future. 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, and technologies, 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 flows.

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, expand 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, but are not limited to:

- 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. To date, the Company has not experienced any material impact to the business or operations resulting from information or cybersecurity attacks; however, because of the frequently changing attack techniques, along with the increased volume and sophistication of the attacks, there is the potential for the Company to be adversely impacted.

The increase in remote working arrangements by our employees, vendors, and other third parties also increases the risk of a data security compromise and the possible attack surfaces. Although we conduct training as part of our information security, cybersecurity, and data privacy efforts, that training cannot be completely effective in preventing those attacks from being successful. There can be no assurance that our cybersecurity risk management program and processes, including our policies, controls, or procedures, will be fully implemented, complied with or effective in protecting our systems and information.

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.

Our business is dependent upon the proper functioning of our business processes and information systems, and modification or interruption of such systems may disrupt our business, processes and internal controls.

We rely upon internal processes and information systems to support key business functions, including our assessment of internal controls over financial reporting as required by Section 404 of the Sarbanes-Oxley Act. The efficient operation of these processes and systems is critical, and these processes and systems need to be scalable to support our growth. Our ERP system integrates multiple business areas and other systems across the organization. Any issues, problems, and errors in the operation of the ERP system or the other connected systems may impact our continued ability to successfully operate our business or to timely and accurately report our financial results. In addition, failure of the controls governing the operation of our ERP system could harm our results of operations or cause us to fail to meet our reporting obligations.

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, or the economic uncertainty created by the changing legal, regulatory, or taxation landscape in the United States, 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 or uncertain 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. There is no guarantee that we will be able to offset inflationary pressure through price increases, and a sustained increase in inflation could have an adverse impact on our operating expenses our business, results of operations, financial condition and cash flows. The extent of these effects on our business and financial results will depend largely on future developments, which are highly uncertain and cannot be predicted.

Natural disasters, epidemic or pandemic 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 or pandemic 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 or pandemic outbreak may have a material adverse effect on global economic conditions, consumer spending and the stability of global financial markets. 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. 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.

If we identify any material weaknesses in our internal control over financial reporting, our management will be unable to assert that our disclosure controls and procedures and our internal control over financial reporting is effective. If we are unable to assert that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an unqualified opinion as to the effectiveness of our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could be adversely affected and we could become subject to litigation or investigations by NASDAQ, the SEC, or other regulatory authorities, which could require additional financial and management resources.

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 in the past and may in the future rely on the exemptions afforded to a “controlled company” from the corporate governance requirements described above. 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.

Our indebtedness and liabilities could limit the cash flow available for our operations, expose us to risks that could adversely affect our business, financial condition and results of operations and impair our ability to satisfy our obligations under our indebtedness.

In April 2024, we incurred \$345.0 million aggregate principal amount of indebtedness as a result of the issuance of the Company's 0.750% Convertible Senior Notes due 2029 (the “Notes”). As of December 31, 2024, we had approximately \$923.4 million of indebtedness, excluding indebtedness of our subsidiaries and intercompany liabilities. We may also incur additional indebtedness to meet future financing needs. Our indebtedness could have significant negative consequences for our security holders and our business, results of operations and financial condition by, among other things:

- increasing our vulnerability to adverse economic and industry conditions;
- limiting our ability to obtain additional financing;
- requiring the dedication of a substantial portion of our cash flow from operations to service our indebtedness, which will reduce the amount of cash available for other purposes;
- limiting our flexibility to plan for, or react to, changes in our business;

- diluting the interests of our existing stockholders as a result of issuing shares of our Class A common stock upon conversion of the Notes; and
- placing us at a possible competitive disadvantage with competitors that are less leveraged than us or have better access to capital.

Our business may not generate sufficient funds, and we may otherwise be unable to maintain sufficient cash reserves, to pay amounts due under our indebtedness, including the Notes, and our cash needs may increase in the future. In addition, the Credit Agreement contains, and any future indebtedness that we may incur may contain financial and other restrictive covenants that limit our ability to operate our business, raise capital or make payments under our other indebtedness. If we fail to comply with these covenants or to make payments under our indebtedness when due, then we would be in default under that indebtedness, which could, in turn, result in that and our other indebtedness becoming immediately payable in full.

Despite current indebtedness levels, we may incur substantially more debt or take other actions which would further intensify the risks associated with our indebtedness.

We and our subsidiaries may be able to incur substantial additional debt in the future, subject to the restrictions contained in our debt instruments, some of which may be secured debt. We will not be restricted under the terms of the indenture governing the Notes (the “Indenture”) from incurring additional debt, securing existing or future debt, recapitalizing our debt or taking a number of other actions that are not limited by the terms of the Indenture that could have the effect of diminishing our ability to make payments on our indebtedness when due. Each of our Line of Credit and Term Loan restricts our ability to incur additional indebtedness, including secured indebtedness, but if the respective facility matures or is repaid, we may not be subject to such restrictions under the terms of any subsequent indebtedness.

We may be unable to raise the funds necessary to repurchase the Notes for cash following a “fundamental change,” or to pay any cash amounts due upon conversion, and applicable law, regulatory authorities and our other indebtedness may limit our ability to repurchase the Notes or pay cash upon their conversion.

Noteholders may, subject to a limited exception, require us to repurchase their Notes following a “fundamental change” (as described in the Indenture governing the Notes) at a cash repurchase price generally equal to the principal amount of the Notes to be repurchased, plus accrued and unpaid interest, if any, to, but excluding, the fundamental change repurchase date. In addition, upon conversion, we will satisfy part or all of our conversion obligation in cash unless we elect to settle conversions solely in shares of our Class A common stock. We may not have enough available cash or be able to obtain financing at the time we are required to repurchase the Notes or pay the cash amounts due upon conversion. In addition, applicable law, regulatory authorities and the agreements governing our other indebtedness may restrict our ability to repurchase the Notes or pay the cash amounts due upon conversion. Our failure to repurchase Notes or to pay the cash amounts due upon conversion when required will constitute a default under the Indenture. A default under the Indenture or the fundamental change itself could also lead to a default under agreements governing our other indebtedness, which may result in that other indebtedness becoming immediately payable in full. We may not have sufficient funds to satisfy all amounts due under the other indebtedness and the Notes.

Provisions in the Indenture could delay or prevent an otherwise beneficial takeover of us.

Certain provisions in the Notes and the Indenture could make a third party’s attempt to acquire us more difficult or expensive. For example, if a takeover constitutes a “fundamental change” (as described in the Indenture governing the Notes), then noteholders will have the right to require us (or in limited circumstances, such third party) to repurchase their Notes for cash. In addition, if a takeover constitutes a “make-whole fundamental change” (as described in the Indenture governing the Notes), then we may be required to temporarily increase the conversion rate. In either case, and in other cases, our obligations under the Notes and the Indenture could increase the cost of acquiring us or otherwise discourage a third party from acquiring us or removing incumbent management, including in a transaction that noteholders or holders of our Class A common stock may view as favorable.

The accounting method for the Notes could adversely affect our reported financial condition and results.

The accounting method for reflecting the Notes on our balance sheet, accruing interest expense for the Notes and reflecting the underlying shares of our Class A common stock in our reported diluted earnings per share may adversely affect our reported earnings and financial condition.

In August 2020, the Financial Accounting Standards Board (“FASB”) published Accounting Standards Update (“ASU”) 2020-06, which simplifies certain of the accounting standards that apply to convertible notes. In accordance with ASU 2020-06, the Notes are reflected as a liability on our balance sheets, with the initial carrying amount equal to the principal amount of the Notes, net of issuance costs. The issuance costs are treated as a debt discount for accounting purposes, and are amortized into interest expense over the term of the Notes. As a result of this amortization, the interest expense that we recognize for the Notes for accounting purposes is greater than the cash interest payments we pay on the Notes, which results in lower reported income or higher reported loss.

In addition, the shares underlying the Notes are reflected in our diluted earnings per share using the “if converted” method, in accordance with ASU 2020-06. Under that method, if the conversion value of the Notes exceeds their principal amount for a reporting period, then we calculate our diluted earnings per share assuming that all of the Notes were converted at the beginning of the reporting period and that we issued shares of our Class A common stock to settle the excess. However, if reflecting the Notes in diluted earnings per share in this manner is anti-dilutive, or if the conversion value of the Notes does not exceed their principal amount for a reporting period, then the shares underlying the Notes are not reflected in our diluted earnings per share. The application of the if-converted method may reduce our reported diluted earnings per share, and accounting standards may change in the future in a manner that may adversely affect our diluted earnings per share.

Furthermore, if any of the conditions to the convertibility of the Notes is satisfied, then we may be required under applicable accounting standards to reclassify the liability carrying value of the Notes as a current, rather than a long-term, liability. This reclassification could be required even if no holders of the Notes convert their Notes and could materially reduce our reported working capital.

The Capped Call Transactions may affect the value of our Class A common stock.

In connection with the pricing of the Notes, we entered into Capped Call Transactions (as defined in Note 10, “Debt” to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K) with certain Option Counterparties (also defined in Note 10, “Debt”). The Capped Call Transactions are expected generally to reduce the potential dilution upon any conversion of the Notes and/or offset any cash payments we are required to make in excess of the principal amount of converted Notes, as the case may be, with such reduction and/or offset subject to a cap.

The Option Counterparties or their respective affiliates may modify their hedge positions by entering into or unwinding various derivatives with respect to our Class A common stock and/or purchasing or selling our Class A common stock or other securities of ours in secondary market transactions from time to time prior to the maturity of the Notes (and are likely to do so during any observation period related to a conversion of Notes). This activity could also cause or avoid an increase or a decrease in the market price of our Class A common stock.

In addition, if any such Capped Call Transactions are terminated for any reason, the Option Counterparties or their respective affiliates may unwind their hedge positions with respect to our Class A common stock, which could adversely affect the value of our Class A common stock.

Furthermore, the Option Counterparties are financial institutions, and we will be subject to the risk that any or all of them might default under the Capped Call Transactions. Our exposure to the credit risk of the Option Counterparties will not be secured by any collateral. If an Option Counterparty becomes subject to insolvency proceedings, we will become an unsecured creditor in those proceedings with a claim equal to our exposure at that time under the Capped Call Transactions with such Option Counterparty. Our exposure will depend on many factors but, generally, an increase in our exposure will be correlated to an increase in the market price and in the volatility of our Class A common stock. We can provide no assurances as to the financial stability or viability of the Option Counterparties.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 1C. Cybersecurity Disclosures

Cybersecurity Risk Management and Strategy

Our cybersecurity risk management initiative is a cornerstone of our information security program, which includes a cross-functional management team with representatives from Legal, Enterprise Risk Management, Information Security, Information Technology, and Engineering. The cybersecurity risk management work is directed by the Enterprise Risk Management Team in collaboration with the Information Security Team and is intended to protect the confidentiality, integrity, and availability of our critical systems and information. Our information security program includes a cybersecurity incident response plan and playbook.

We have designed and assessed our program based on the National Institute of Standards and Technology Cybersecurity Framework (“NIST CSF”). This does not imply that we meet any particular technical standards, specifications, or requirements, only that we use the NIST CSF as a guide to help us identify, assess, and manage cybersecurity risks relevant to our business.

Our cybersecurity risk management initiative is integrated into our overall enterprise risk management program, and shares common methodologies, reporting channels and governance processes that apply across the enterprise risk management program to other legal, compliance, strategic, operational, and financial risk areas.

Our cybersecurity risk management initiative includes:

- risk assessments designed to help identify material cybersecurity risks to our critical systems, information, products, services, and our broader enterprise IT environment;
- a risk management team responsible for managing our cybersecurity risk assessment processes and acts as a check and balance on our information security team which is responsible for maintaining, monitoring, and updating our security controls as well as managing our response to cybersecurity incidents;
- the use of external service providers, where appropriate, to assess, test or otherwise assist with aspects of our security controls;
- cybersecurity awareness training of our employees, incident response personnel, and senior management;
- a cybersecurity incident response plan and playbook that includes procedures for responding to cybersecurity incidents; and
- a third-party risk management process for service providers, suppliers, and vendors.

We have not identified risks from known cybersecurity threats, including as a result of any prior cybersecurity incidents, that have materially affected us, including our operations, business strategy, results of operations, or financial condition. We face risks from cybersecurity threats that, if realized, are reasonably likely to materially affect us, including our operations, business strategy, results of operations, or financial condition. See Item 1A. “Risk Factors – 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.”

Cybersecurity Governance

Our Board of Directors (the “Board”) considers cybersecurity risk as part of its risk oversight function and has delegated to the Audit Committee (the “Committee”) oversight of cybersecurity and other information technology risks. The Committee oversees management’s implementation of our cybersecurity risk management program.

The Committee receives quarterly reports from management on our cybersecurity risks. In addition, management updates the Committee, as necessary, regarding any cybersecurity incidents.

The Committee reports to the full Board regarding its activities, including those related to cybersecurity. The full Board also receives briefings from management on our cybersecurity risk management program. Board members receive presentations on cybersecurity topics from our General Counsel, internal security staff, or external experts as part of the Board's continuing education on topics that impact public companies.

Our Chief Operating Officer and General Counsel manage the cybersecurity risk management program. The Vertex Executive Leadership Team has oversight over their management and the program. Our Chief Operating Officer is responsible for managing and mitigating our material risks from cybersecurity threats. His team of information security professionals manage our internal cybersecurity personnel and our retained external cybersecurity consultants. Our Chief Operating Officer has over twenty-five years of leadership experience in global business operations, including information security and compliance. Our General Counsel has overall management responsibility of cybersecurity risks. His team of attorneys and certified risk professional assess cybersecurity risks, assist the information security team with mitigating identified risks, and aligns the management of cybersecurity risks with the management of enterprise risks. Our General Counsel's experience includes over twenty years in positions of leadership in global organizations supervising compliance and risk professionals.

Our management team supervises efforts to prevent, detect, mitigate, and remediate cybersecurity risks and incidents through various means, which may include briefings from internal security personnel; threat intelligence and other information obtained from governmental, public or private sources, including external consultants engaged by us; and alerts and reports produced by security tools deployed in the IT environment.

Item 2. Properties

Our corporate headquarters, which includes our operations and development teams, 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 Naperville, Illinois; Frankfurt, Germany; Sao Paulo, Brazil; Chennai, India; Killorglin, Ireland; Cork, Ireland; and Vienna, Austria.

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

Item 3. Legal Proceedings

On January 25, 2022, we filed a complaint (subsequently amended on February 9, 2022) against Avalara, Inc. ("Avalara") in the United States District Court for the Eastern District of Pennsylvania. The complaint alleges claims of unfair competition, intentional interference with contractual relations, and trade secret misappropriation against Avalara. We are seeking a permanent injunction to prevent Avalara from further interference with our contractual relations and to prohibit the disclosure in any way of our confidential, proprietary and/or trade secret information. We are also seeking monetary damages, including punitive damages and attorney's fees. As of December 31, 2024, the matter remains before the Court and is proceeding through the discovery process. We believe the allegations in the complaint, once proven, are sufficient to prevail in this matter. However, the eventual outcome of the case is subject to a number of uncertainties, and therefore we cannot offer any assurance as to the ultimate impact of this case on our business and operations.

In addition to the foregoing matter, 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 Global Market 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, 2024, we had 6 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.

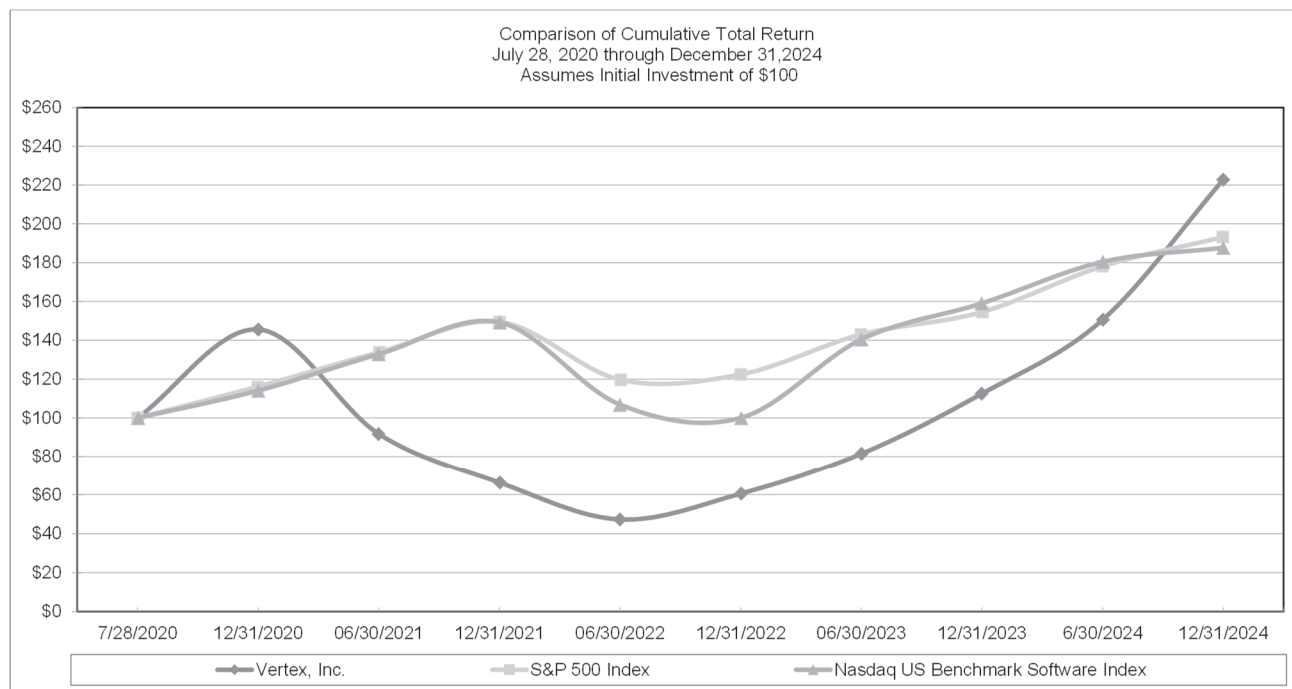
As of December 31, 2024, there were 22 stockholders of record of our Class B common stock.

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⁽¹⁾ compares the cumulative total return on our Class A common stock with that of the S&P 500 Index⁽²⁾ and the NASDAQ U.S. Benchmark Software TR Index⁽³⁾. The period shown commences on July 28, 2020, and ends on December 31, 2024, 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.



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² S&P 500 Index Data: Copyright Standard and Poor's, Inc. Used with permission. All rights reserved.

³ NASDAQ Index Data: Copyright NASDAQ OMX, Inc. Used with permission. All rights reserved.

Company / Index	Base Date									
	7/28/20	12/31/20	6/30/21	12/31/21	6/30/22	12/31/22	6/30/23	12/31/23	6/30/24	12/31/24
Vertex, Inc.	\$ 100.00	\$ 145.62	\$ 91.67	\$ 66.31	\$ 47.33	\$ 60.62	\$ 81.46	\$ 112.53	\$ 150.57	\$ 222.82
S&P 500	\$ 100.00	\$ 116.12	\$ 133.83	\$ 149.46	\$ 119.63	\$ 122.39	\$ 143.07	\$ 154.56	\$ 178.20	\$ 193.23
NASDAQ U.S. Benchmark Software TR	\$ 100.00	\$ 114.08	\$ 132.90	\$ 149.28	\$ 106.79	\$ 100.01	\$ 140.52	\$ 159.09	\$ 180.49	\$ 187.69

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Item 6. [Reserved]

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."

This section of this Annual Report on Form 10-K generally discusses 2024 and 2023 items and year-to-year comparisons between 2024 and 2023. Discussions of 2022 items and year-to-year comparisons between 2023 and 2022 are not included in this Annual Report on Form 10-K, and can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of the Company's Annual Report on Form 10-K for the year ended December 31, 2023.

Overview

Vertex is a leading global provider of indirect tax software and solutions. Our mission is to deliver the most trusted tax technology enabling global businesses to transact, comply, and grow with confidence. Vertex provides cloud-based and on-premise solutions that can be tailored to specific industries for every major line of indirect tax, including sales and consumer use, value added (including e-invoicing), and payroll. Headquartered in North America, and with offices in South America and Europe, Vertex employs over 1,900 professionals and serves companies across the globe.

We derive the majority of our revenue 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 and cloud-based subscriptions are typically sold through one- to three-year contracts. We bill the majority 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. 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.

We employ a hybrid deployment model to align to our customers' technology preferences for their core financial management software across on-premise, cloud deployments, or any combination of these models. Over time, we expect both existing and newly acquired customers to continue to shift toward cloud deployment models. Cloud-based subscription sales to new customers have grown at a significantly faster rate than on-premise software subscription sales, which is a trend that we expect to continue over time. We generated 49% and 45% of software subscription revenues from cloud-based subscriptions in 2024 and 2023, respectively. While our on-premise software subscription revenues comprised 51% and 55% of our software subscription revenues for 2024 and 2023, respectively, they continue to decrease as a percentage of total software subscriptions revenues as cloud-based subscriptions grow.

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, Shopify, 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 global commerce and the compliance environment provides durable and accelerating growth opportunities for our business. We generated revenues of \$666.8 million and \$572.4 million in 2024 and 2023, respectively. We had net losses of \$(52.7) million and \$(13.1) million in 2024 and 2023, respectively. These amounts are presented in accordance with generally accepted accounting principles in the U.S. (“GAAP”).

We define Adjusted EBITDA as net income or loss before interest (including adjustments to the settlement value of deferred purchase commitment liabilities), income tax expense or benefit, depreciation, and amortization, as adjusted to exclude charges for stock-based compensation expense, amortization of cloud computing arrangement implementation costs, severance expense, acquisition contingent consideration, changes in the fair value of acquisition contingent earn-outs, changes in the settlement value of deferred purchase commitment liabilities recorded as interest expense, and transaction costs. Adjusted EBITDA was \$151.9 million and \$100.8 million in 2024 and 2023, respectively. Adjusted EBITDA is a non-GAAP financial measure. Refer to “Key Business Metrics” and “Use and Reconciliation of Non-GAAP Financial Measures” for further discussion of key business metrics and non-GAAP financial measures and their comparison to GAAP financial measures.

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 continually invest in and focus on elevating and delivering exceptional experiences for our customers, while aiming to build strong, long-term relationships with them. 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 109% and 113% in 2024 and 2023, respectively. We believe our gross revenue retention rate (“GRR”) provides insight into and demonstrates to investors our ability to retain revenues from our existing customers. Our GRR was 95% in both 2024 and 2023. Refer to “Management’s Discussion and Analysis of Financial Condition and Results of Operations— Key Business Metrics— Net Revenue Retention Rate and Gross Revenue Retention Rate” and 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 and e-invoicing 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, business-to-consumer, business-to-business, and business-to-government.

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 to continue 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. We believe continuing to enhance our existing software and expanding our tax content and increasing jurisdictional coverage with our e-invoicing solutions 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. Refer to Note 3, “Acquisitions” to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K for a discussion of our acquisitions.

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; therefore, 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. Refer to Note 3, “Acquisitions” to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K for a discussion of our acquisitions.

Customer migration to cloud solutions. Over time, we expect a continued shift to our cloud solutions by our existing and newly acquired customers. When existing customers migrate from our on-premise to our 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 recent years, cloud sales to new customers have grown at a faster rate than sales of on-premise solutions, which is a trend that we expect to continue over time. We generated 49% and 45% of software subscription revenues from cloud-based subscriptions in 2024 and 2023, respectively. We host our cloud-based subscriptions. To the extent that revenues from our cloud-based solutions continue to increase as a percentage of total revenues, our gross margin may decrease as we scale our multi-cloud offerings to support future growth.

Recent Developments

Issuance of Convertible Senior Notes

On April 26, 2024, we closed our offering of \$345.0 million aggregate principal amount of 0.750% Convertible Senior Notes due 2029 (the “Notes”) to qualified institutional buyers in accordance with Rule 144A under the Securities Act of 1933, as amended. The Notes were issued pursuant to, and are governed by, an indenture (the “Indenture”) between the Company and U.S. Bank Trust Company, National Association, as trustee. The Notes included an additional \$45.0 million aggregate principal amount of Notes, issued pursuant to the full exercise by the initial purchasers of the Notes of their option to purchase additional Notes.

The net proceeds from the offering of the Notes were \$333.7 million after deducting the initial purchasers’ discount and commissions, and other transaction and offering expenses. We used \$42.4 million of the net proceeds from this offering to fund the cost of the Capped Call Transactions (as defined in Note 10, “Debt” to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K) and intend to use the remainder for working capital or other general corporate expenses, which may include capital expenditures, potential acquisitions, and strategic transactions.

For further information on the Notes, refer to Note 10, “Debt” to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

Artificial Intelligence Tax Categorization Acquisition

On May 31, 2024, we paid approximately \$6.1 million to enter into an asset purchase agreement to acquire tax-specific artificial intelligence (“AI”) capabilities, designed to more effectively manage the complexity of tax mapping. The acquisition will accelerate our AI innovation strategy to help global companies manage tax complexity with greater speed and scale. The purchase agreement includes the potential for earn-out payments and referral fees over a five-year period. For further information, refer to Note 3, “Acquisitions” to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

Systax Acquisition

During the second quarter of 2024, we paid \$9.6 million to acquire the remaining 20% equity interest of Systax Sistemas Fiscais LTDA (“Systax”), a provider of Brazilian transaction tax content and software. On June 5, 2024, Systax became a wholly owned subsidiary of the Company. For further information, refer to Note 5, “Financial Instruments and Fair Value Measurements” to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

ecosio GmbH Acquisition

On August 30, 2024, we purchased 100% of the share interests in ecosio GmbH (“ecosio”), a limited liability company incorporated under the laws of Austria and a provider of electronic data interchange (“EDI”) and e-invoicing services. The acquisition was completed with the goal of integrating ecosio’s cloud-based, scalable global network with our indirect tax solutions to enable customers to facilitate the creation, exchange, and clearance of jurisdictionally compliant e-invoices and seamlessly reconcile these invoices with their periodic filing requirements.

Total purchase consideration for the ecosio acquisition was \$169.0 million, net of \$0.8 cash acquired and included contingent consideration liabilities included in the consideration are in the form of cash (the “Cash Earn-outs”), with an aggregate of up to \$94.4 million, and stock, with an aggregate value of up to \$35.0 million (the “Stock Earn-outs”, together with the Cash Earn-outs, the “Earn-outs”), assuming maximum payouts. For further information, refer to Note 3, “Acquisitions” to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

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 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 cloud-based subscriptions allow customers to use Vertex-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. 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. 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 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. 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 on past experience, current information, and forward-looking economic considerations.

Services Revenue

We generate services revenue 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 revenue 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 revenue are 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 of approximately 60%. In addition, 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 Revenue

Software Subscriptions

Cost of software subscriptions revenue 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 revenue includes direct costs associated with information technology, such as data center and software hosting costs, and tax content maintenance. Cost of software subscriptions revenue also includes amortization associated with capitalized internal-use software for cloud-based subscription solutions and software developed for sale for new products and enhancements to existing products, and costs associated with the amortization of certain 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 software subscriptions revenue in absolute dollars.

Services

Cost of services revenue 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 in our managed service offerings and related increases in our service revenue. We expect growth in our business will result in an increase in the cost of services revenue in absolute dollars.

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.

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, 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 Expenses

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 and marketing expenses include costs related to advertising and promotion efforts, branding costs, partner-based commissions, costs associated with our annual customer conferences and 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 revenue 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 will occur in advance of experiencing the benefits from such investments and 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, amortization of cloud computing arrangement implementation costs, and other internal support and infrastructure costs.

We expect our general and administrative expenses to increase in absolute dollars as we continue to expand our operations, hire additional personnel, and integrate current and future acquisitions.

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 tools. Depreciation and amortization will fluctuate in correlation with our ongoing investment in internal infrastructure costs to support our growth.

Change in Fair Value of Acquisition Contingent Earn-Outs

The change in fair value of acquisition contingent earn-outs consists of fair value adjustments to our Cash Earn-outs and Stock Earn-outs related to our 2024 acquisition of ecosio. The Earn-outs will be revalued and adjusted quarterly until the end of the Earn-out periods.

Other Operating Expense (Income), net

Other operating expense (income), net consists primarily of transactions costs associated with merger and acquisition activities, periodic remeasurement of contingent consideration associated with completed acquisitions, realized gains and losses on foreign currency fluctuations, and other operating gains and losses. These amounts will fluctuate as a result of ongoing merger and acquisition activities and for changes in foreign currency rates.

Interest Expense (Income), net

Interest expense (income), net reflects the net amount of interest expense and interest income over the same period.

Interest expense consists primarily of interest incurred related to the Notes, Term Loan, Credit Agreement, and leases. Interest expense includes amortization of deferred financing fees over the term of the credit facility or write-downs of such 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, as well as changes in the settlement value of the future payment obligation for the Systax acquisition, which was fully settled on June 5, 2024.

Interest income reflects earnings on investments of our cash on hand and our investment securities. 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.

Income Tax Expense (Benefit)

Income tax expense (benefit) consists primarily of federal, foreign, state, and local taxes on our loss or income. In determining our annualized effective income tax rates, net deferred tax assets, valuation allowances, and cash paid for income taxes, we are required to make judgments and estimates about domestic and foreign profitability, the timing and usage of net operating loss and credit carryforwards, applicable tax rates, and transfer pricing methodologies. Judgments and estimates related to our projections and assumptions are inherently uncertain; therefore, actual results could materially differ from our projections.

Vertex and its subsidiaries are generally taxed at the corporate level, and the income tax provision or benefit is based on the income or loss sourced to the U.S. federal and state jurisdictions as well as foreign jurisdictions at the tax rates applicable in those jurisdictions.

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. The following table sets forth our consolidated statements of comprehensive loss for the periods indicated.

(Dollars in thousands)	For the year ended December 31,		Year-Over-Year Change	
	2024	2023		
Revenues:				
Software subscriptions	\$ 567,124	\$ 480,830	\$ 86,294	17.9 %
Services	99,652	91,557	8,095	8.8 %
Total revenues	666,776	572,387	94,389	16.5 %
Cost of revenues:				
Software subscriptions ⁽¹⁾	175,580	162,920	12,660	7.8 %
Services ⁽¹⁾	65,071	60,888	4,183	6.9 %
Total cost of revenues	240,651	223,808	16,843	7.5 %
Gross profit	426,125	348,579	77,546	22.2 %
Operating expenses:				
Research and development ⁽¹⁾	66,666	58,212	8,454	14.5 %
Selling and marketing ⁽¹⁾	170,574	140,237	30,337	21.6 %
General and administrative ⁽¹⁾	152,835	145,936	6,899	4.7 %
Depreciation and amortization	20,953	15,202	5,751	37.8 %
Change in fair value of acquisition contingent earn-outs	17,500	—	17,500	NM
Other operating expense (income), net	(175)	6,502	(6,677)	(102.7)%
Total operating expenses	428,353	366,089	62,264	17.0 %
Loss from operations	(2,228)	(17,510)	15,282	(87.3)%
Other (income) expense:				
Interest expense (income), net	(4,137)	4,164	(8,301)	(199.4)%
Income (loss) before income taxes	1,909	(21,674)	23,583	(108.8)%
Income tax expense (benefit)	54,638	(8,581)	63,219	(736.7)%
Net loss	(52,729)	(13,093)	(39,636)	302.7 %
Other comprehensive (income) loss:				
Foreign currency translation adjustments, net of tax	24,150	(5,978)	30,128	(504.0)%
Unrealized (gain) loss on investments, net of tax	(13)	(32)	19	NM
Total other comprehensive (income) loss, net of tax	24,137	(6,010)	30,147	(501.6)%
Total comprehensive loss	\$ (76,866)	\$ (7,083)	\$ (69,783)	985.2 %

NM: Not meaningful

⁽¹⁾ Includes stock-based compensation expenses as follows in the table below.

(Dollars in thousands)	For the year ended December 31,	
	2024	2023
Stock-based compensation expense:		
Cost of revenues, software subscriptions	\$ 4,349	\$ 2,834
Cost of revenues, services	2,768	1,846
Research and development	9,548	5,994
Selling and marketing	13,204	8,380
General and administrative	17,556	14,865
Total stock-based compensation expense	\$ 47,425	\$ 33,919

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,	
	2024	2023
Revenues:		
Software subscriptions	85.1 %	84.0 %
Services	14.9 %	16.0 %
Total revenues	100.0 %	100.0 %
Cost of revenues:		
Software subscriptions	26.3 %	28.5 %
Services	9.8 %	10.6 %
Total cost of revenues	36.1 %	39.1 %
Gross profit	63.9 %	60.9 %
Operating expenses:		
Research and development	10.0 %	10.2 %
Selling and marketing	25.6 %	24.5 %
General and administrative	22.9 %	25.5 %
Depreciation and amortization	3.1 %	2.7 %
Change in fair value of acquisition contingent earn-outs	2.6 %	— %
Other operating expense (income), net	— %	1.1 %
Total operating expenses	64.2 %	64.0 %
Loss from operations	(0.3)%	(3.1)%
Interest expense (income), net	(0.6)%	0.7 %
Income (loss) before income taxes	0.3 %	(3.8)%
Income tax expense (benefit)	8.2 %	(1.5)%
Net loss	(7.9)%	(2.3)%
Other comprehensive (income) loss:		
Foreign currency translation adjustments, net of tax	3.6 %	(1.0)%
Unrealized (gain) loss on investments, net of tax	— %	— %
Total other comprehensive (income) loss, net of tax	3.6 %	(1.0)%
Total comprehensive loss	(11.5)%	(1.3)%

Year Ended December 31, 2024 Compared to Year Ended December 31, 2023

Revenues

(Dollars in thousands)	For the year ended December 31,		Year-Over-Year Change	
	2024	2023		
Revenues:				
Software subscriptions	\$ 567,124	\$ 480,830	\$ 86,294	17.9 %
Services	99,652	91,557	8,095	8.8 %
Total revenues	<u>\$ 666,776</u>	<u>\$ 572,387</u>	<u>\$ 94,389</u>	16.5 %

Revenues increased \$94.4 million, or 16.5%, to \$666.8 million in 2024 compared to \$572.4 million in 2023. The increase in software subscriptions revenues of \$86.3 million, or 17.9%, was primarily driven by an increase of \$80.5 million from cross selling new products to existing customers, increases from expanded use of our products and services, and price increases. Software subscriptions revenues derived from new customers averaged 6.3% and 6.2% of total software subscriptions revenues in 2024 and 2023, respectively.

The \$8.1 million increase in services revenues was primarily driven by an increase of \$2.7 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 \$5.4 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	
	2024	2023		
Cost of software subscriptions revenues	\$ 175,580	\$ 162,920	\$ 12,660	7.8 %

Cost of software subscriptions revenues increased \$12.7 million, or 7.8%, to \$175.6 million in 2024 compared to \$162.9 million in 2023. This increase was primarily driven by a \$5.9 million increase in costs of personnel supporting period-over-period growth of sales and customers, and ongoing hosting and infrastructure investments to support expansion of customer transaction volumes for our cloud-based subscription customers. In addition, we experienced an increase in depreciation and amortization of capitalized software and acquired intangible assets of \$5.3 million associated with our ongoing investments in internal-use software for cloud-based subscription solutions, software developed for sale for new products and enhancements to existing products, and costs associated with the amortization of acquired intangible assets. Lastly, stock-based compensation increased by \$1.5 million for the twelve months ended December 31, 2024, over the same period in 2023.

Cost of Services Revenues

(Dollars in thousands)	For the year ended December 31,		Year-Over-Year Change	
	2024	2023		
Cost of services revenues	\$ 65,071	\$ 60,888	\$ 4,183	6.9 %

Cost of services revenues increased \$4.2 million, or 6.9%, to \$65.1 million in 2024 compared to \$60.9 million in 2023. This increase was primarily driven by a \$3.3 million increase in costs of service delivery personnel to support revenue growth in software-subscription related services and our managed services offering. In addition, this amount includes an increase in stock-based compensation of \$0.9 million for the twelve months ended December 31, 2024, over the same period in 2023.

Research and Development

(Dollars in thousands)	For the year ended December 31,		Year-Over-Year Change	
	2024	2023		
Research and development	\$ 66,666	\$ 58,212	\$ 8,454	14.5 %

Research and development expenses increased \$8.5 million, or 14.5%, to \$66.7 million in 2024 compared to \$58.2 million in 2023. This increase was primarily due to a \$4.9 million increase in personnel costs related to development work associated with new solutions to address end-to-end data analysis and compliance needs of our customers, and continued expansion of connectors and application program interfaces (“APIs”) to customer enterprise resource planning (“ERP”) and other software platforms. In addition, this amount includes an increase in stock-based compensation of \$3.6 million for the twelve months ended December 31, 2024, over the same period in 2023. Research and development expenses exclude those costs that have been capitalized for solutions that have met our capitalization policy.

Selling and Marketing

(Dollars in thousands)	For the year ended December 31,		Year-Over-Year Change	
	2024	2023		
Selling and marketing	\$ 170,574	\$ 140,237	\$ 30,337	21.6 %

Selling and marketing expenses increased \$30.3 million, or 21.6%, to \$170.6 million in 2024 compared to \$140.2 million in 2023, primarily driven by a \$15.6 million increase in payroll and related expenses associated with the growth in period-over-period subscription sales and services revenues and expansion of our partner and channel management programs. In addition, this included an increase of \$10.0 million in advertising and promotional spending related to expanded brand awareness efforts. Lastly, there was an increase in stock-based compensation of \$4.8 million.

General and Administrative

(Dollars in thousands)	For the year ended December 31,		Year-Over-Year Change	
	2024	2023		
General and administrative	\$ 152,835	\$ 145,936	\$ 6,899	4.7 %

General and administrative expenses increased \$6.9 million, or 4.7%, to \$152.8 million in 2024 compared to \$145.9 million in 2023, primarily driven by an increase of \$2.8 million associated with planned strategic investments in information technology infrastructure, business process re-engineering, and other initiatives to drive future operating leverage. This increase also reflects investments in employees, systems, and other resources in support of our growth. Additionally, there was an increase of \$1.4 million for the amortization of capitalized cloud computing implementation costs related to our ERP modernization initiative which was completed in 2023. Lastly, there was an increase in stock-based compensation of \$2.7 million for the year ended December 31, 2024, over the same period in 2023.

Depreciation and Amortization

(Dollars in thousands)	For the year ended December 31,		Year-Over-Year Change	
	2024	2023		
Depreciation and amortization	\$ 20,953	\$ 15,202	\$ 5,751	37.8 %

Depreciation and amortization increased \$5.8 million, or 37.8%, to \$21.0 million in 2024 compared to \$15.2 million in 2023. The increase was primarily due to the impact of infrastructure and technology purchases and other capitalized infrastructure costs to support our growth.

Change in Fair Value of Acquisition Contingent Earn-outs

(Dollars in thousands)	For the year ended December 31,		Year-Over-Year Change	
	2024	2023		
Change in fair value of acquisition contingent earn-outs	\$ 17,500	\$ —	\$ 17,500	NM

NM: Not meaningful.

Change in fair value of acquisition contingent earn-outs increased \$17.5 million from the prior year due entirely to adjustments to the fair values of our ecosio acquisition contingent Cash Earn-outs and Stock Earn-outs of \$3,365 and \$14,135, respectively, recorded for the year ended December 31, 2024. For further information, refer to Note 3, "Acquisitions" to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

Other Operating Expense, Net

(Dollars in thousands)	For the year ended December 31,		Year-Over-Year Change	
	2024	2023		
Other operating expense (income), net	\$ (175)	\$ 6,502	\$ (6,677)	(102.7)%

Other operating expense, net decreased \$6.7 million, to \$0.2 million of income in 2024 compared to \$6.5 million of expense in 2023. Other operating expense (income), net for the year ended December 31, 2024 was primarily comprised of a \$2.5 million decrease in the contingent consideration liability associated with our 2021 acquisition of Tellutax, LLC ("Tellutax"), which was partially offset by \$1.2 million of transaction costs associated with our recent acquisitions, and

\$1.1 million in foreign currency losses. Other operating expense (income), net for the year ended December 31, 2023 was primarily comprised of \$4.9 million related to costs associated with a public tender offer, which occurred in December 2023, and was later withdrawn in January 2024, as well as a \$1.5 million increase in the contingent consideration liability associated with our acquisition of Tellutax, and \$0.1 million in foreign currency losses.

Interest Expense (Income), Net

(Dollars in thousands)	For the year ended December 31,		Year-Over-Year Change	
	2024	2023		
Interest expense (income), net	\$ (4,137)	\$ 4,164	\$ (8,301)	(199.4)%

Interest expense, net decreased \$8.3 million, or 199.4%, to \$4.1 million of income in 2024 compared to \$4.2 million of expense in 2023. This change was primarily due to several factors: (i) an increase in interest and dividend income of \$7.4 million, mainly attributed to higher investment balances in 2024 compared to 2023; (ii) a \$2.0 million decrease in interest costs related to the paydown of our Term Loan in 2024; and (iii) a \$1.9 million decrease in interest expense, comprised of \$4.2 million from the roll-off of the deferred purchase commitment liability associated with our acquisition of Systax, which was partially offset by an increase of \$2.3 million in interest related to our Notes. Increases in interest income in 2024 were partially offset by (i) a \$1.0 million decrease in the valuation of our foreign currency forward contracts due to market fluctuations and (ii) a \$2.0 increase in interest expense related to deferred financing costs associated with the issuance of our Notes.

Income Tax Expense (Benefit)

(Dollars in thousands)	For the year ended December 31,		Year-Over-Year change	
	2024	2023		
Income tax expense (benefit)	\$ 54,638	\$ (8,581)	\$ 63,219	(736.7)%

Income tax expense was \$54.6 million in 2024 as compared to an income tax benefit of \$8.6 million in 2023. This change was primarily driven by changes in valuation allowances on net deferred tax assets established for U.S. and certain foreign jurisdictions, nondeductible purchase commitment and contingent consideration liabilities, and pre-tax income, partially offset by the favorable impact of tax benefits on exercises and vesting of stock awards, net of limitations on deductions of certain employees' compensation under Internal Revenue Code ("IRC") Section 162(m).

During the fourth quarter of 2024, we established a valuation allowance against our U.S. deferred tax assets as it was determined to be more likely than not that these assets will not be realized. This determination was made based on weighing all negative evidence, specifically cumulative losses recognized in our U.S. entity over the past three years. These cumulative losses were mainly due to significant windfall tax benefits realized from the exercises of stock options during the fourth quarter of 2024, driven by an increase in our Class A common stock price during that period. Despite positive evidence of projected future business profitability in our U.S. entity, management determined that this did not outweigh the negative evidence to allow us to conclude it was more likely than not the deferred tax assets would be realized and therefore we recorded a full valuation allowance against these U.S. deferred tax assets as of December 31, 2024.

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, or customer usage tier true-ups, 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 sales team 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.

Quarterly fluctuations in our costs and expenses overall primarily reflect changes in our headcount, infrastructure, and sales and marketing investments, 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 our current and past investments related to the expansion of our brand awareness and product innovation. We have also invested in acquisitions and product innovation to expand our product portfolio. We anticipate our operating expenses will increase in future periods as we invest to support the ongoing expansion of our business.

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

Outlook

In 2025, we are forecasting continued revenue growth given our market position, strong pipeline and the secular tailwinds we are seeing in the industry. In order to capitalize on the significant growth opportunities in front of us, we plan to make further investments in ecosio to accelerate coverage across countries that have either launched or are launching e-invoicing initiatives in the coming years. Additionally, we expect to make additional research and development investments in the upcoming year for the commercialization of our AI-based Smart Categorization product, other AI-related internal tools and new product initiatives, and other emerging technologies. We believe these strategic investments will enhance our offerings and allow us to capitalize on sustainable growth opportunities.

Liquidity and Capital Resources

As of December 31, 2024, we had unrestricted cash and cash equivalents of \$296.1 million, in addition to \$9.2 million in investment securities with a maturity date exceeding three months, which are not included in unrestricted cash and cash equivalents. Our primary sources of capital include sales of our solutions, proceeds from bank lending facilities, and the offering of existing or future classes of stock.

Historical Cash Flows

Years Ended December 31, 2024 and 2023

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

(Dollars in thousands)	For the year ended December 31,		Year-Over-Year Change	
	2024	2023		
Net cash provided by operating activities	\$ 164,821	\$ 74,332	\$ 90,489	121.7 %
Net cash used in investing activities	(158,151)	(66,171)	(91,980)	(139.0)%
Net cash provided by (used in) financing activities	231,257	(26,482)	257,739	973.3 %
Effect of foreign exchange rate changes	(1,012)	724	(1,736)	(239.8)%
Net increase (decrease) in cash, cash equivalents and restricted cash	<u>\$ 236,915</u>	<u>\$ (17,597)</u>	<u>\$ 254,512</u>	

Operating Activities. Net cash provided by operating activities of \$164.8 million for the twelve months ended December 31, 2024 consisted of a net loss of \$52.7 million, adjusted for non-cash charges of \$205.7 million, and cash inflows of \$16.2 million from changes in operating assets and liabilities. These items were partially offset by \$4.4 million in payments for purchase commitment and contingent consideration liabilities in excess of their initial fair value. The change in operating assets and liabilities was primarily driven by an increase in deferred revenue due to customer growth during the period, which was partially offset by increases in accounts receivable, as well as prepaid expenses and other current assets, as a result of the timing of cash collections and payments.

Net cash provided by operating activities of \$74.3 million for the twelve months ended December 31, 2023 consisted of a net loss of \$13.1 million adjusted for non-cash charges of \$107.1 million, and cash outflows of \$19.7 million from changes in operating assets and liabilities. The change in operating assets and liabilities was primarily driven by increases in accounts receivable, as a result of the timing of cash collections during the year, partially offset by increases in deferred revenue, accounts payable and accrued expenses, as a result of customer growth during the period and the timing of cash disbursements.

Investing Activities. Net cash used in investing activities of \$158.2 million for the twelve months ended December 31, 2024 primarily consisted of investments in property and equipment, and capitalized software of \$65.8 million and \$21.3 million, respectively, related to investments in infrastructure, new products, and enhancements to existing products, and payments of \$71.8 million related to acquisitions completed during the second and third quarters of 2024. In addition, we invested \$16.0 million in available-for-sale investment securities, which was more than offset by proceeds of \$16.7 million received during the period for sales and maturities in our investment securities. For further information on our acquisitions, refer to Note 3, “Acquisitions” to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

Net cash used in investing activities of \$66.2 million for the twelve months ended December 31, 2023 primarily consisted of investments in property and equipment, and capitalized software of \$49.3 million and \$19.0 million, respectively, related to infrastructure investments to drive operating leverage and commercial solutions to support our customers. In addition, we invested \$16.3 million in available-for-sale investment securities, which was more than offset by proceeds of \$18.4 million received during the period for sales and maturities in our investment securities.

Financing Activities. Net cash provided by financing activities of \$231.3 million for the twelve months ended December 31, 2024 consisted of \$345.0 million in gross proceeds from our Notes, a \$9.7 million increase in customer funds obligations, primarily due to timing differences between receipt of funds from customers and taxing jurisdiction withdrawals of these funds, \$8.5 million in proceeds from the exercise of stock options, and \$3.0 million in proceeds from the purchase of stock under our ESPP. These transactions were partially offset by \$46.9 million for the repayment of the Term Loan, \$42.4 million for the purchase of the Capped Call Transactions, \$21.5 million in payments for taxes related to the net share settlement of stock-based awards, \$12.5 million for payments related to deferred financing costs, \$7.6 million for payments on purchase commitment and contingent consideration liabilities, and \$3.9 million in payments of other third-party debt.

Net cash used in financing activities of \$26.5 million for the twelve months ended December 31, 2023 consisted of \$20.0 million in payments for deferred purchase commitments, \$9.7 million in payments for taxes related to the net share settlement of stock-based awards, \$6.4 million in payments for purchase commitment and contingent consideration liabilities, \$2.2 million used for principal debt repayments, and \$1.0 million in payments related to deferred financing costs. These transactions were partially offset by a \$5.6 million increase in customer funds obligations, primarily due to timing differences between receipt of funds from customers and taxing jurisdiction withdrawals of these funds, \$4.8 million in proceeds from the exercise of stock options, and \$2.5 million in proceeds from the purchase of stock under our ESPP.

Sources of Credit

As of December 31, 2024, we had a credit agreement with a banking syndicate (the “Credit Agreement”) that provides a \$300.0 million revolving facility (the “Line of Credit”).

The Line of Credit expires in March 2029. We are required to pay a quarterly fee on the difference between the \$300.0 million allowed maximum borrowings and the unpaid principal balance outstanding under the Line of Credit at the applicable rate. Borrowings under the Credit Agreement will bear interest, at our option, at either the bank base rate plus an applicable margin (the “New Base Rate Option”) or Secured Overnight Financing Rate (“SOFR”) plus an applicable margin (the “SOFR Option”). At December 31, 2024, the New Base Rate Option and the SOFR Option applicable to the Line of Credit were 8.00% and 5.99%, respectively. There were no outstanding borrowings under the Line of Credit at December 31, 2024.

Outstanding borrowings under the Credit Agreement are collateralized by nearly all of the assets of the Company and contain financial and operating covenants. The Company was in compliance with these covenants at December 31, 2024. The Credit Agreement also limits the declaration or payment of certain dividends, not to exceed, from and after the Credit

Agreement closing date, the greater of (i) \$15.0 million and (ii) 15% of Consolidated EBITDA (as defined in the Credit Agreement) for the most recently ended period.

On April 26, 2024, we closed the Notes offering. The net proceeds from the offering of the Notes were \$333.7 million, after deducting the initial purchasers' discount and commissions, and other transaction and offering expenses.

For further information on our indebtedness, refer to Note 10, "Debt" to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

Material Future Cash Obligations and Commercial Commitments

Cash Requirements. We believe that our existing cash resources and our Line of Credit will be sufficient to meet our capital requirements and fund our operations for the next 12 months as well as our longer-term liquidity needs. If an early conversion notice occurs on the Notes, we have the option to pay cash, shares of our Class A common stock, or a combination of both. We expect to have access to additional sources of funds in the capital markets, and we may, from time to time, seek additional capital through a combination of additional debt and/or equity financings. If we were to raise additional funds by issuing equity securities, our stockholders may 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.

Funds Held for Customers and Customer Funds Obligations. We maintain trust accounts with financial institutions, to accumulate cash from our customers that 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.

Contractual Obligations and Commitments. Our contractual obligations and commitments as of December 31, 2024 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
Notes ⁽¹⁾	\$ 356,213	\$ 2,588	\$ 5,175	\$ 348,450	\$ —
Financing lease liabilities	89	78	11	—	—
Operating lease liabilities	17,326	4,340	9,504	3,482	—
Cash Earn-outs ⁽²⁾	74,400	17,900	56,500	—	—
Stock Earn-outs ⁽²⁾	48,100	17,200	30,900	—	—
Purchase obligations	27,423	14,352	9,995	3,076	—
Total	<u>\$ 523,551</u>	<u>\$ 56,458</u>	<u>\$ 112,085</u>	<u>\$ 355,008</u>	<u>\$ —</u>

⁽¹⁾ The table presents the principal payment made on the maturity date of the Notes. On November 1, 2028, and thereafter, holders have the right, but not the obligation, to convert their Notes. Upon conversion, we will pay or deliver, as applicable, cash, shares of Class A common stock or a combination of cash and shares of Class A common stock at our election. Future interest payments related to the Notes of \$11.2 million are included in the table. For further information, refer to Note 10, "Debt" to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

⁽²⁾ The Company has contingent consideration liabilities for Cash Earn-outs and Stock Earn-outs related to the 2024 acquisition of ecosio. For further information, refer to Note 3, "Acquisitions" to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

As of December 31, 2024, we have no outstanding borrowings under the Line of Credit. The Notes are due in May 2029. We expect to continue to fund debt maturities and interest payments with cash flows generated from operations, existing cash and cash equivalents, or proceeds from additional financing. For further information on our debt obligations, refer to Note 10, "Debt" to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

In connection with the pricing of the Notes on April 23, 2024, the Company entered into Capped Call Transactions. As of December 31, 2024, all of the Capped Call Transactions remained outstanding. For further information, refer to Note 10, “Debt” to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

Key Business Metrics

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

Annual Recurring Revenue (“ARR”) and Average Annual Revenue Per Customer (“AARPC”).

We derive the vast majority of our revenue from recurring software subscriptions. We believe ARR provides us with visibility to our projected software subscription revenue in order to evaluate the health of our business. Because we recognize subscription revenue 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 revenue (“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.

AARPC represents average annual revenue per customer and is calculated by dividing ARR by the number of software subscription customers at the end of the respective period:

(Dollars in millions)	For the year ended December 31,		Year-Over-Year Change	
	2024	2023		
Annual Recurring Revenue	\$ 603.1	\$ 512.5	\$ 90.6	17.7 %

ARR increased by \$90.6 million, or 17.7%, at December 31, 2024, as compared to December 31, 2023. The increase was primarily driven by \$47.3 million of growth in revenues from existing customers through their expanded use of our solutions as well as price increases, and \$29.5 million in growth of subscriptions of our solutions to new customers. In addition, ARR increased by \$5.9 million as a result of the acquisition of the remaining ownership interests of Systax during the second quarter of 2024, and \$7.9 million due to the ecosio acquisition during the third quarter of 2024. Excluding the impacts of Systax and ecosio, the ARR growth rate would have been 15.0%.

At December 31, 2024, we had 4,915 direct customers and approximately \$122,706 of AARPC. At December 31, 2023, we had 4,310 direct customers and approximately \$118,910 of AARPC. The increase in AARPC was primarily due to expansion of usage by existing customers and adding new customers through organic growth. Additionally, the inclusion of Systax and ecosio added 597 customers in 2024.

Net Revenue Retention Rate (“NRR”).

We believe that our NRR provides insight into our ability to retain and grow revenue 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 revenue 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.

	As of December 31,	
	2024	2023
Net Revenue Retention Rate	109 %	113 %

The 400 basis point decrease in NRR to 109% at December 31, 2024 from 113% for the same period in 2023 was primarily attributed to a decrease in customer cross-sell and additional entitlements.

Gross Revenue Retention Rate (“GRR”).

We believe our GRR provides insight into and demonstrates to investors our ability to retain revenues from our existing customers. Our GRR refers to how much of our MRR we retain each month after reduction for the effects of revenues lost from departing customers or those who have downgraded or reduced usage. GRR does not take into account revenue expansion from migrations, new licenses for additional products or contractual and usage-based price changes. GRR does not include revenue reductions resulting from cancellations of customer subscriptions that are replaced by new subscriptions associated with customer migrations to a newer version of the related software solution.

	As of December 31,	
	2024	2023
Gross Revenue Retention Rate	95 %	95 %

Adjusted EBITDA and Adjusted EBITDA Margin.

We believe that Adjusted EBITDA is a measure 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 agreement. We define Adjusted EBITDA as net income or loss before interest (including adjustments to the settlement value of deferred purchase commitment liabilities), income tax expense or benefit, depreciation, and amortization, as adjusted to exclude charges for stock-based compensation expense, amortization of cloud computing arrangement implementation costs, severance expense, acquisition contingent consideration, changes in the fair value of acquisition contingent earn-outs, and transaction costs. Adjusted EBITDA margin represents Adjusted EBITDA divided by total revenues for the same period. For purposes of comparison, our net loss was \$(52.7) million and \$(13.1) million in 2024 and 2023, respectively, while our net loss margin was (7.9)% and (2.3)% over the same periods, respectively. The following schedules reconcile Adjusted EBITDA and Adjusted EBITDA margin to net loss, the most closely directly comparable GAAP financial measure.

(Dollars in thousands)	For the year ended December 31,	
	2024	2023
Adjusted EBITDA:		
Net loss	\$ (52,729)	\$ (13,093)
Interest expense (income), net ⁽¹⁾	(4,137)	4,164
Income tax expense (benefit)	54,638	(8,581)
Depreciation and amortization – property and equipment	20,953	15,202
Depreciation and amortization of capitalized software and acquired intangible assets – cost of subscription revenues	59,302	54,048
Amortization of acquired intangible assets – selling and marketing expense	2,478	2,641
Amortization of cloud computing implementation costs – general and administrative	4,007	2,570
Stock-based compensation expense	47,425	33,919
Severance expense	3,048	3,576
Acquisition contingent consideration	(2,575)	1,549
Change in fair value of acquisition contingent earn-outs	17,500	—
Transaction costs ⁽²⁾	2,032	4,853
Adjusted EBITDA	\$ 151,942	\$ 100,848
Adjusted EBITDA Margin:		
Total revenues	\$ 666,776	\$ 572,387
Adjusted EBITDA margin	22.8 %	17.6 %

⁽¹⁾ The years ended December 31, 2024 and 2023 include \$423 and \$4,020, respectively, for the change in the settlement value of a deferred purchase commitment liability recorded as interest expense.

⁽²⁾ The year ended December 31, 2023 includes costs associated with a public tender offer, which was withdrawn by the Company in January 2024.

The increase in Adjusted EBITDA of \$51.1 million in 2024, as compared to 2023, was primarily driven by an increase of \$85.2 million in non-GAAP gross profit, which was partially offset by a \$25.7 million increase in non-GAAP selling and marketing expense, a \$4.2 million increase in non-GAAP research and development expense, and a \$3.3 million increase in non-GAAP general and administrative expense. The 2024 increase in Adjusted EBITDA over the prior year, reflects the impact of our previously announced strategic investments, which were predominantly made from 2020 through 2023, into information technology infrastructure, business and re-engineering processes, employees, and other initiatives. Such investments were strategically aimed to deliver consistent revenue growth, drive future earnings leverage, and expand adjusted EBITDA margins.

Adjusted EBITDA margin increased in 2024 by 520 basis points in comparison to 2023 primarily due to increased non-GAAP gross margin from our software subscriptions revenue, which was partially offset by increased operating expenses driven by our previously noted investments to enable future growth.

Free Cash Flow and Free Cash Flow Margin.

We use free cash flow as a critical measure in the evaluation of liquidity in conjunction with related GAAP amounts. We also use this 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 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.

Our net cash provided by operating activities was \$164.8 million and \$74.3 million in 2024 and 2023, respectively, while our operating cash flow margin was 24.7% and 13.0% over the same periods, respectively. 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.

(Dollars in thousands)	For the year ended December 31,	
	2024	2023
Free Cash Flow:		
Cash provided by operating activities	\$ 164,821	\$ 74,332
Property and equipment additions	(65,769)	(49,261)
Capitalized software additions	(21,344)	(18,972)
Free cash flow	\$ 77,708	\$ 6,099
Free Cash Flow Margin:		
Total revenues	\$ 666,776	\$ 572,387
Free cash flow margin	11.7 %	1.1 %

Free cash flow increased by \$71.6 million in 2024 compared to 2023, driven primarily by a net increase of \$90.5 million in cash provided by operating activities, partially offset by a year-over-year increase in investments in commercial solutions supporting our customers and infrastructure investments to drive operating leverage. Free cash flow margin increased in 2024 to 11.7% compared to 1.1% in 2023.

Use and Reconciliation of Non-GAAP Financial Measures

In addition to our results determined in accordance with GAAP, we have calculated Adjusted EBITDA, Adjusted EBITDA margin, free cash flow, free cash flow margin, 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, and non-GAAP net income, 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.

We use 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. We use non-GAAP financial measures of free cash flow and free cash flow margin to evaluate 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.

Additional Non-GAAP Financial Measures

In addition to Adjusted EBITDA, Adjusted EBITDA margin, free cash flow, and free cash flow margin calculated and discussed in “Key Business Metrics,” the following additional non-GAAP financial measures are calculated and presented further below:

- 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 and acquired intangible assets included in cost of subscription 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, services 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 and acquired intangible assets included in cost of subscription revenues for the respective periods.
- Non-GAAP gross margin is determined by dividing non-GAAP gross profit by total revenues for the respective periods.
- Non-GAAP research and development expense is determined by adding back to GAAP research and development expense the stock-based compensation expense, and transaction costs related to acquired technology included in research and development expense 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 general and administrative expense is determined by adding back to GAAP general and administrative expense the stock-based compensation expense, amortization of cloud computing implementation costs and severance expense included in general and administrative expense for the respective periods.
- Non-GAAP operating income is determined by adding back to GAAP loss or income from operations the stock-based compensation expense, depreciation and amortization of capitalized software and acquired intangible assets included in cost of subscription revenues, amortization of acquired intangible assets included in selling and marketing expense, amortization of cloud computing implementation costs in general and administrative expense, severance expense, acquisition contingent consideration, changes in the fair

value of acquisition contingent earn-outs, and transaction costs, included in GAAP loss or income from operations for the respective periods.

- Non-GAAP net income is determined by adding back to GAAP net income or loss the income tax benefit or expense, stock-based compensation expense, depreciation and amortization of capitalized software and acquired intangible assets included in cost of subscription revenues, amortization of acquired intangible assets included in selling and marketing expense, amortization of cloud computing implementation costs in general and administrative expense, severance expense, acquisition contingent consideration, changes in the fair value of acquisition contingent earn-outs, adjustments to the settlement value of deferred purchase commitment liabilities recorded as interest expense, and transaction costs, included in GAAP net income or loss for the respective periods to determine non-GAAP loss or income 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%.

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.

The following schedules reflect our additional non-GAAP financial measures and reconciles our additional non-GAAP financial measures to the related GAAP financial measures.

(Dollars in thousands)	For the year ended December 31,	
	2024	2023
Non-GAAP cost of revenues, software subscriptions	\$ 111,929	\$ 106,038
Non-GAAP cost of revenues, services	\$ 62,303	\$ 59,042
Non-GAAP gross profit	\$ 492,544	\$ 407,307
Non-GAAP gross margin	73.9 %	71.2 %
Non-GAAP research and development expense	\$ 56,395	\$ 52,218
Non-GAAP selling and marketing expense	\$ 154,892	\$ 129,216
Non-GAAP general and administrative expense	\$ 128,224	\$ 124,925
Non-GAAP operating income	\$ 130,989	\$ 85,646
Non-GAAP net income	\$ 100,984	\$ 63,699

(Dollars in thousands)	For the year ended December 31,	
	2024	2023
Non-GAAP Cost of Revenues, Software Subscriptions:		
Cost of revenues, software subscriptions	\$ 175,580	\$ 162,920
Stock-based compensation expense	(4,349)	(2,834)
Depreciation and amortization of capitalized software and acquired intangible assets – cost of subscription revenues	(59,302)	(54,048)
Non-GAAP cost of revenues, software subscriptions	\$ 111,929	\$ 106,038
Non-GAAP Cost of Revenues, Services:		
Cost of revenues, services	\$ 65,071	\$ 60,888
Stock-based compensation expense	(2,768)	(1,846)
Non-GAAP cost of revenues, services	\$ 62,303	\$ 59,042

(Dollars in thousands)	For the year ended December 31,	
	2024	2023
Non-GAAP Gross Profit:		
Gross profit	\$ 426,125	\$ 348,579
Stock-based compensation expense	7,117	4,680
Depreciation and amortization of capitalized software and acquired intangible assets – cost of subscription revenues	59,302	54,048
Non-GAAP gross profit	\$ 492,544	\$ 407,307
Non-GAAP Gross Margin:		
Total revenues	\$ 666,776	\$ 572,387
Non-GAAP gross margin	73.9 %	71.2 %
Non-GAAP Research and Development Expense:		
Research and development expense	\$ 66,666	\$ 58,212
Stock-based compensation expense	(9,548)	(5,994)
Transaction costs	(723)	—
Non-GAAP research and development expense	\$ 56,395	\$ 52,218
Non-GAAP Selling and Marketing Expense:		
Selling and marketing expense	\$ 170,574	\$ 140,237
Stock-based compensation expense	(13,204)	(8,380)
Amortization of acquired intangible assets – selling and marketing expense	(2,478)	(2,641)
Non-GAAP selling and marketing expense	\$ 154,892	\$ 129,216
Non-GAAP General and Administrative Expense:		
General and administrative expense	\$ 152,835	\$ 145,936
Stock-based compensation expense	(17,556)	(14,865)
Severance expense	(3,048)	(3,576)
Amortization of cloud computing implementation costs – general and administrative	(4,007)	(2,570)
Non-GAAP general and administrative expense	\$ 128,224	\$ 124,925
Non-GAAP Operating Income:		
Loss from operations	\$ (2,228)	\$ (17,510)
Stock-based compensation expense	47,425	33,919
Depreciation and amortization of capitalized software and acquired intangible assets – cost of subscription revenues	59,302	54,048
Amortization of acquired intangible assets – selling and marketing expense	2,478	2,641
Amortization of cloud computing implementation costs – general and administrative	4,007	2,570
Severance expense	3,048	3,576
Acquisition contingent consideration	(2,575)	1,549
Change in fair value of acquisition contingent earn-outs	17,500	—
Transaction costs	2,032	4,853
Non-GAAP operating income	\$ 130,989	\$ 85,646

(Dollars in thousands)	For the year ended December 31,	
	2024	2023
Non-GAAP Net Income:		
Net loss	\$ (52,729)	\$ (13,093)
Income tax expense (benefit)	54,638	(8,581)
Stock-based compensation expense	47,425	33,919
Depreciation and amortization of capitalized software and acquired intangible assets – cost of subscription revenues	59,302	54,048
Amortization of acquired intangible assets – selling and marketing expense	2,478	2,641
Amortization of cloud computing implementation costs – general and administrative	4,007	2,570
Severance expense	3,048	3,576
Acquisition contingent consideration	(2,575)	1,549
Change in fair value of acquisition contingent earn-outs	17,500	—
Transaction costs ⁽¹⁾	2,032	4,853
Change in settlement value of deferred purchase commitment liability – interest expense	423	4,020
Non-GAAP income before income taxes	135,549	85,502
Income tax adjustment at statutory rate ⁽²⁾	(34,565)	(21,803)
Non-GAAP net income	\$ 100,984	\$ 63,699

(1) The year ended December 31, 2023 includes costs associated with a public tender offer, which was withdrawn by the Company in January 2024.

(2) Non-GAAP income before income taxes is adjusted for income taxes using the respective statutory tax rates for applicable jurisdictions, which for purposes of this determination were assumed to be 25.5%.

Critical Accounting 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 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 estimates are described in the following sections. For all of these estimates, we caution that future events rarely develop exactly as forecast, and such estimates routinely require adjustment. We have reviewed these critical accounting estimates and related disclosures with our Audit Committee.

Our discussion of critical accounting 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, "Summary of Significant Accounting Policies" to our consolidated financial statements beginning on page F-1 of this Annual Report on Form 10-K.

Revenue Recognition

We account for our revenue in accordance with Accounting Standards Codification ("ASC") 606, *Revenue from Contracts with Customers*, which requires judgment and the use of estimates. Revenue is recognized upon transfer of control of promised goods or services to customers in an amount that reflects the consideration expected to be received in exchange for those products or services. Our most critical judgments required in applying ASC 606 relate to the identification of performance obligations.

Identification of the Performance Obligations

We enter into contracts with customers that may include promises to transfer various combinations of software subscriptions and services. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. Software subscriptions include the related software, consisting of both on-premise and cloud-based software, 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 that the software, updates, and support should be combined into a single performance obligation.

Income Taxes

We estimate our income taxes based on the various jurisdictions where we conduct business. Significant judgment is required in determining our worldwide income tax provision. Vertex and its subsidiaries are generally taxed at the corporate level, and the income tax provision or benefit is based on income or loss sourced to the U.S. federal and state jurisdictions as well as foreign jurisdictions at the tax rates applicable in those jurisdictions.

We account for income taxes using the asset and liability method resulting in the recognition of deferred tax assets and liabilities for future tax consequences of events that have been previously recognized in the Company's consolidated financial statements or tax returns. The measurement of deferred tax assets and liabilities is based on provisions of the enacted tax law and rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled, the determination of which requires management judgement and which could result in a different result should our expectations of the recovery or settlement timing differ from the actual events. The effect of a change in tax laws or rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date. The effects of future changes in tax laws or rates are not anticipated.

A valuation allowance is recorded when management determines it is more likely than not that some or all the deferred tax assets will not be realized. Significant judgment is required in determining any valuation allowance recorded against deferred tax assets. In evaluating the ability to realize our deferred tax assets, we rely on, in order of increasing subjectivity, taxable income in prior carryback years, the future reversals of existing taxable temporary differences, tax planning strategies and forecasted taxable income using historical and projected future operating results.

We record uncertain tax positions in accordance with ASC 740, *Income Taxes*, on the basis of a two-step process requiring judgement whereby: (i) we determine 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, we recognize the largest amount of tax benefit that is greater than 50 percent likely to be realized upon ultimate settlement with the related tax authority. We record interest related to underpayment of income taxes as interest expense and penalties as other operating expenses in the consolidated statements of comprehensive loss.

We assess our income tax positions and record tax benefits or expense based upon our evaluation of the facts, circumstances, and information available at the reporting date. Variations in the actual outcome of these future tax consequences could materially impact the consolidated financial statements.

Business Combination Fair Value Estimates

The results of a business acquired in a business combination are included in our consolidated financial statements from the date of the acquisition. Purchase accounting results in tangible and intangible assets acquired, liabilities assumed, consideration transferred, and amounts attributed to noncontrolling interests of an acquired business being recorded at their estimated fair values on the acquisition date, which may be considered preliminary and subject to adjustment during the measurement period, which is up to one year from the acquisition date (the "Measurement Period"). Any excess consideration over the fair value of assets acquired and liabilities assumed is recorded as goodwill. Determining the fair value of these amounts requires significant judgment and estimates, including the selection of valuation methodologies, estimates of future revenue, costs and cash flows, discount rates, royalty rates, and selection of comparable companies. We continue to collect information and reevaluate these estimates and assumptions periodically and record any adjustments to preliminary estimates to goodwill, provided we are within the Measurement Period, with any adjustments to amortization of new or previously recorded assets and identifiable intangibles being recorded to the consolidated statements of comprehensive 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 reflected in the consolidated statements of comprehensive loss in the period in which they arise.

We use our best estimates, information and assumptions available at the acquisition date to assign preliminary fair values to the assets acquired, liabilities assumed, consideration transferred, and amounts attributed to noncontrolling interests. We engage the assistance of third-party valuation specialists to perform valuations of these amounts and to assist us in concluding on these fair value measurements. The resulting fair values and useful lives assigned to acquisition-related assets impact the amount and timing of future amortization expense.

These estimates are inherently uncertain and unpredictable, and if different estimates were used then the purchase price for the respective acquisition could be allocated to the acquired assets and liabilities differently from the allocation that we have made. In addition, unanticipated events and circumstances may occur which may affect the accuracy or validity of such estimates, and if such events occur, we may be required to record a charge against the value ascribed to an acquired asset, an increase in the amounts recorded for assumed liabilities, or an impairment of some or all of the goodwill.

Recent Accounting Pronouncements

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

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

We had unrestricted cash and cash equivalents of \$296.1 million and \$68.2 million as of December 31, 2024 and 2023, respectively, and investments of \$9.2 million and \$9.5 million as of December 31, 2024 and 2023, respectively. We maintain our cash and cash equivalents in deposit accounts, money market funds with various financial institutions, and in short duration fixed income securities. 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 these investments as a result of changes in interest rates. Increases or declines in interest rates would be expected to augment or reduce future interest income by an insignificant amount.

The Notes have a fixed annual interest rate; therefore, we have no financial or economic interest exposure associated with changes in interest rates. However, the fair value of fixed rate debt instruments fluctuates when interest rates change. Additionally, the fair value of the Notes can be affected when the market price of our Class A common stock fluctuates. We carry the Notes at principal value less unamortized issuance costs on our consolidated balance sheets, and we present fair value for required disclosure purposes only.

Borrowings under our Credit Agreement will bear interest, at our option, at either the New Base Rate Option or the SOFR Option. At December 31, 2024, the New Base Rate Option and SOFR Option applicable to the Line of Credit borrowings were 8.00% and 5.99%, respectively. Because the interest rates applicable to borrowings under the Credit Agreement are variable, we are exposed to market risk from changes in the underlying index rates, which affect our cost of borrowing. There were no outstanding borrowings under the Line of Credit at December 31, 2024 or 2023.

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, 2024, 2023, and 2022, approximately 4%, 4%, and 3% 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.

Inflation

In the ordinary course of business we increase our product and services selling prices to offset the inflationary pressures we have or may experience in the future in many of our expense items, including internal labor and third-party costs. If our product costs became subject to significant future inflationary pressures, then we may not be able to fully offset these higher costs through price increases. Our inability or failure to do so could adversely affect our business, financial condition, and results of operations. To date, we do not believe that inflation has had a material effect on our business, financial condition, or 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, we recognize 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 we are required to apply judgment 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 as defined in Rule 13a-15(e) under the Exchange Act as of December 31, 2024.

Disclosure controls and procedures are designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized, and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include those designed to ensure that such information required to be disclosed in the reports that we file or submit under the Exchange Act is accumulated and communicated to management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Based on the evaluation of our disclosure controls and procedures, our principal executive officer and principal financial officer concluded that, as of December 31, 2024, our disclosure controls and procedures were effective at a reasonable assurance level.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2024 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Exchange Act. Our internal control over financial reporting is a process designed under the supervision of our principal executive officer and principal financial officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements on a timely basis. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with policies and procedures may deteriorate.

Our management, under the supervision and with the participation of our principal executive officer and principal financial officer, conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2024 based on the framework and criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management concluded that, as of December 31, 2024, our internal control over financial reporting was effective.

In August 2024, the Company completed the acquisition of ecosio. Based on the SEC staff guidance, management has excluded the internal controls of ecosio from our assessment of the effectiveness of internal control over financial reporting as of December 31, 2024. The acquired business represented approximately 14.6% of our total assets as of December 31, 2024 (including 10.8% of goodwill and intangible assets, which were subject to corporate controls) and approximately 1.1% of our total revenues for the year ended December 31, 2024.

The effectiveness of our internal control over financial reporting as of December 31, 2024 has been audited by Crowe LLP, an independent registered public accounting firm, as stated in their report, which is included below.

Report of Independent Registered Public Accounting Firm

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

Opinion on Internal Control over Financial Reporting

We have audited Vertex, Inc.'s (the "Company") internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control – Integrated Framework: (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control – Integrated Framework: (2013) issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets of the Company as of December 31, 2024 and 2023, the related consolidated statements of comprehensive loss, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2024, and the related notes (collectively referred to as the "financial statements") and our report dated February 27, 2025 expressed an unqualified opinion.

Basis for Opinion

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

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

understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. As permitted, the Company has excluded the operations of ecosio GmbH acquired during 2024, which is described in Note 3 of the consolidated financial statements, from the scope of management's report on internal control over financial reporting. As such, it has also been excluded from the scope of our audit of internal control over financial reporting. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Crowe LLP

Oakbrook Terrace, Illinois
February 27, 2025

Item 9B. Other Information

Second Amended and Restated Bylaws

On February 26, 2025, the Board approved and adopted the Company's Second Amended and Restated Bylaws (the "Bylaws") to:

- clarify that no person may solicit proxies in support of a director nominee other than the Board's nominees unless such person has complied with Rule 14a-19 under the Exchange Act, including applicable notice and solicitation requirements;
- require that a stockholder directly or indirectly soliciting proxies from other stockholders use a proxy card color other than white;
- clarify responsibility for determining whether proposals and nominations were made in compliance with the Bylaws;
- clarify procedures with respect to director nominations;
- clarify the applicable record date for stockholder action by consent;
- update provisions relating to meetings held by remote communication, access to the stockholder list, notices and other communications by means of electronic transmission.

The complete text of the Bylaws is attached hereto as Exhibit 3.2 and is incorporated herein by reference. The foregoing description of the amendments reflected in the Bylaws does not purport to be complete and is qualified in its entirety by Exhibit 3.2.

Trading Plans

On December 16, 2024, John Schwab, our Chief Financial Officer, adopted a Rule 10b5-1 trading arrangement that is intended to satisfy the affirmative defense of Rule 10b5-1(c) for the sale of up to 60,000 shares of Class A common stock until December 18, 2026.

On November 26, 2024, Bryan Rowland, Senior Vice President & General Counsel, adopted a Rule 10b5-1 trading arrangement that is intended to satisfy the affirmative defense of Rule 10b5-1(c) for the sale of up to 47,621 shares of Class A common stock until September 30, 2025.

Other than as described above, during the three months ended December 31, 2024, no director or officer of the Company adopted, modified, or terminated a “Rule 10b5-1 trading arrangement” or “non-Rule 10b5-1 trading arrangement,” as each term is defined in Item 408(a) of Regulation S-K.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item is incorporated by reference to the relevant information from our definitive Proxy Statement for our 2025 Annual Meeting of Shareholders, which will be filed not later than 120 days after the end of the fiscal year ended December 31, 2024.

Our Insider Trading Policy includes our policy governing the purchase, sale, and/or other dispositions of our securities by directors, officers and employees and is reasonably designed to promote compliance with insider trading laws, rules and regulations, and Nasdaq listing standards. This policy is included as Exhibit 19.1 hereto.

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 2025 Annual Meeting of Shareholders, which will be filed not later than 120 days after the end of the fiscal year ended December 31, 2024.

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 2025 Annual Meeting of Shareholders, which will be filed not later than 120 days after the end of the fiscal year ended December 31, 2024.

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 2025 Annual Meeting of Shareholders, which will be filed not later than 120 days after the end of the fiscal year ended December 31, 2024.

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 2025 Annual Meeting of Shareholders, which will be filed not later than 120 days after the end of the fiscal year ended December 31, 2024.

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 in 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.

Exhibit Number	Exhibit Description	Form	File No.	Exhibit	Filing Date	Filed Herewith	Furnished Herewith
3.1	Form of Amended and Restated Certificate of Incorporation of Vertex, Inc.	S-1/A	333-239644	3.1	07/20/20		
3.2	Second Amended and Restated Bylaws of Vertex, Inc.	10-K	001-39413	3.2		X	
4.1	Specimen Stock Certificate evidencing the shares of Class A common stock.	S-1/A	333-239644	4.1	07/24/20		
4.2	Form of Third Amended and Restated Stockholders' Agreement.	S-1/A	333-239644	4.2	07/24/20		
4.3	Description of Capital Stock	10-K	333-239644	4.3	03/15/21		
4.4	Indenture, dated April 26, 2024, between Vertex, Inc. and U.S. Bank Trust Company, National Association.	8-K	001-39413	4.1	04/26/24		
10.1	Second Amendment to the Credit Agreement by and among Vertex, Inc., the guarantors party thereto, PNC Bank, National Association, and the lenders party thereto, dated as of March 8, 2022.	8-K	001-39413	10.1	03/09/22		
10.3#	Form of Indemnification Agreement between Vertex, Inc. and each of its Executive Officers and Directors.	S-1/A	333-239644	10.3	07/20/20		
10.4	2007 Stock Appreciation Plan.	S-1	333-239644	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	333-239644	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	333-239644	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	333-239644	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	333-239644	10.8	07/20/20		
10.9	Form of S Corporation Termination and Tax Sharing Agreement.	S-1/A	333-239644	10.9	07/20/20		
10.10#	Vertex Inc. & Subsidiaries 2010 Long-Term Rewards Plan.	S-1/A	333-239644	10.10	07/20/20		
10.11#	Vertex Inc. & Subsidiaries 2018 Long-Term Rewards Plan.	S-1/A	333-239644	10.11	07/20/20		
10.12#	Form of Stock Option Amendment Agreement.	S-1/A	333-239644	10.12	07/20/20		
10.13#	Form of Option Award Agreement under 2020 Incentive Award Plan for Amended Options.	S-1/A	333-239644	10.13	07/20/20		

Exhibit Number	Exhibit Description	Form	File No.	Exhibit	Filing Date	Filed Herewith	Furnished Herewith
10.14#	Form of Option Award Agreement under 2020 Incentive Award Plan for Amended Stock Appreciation Rights.	S-1/A	333-239644	10.14	07/20/20		
10.15#	Vertex, Inc. 2020 Incentive Award Plan.	S-1/A	333-239644	10.15	07/20/20		
10.16#	Form of Option Award Agreement under 2020 Incentive Award Plan.	S-1/A	333-239644	10.16	07/20/20		
10.17#	Form of Restricted Stock Award Agreement under 2020 Incentive Award Plan.	S-1/A	333-239644	10.17	07/20/20		
10.18#	Form of Restricted Stock Unit Award Agreement under 2020 Incentive Award Plan.	S-1/A	333-239644	10.18	07/20/20		
10.19#	Form of Stock Award Agreement under 2020 Incentive Award Plan.	S-1/A	333-239644	10.19	07/20/20		
10.20	Fourth Amendment to Credit Agreement by and among Vertex, Inc., the guarantors party thereto, PNC Bank, National Association, as administrative agent, and the lenders party, thereto, dated as of April 19, 2024.	8-K	001-39413	10.1	04/23/24		
10.21	Form of Capped Call Confirmation.	8-K	001-39413	10.1	04/26/24		
10.22	Amended and Restated Credit Agreement by and among Vertex, Inc., the guarantors party thereto, PNC Bank, National Association, as administrative agent, and the lenders party, thereto, dated as of November 4, 2024.	8-K	001-39413	10.1	11/08/24		
19.1	Insider Trading Policy.					X	
21.1	List of Subsidiaries	S-1/A	333-239644	21.1	07/20/20		
23.1	Consent of Crowe LLP					X	
24.1	Power of Attorney					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

Exhibit Number	Exhibit Description	Form	File No.	Exhibit	Filing Date	Filed Herewith	Furnished Herewith
97.1#	Vertex, Inc. Policy for Recovery of Erroneously Awarded Compensation	10-K	001-39413	97.1	02/29/24		
101.INS	Inline XBRL Instance Document					X	
101.SCH	Inline XBRL Taxonomy Extension Schema Document					X	
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					X	
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					X	
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document					X	
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					X	
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)					X	

Indicates a management contract or compensatory plan.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Vertex, Inc.

Date: February 27, 2025

By: /s/ DAVID DESTEFANO
David DeStefano
*President, Chief Executive Officer
and Chairperson*

Pursuant to the requirements of the Securities Act of 1934, as amended, this report has been signed by the following persons on behalf of the registrant in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ DAVID DESTEFANO</u> David DeStefano	President, Chief Executive Officer and Chairperson (Principal Executive Officer)	February 27, 2025
<u>/s/ JOHN SCHWAB</u> John Schwab	Chief Financial Officer (Principal Financial Officer)	February 27, 2025
<u>/s/ RYAN LEIB</u> Ryan Leib	Chief Accounting Officer (Principal Accounting Officer)	February 27, 2025
<u>*</u> Eric Andersen	Director	February 27, 2025
<u>*</u> Philip Saunders	Director	February 27, 2025
<u>*</u> J. Richard Stamm	Director	February 27, 2025
<u>*</u> Amanda Westphal Radcliffe	Director	February 27, 2025
<u>*</u> Stefanie Westphal Thompson	Director	February 27, 2025
<u>*</u> Bradley Gayton	Director	February 27, 2025

* The undersigned, by signing his name hereto, does sign and execute this Annual Report on Form 10-K pursuant to the Powers of Attorney executed by the abovenamed directors of the Registrant and filed with the Securities and Exchange Commission on behalf of such directors.

Date: February 27, 2025

By: /s/ BRYAN ROWLAND
Bryan Rowland
Attorney-in-Fact for Director

VERTEX, INC. AND SUBSIDIARIES

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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Audited Consolidated Financial Statements as of December 31, 2024 and 2023 and for each of the three years in the period ended December 31, 2024:	
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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, 2024 and 2023, the related consolidated statements of comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2024, 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, 2024 and 2023, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2024, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control – Integrated Framework: (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and our report dated February 27, 2025 expressed an unqualified opinion.

Basis for Opinion

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

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

Critical Audit Matter

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

Valuation of Developed Technology and Earn-Outs in the ecosio GmbH Acquisition

As described in Notes 3 and 5, the Company completed the acquisition of ecosio GmbH for consideration of \$169.83 million and the transaction was accounted for as a business combination. The acquired intangible assets included developed technology valued at \$63.80 million. The total purchase consideration for the acquisition included a cash earn-out, with an aggregate of up to \$94.36 million, and a stock earn-out, with an aggregate value of up to \$35.00 million, collectively valued at \$105.00 million as of the acquisition date. The Company used a discounted cash flow methodology to value the acquired developed technology at fair value on the date of acquisition. The Company used a Monte Carlo simulation model to value the cash and stock earn-outs. The methods used to estimate the fair value of acquired developed technology and earn-outs involve significant assumptions. The significant assumptions applied by management in estimating the fair value of acquired developed technology included cash flow projections and discount rates.

The principal considerations for our determination that auditing the valuation of developed technology and earn-outs in the ecosio acquisition is a critical audit matter are (1) there was a high degree of auditor judgment and subjectivity in applying procedures relating to the fair value of the developed technology acquired and earn-outs due to the significant judgment by management when developing the cash flow estimates and (2) significant audit effort was required in evaluating the significant assumptions relating to the basis and subjectivity of significant estimates, including the cash flow projections, revenue growth rates, cost of sales and margin projections, obsolescence curve, and discount rates. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included:

- reading the purchase agreement
- testing the effectiveness of controls over the valuation of developed technology and earn-outs including controls over the development of the prospective financial information and other assumptions used in the valuations
- evaluating the appropriateness of the valuation models applied by management
- testing the completeness, accuracy, and relevance of underlying data and reports used in the models
- testing the reasonableness of significant assumptions, including key inputs into the cash flow projections and discount rates. Procedures considered the current performance of the acquired business, consistency with external market and industry data, and whether these assumptions were consistent with other evidence obtained in other areas of the audit
- utilizing professionals with specialized skill and knowledge to assist in evaluating the reasonableness of significant assumptions, including the discount rates, by comparing them against discount rate ranges that were independently developed using publicly available market data for comparable companies

/s/ Crowe LLP

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

Oakbrook Terrace, Illinois
February 27, 2025

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

	December 31, 2024	December 31, 2023
Assets		
Current assets:		
Cash and cash equivalents	\$ 296,051	\$ 68,175
Funds held for customers	30,015	20,976
Accounts receivable, net of allowance of \$16,838 and \$16,272, respectively	164,432	141,752
Prepaid expenses and other current assets	36,678	26,173
Investment securities available-for-sale, at fair value (amortized cost of \$9,147 and \$9,550, respectively)	9,157	9,545
Total current assets	536,333	266,621
Property and equipment, net of accumulated depreciation	177,559	100,734
Capitalized software, net of accumulated amortization	36,350	38,771
Goodwill and other intangible assets	363,021	260,238
Deferred commissions	27,480	21,237
Deferred income tax asset	19	41,708
Operating lease right-of-use assets	11,956	14,605
Other assets	14,073	16,013
Total assets	<u>\$ 1,166,791</u>	<u>\$ 759,927</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Current portion of long-term debt	\$ —	\$ 2,500
Accounts payable	36,215	23,596
Accrued expenses	35,169	44,735
Customer funds obligations	27,406	17,731
Accrued salaries and benefits	14,581	12,277
Accrued variable compensation	45,507	34,105
Deferred revenue, current	339,326	290,143
Current portion of operating lease liabilities	3,995	3,717
Current portion of finance lease liabilities	77	74
Purchase commitment and contingent consideration liabilities, current	35,100	11,901
Total current liabilities	537,376	440,779
Deferred revenue, net of current portion	4,840	2,577
Debt, net of current portion	335,220	44,059
Operating lease liabilities, net of current portion	12,585	16,567
Finance lease liabilities, net of current portion	10	51
Purchase commitment and contingent consideration liabilities, net of current portion	87,400	2,600
Deferred income tax liabilities	9,918	—
Deferred other liabilities	90	313
Total liabilities	987,439	506,946
Commitments and contingencies (Note 15)		
Stockholders' equity:		
Preferred shares, \$0.001 par value, 30,000 shares authorized; no shares issued and outstanding	—	—
Class A voting common stock, \$0.001 par value, 300,000 shares authorized; 70,670 and 60,989 shares issued and outstanding, respectively	71	61
Class B voting common stock, \$0.001 par value, 150,000 shares authorized; 86,481 and 92,661 shares issued and outstanding, respectively	86	93
Additional paid in capital	278,389	275,155
Accumulated deficit	(53,315)	(586)
Accumulated other comprehensive loss	(45,879)	(21,742)
Total stockholders' equity	179,352	252,981
Total liabilities and stockholders' equity	<u>\$ 1,166,791</u>	<u>\$ 759,927</u>

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

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

	For the year ended December 31,		
	2024	2023	2022
Revenues:			
Software subscriptions	\$ 567,124	\$ 480,830	\$ 415,473
Services	99,652	91,557	76,151
Total revenues	666,776	572,387	491,624
Cost of revenues:			
Software subscriptions	175,580	162,920	142,071
Services	65,071	60,888	51,061
Total cost of revenues	240,651	223,808	193,132
Gross profit	426,125	348,579	298,492
Operating expenses:			
Research and development	66,666	58,212	41,877
Selling and marketing	170,574	140,237	125,335
General and administrative	152,835	145,936	121,651
Depreciation and amortization	20,953	15,202	12,440
Change in fair value of acquisition contingent earn-outs	17,500	—	—
Other operating expense (income), net	(175)	6,502	5,271
Total operating expenses	428,353	366,089	306,574
Loss from operations	(2,228)	(17,510)	(8,082)
Interest expense (income), net	(4,137)	4,164	2,048
Income (loss) before income taxes	1,909	(21,674)	(10,130)
Income tax expense (benefit)	54,638	(8,581)	2,174
Net loss	(52,729)	(13,093)	(12,304)
Other comprehensive (income) loss:			
Foreign currency translation adjustments, net of tax	24,150	(5,978)	10,219
Unrealized (gain) loss on investments, net of tax	(13)	(32)	36
Total other comprehensive (income) loss, net of tax	24,137	(6,010)	10,255
Total comprehensive loss	\$ (76,866)	\$ (7,083)	\$ (22,559)
Net loss per share of Class A and Class B, basic	\$ (0.34)	\$ (0.09)	\$ (0.08)
Net loss per share of Class A and Class B, dilutive	\$ (0.34)	\$ (0.09)	\$ (0.08)

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

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

	Outstanding Class A Shares	Class A Common Stock	Outstanding Class B Shares	Class B Common Stock	Additional Paid In Capital	Retained Earnings (Accumulated Deficit)	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
Balance, January 1, 2022	42,286	\$ 42	106,807	\$ 107	\$ 222,621	\$ 24,811	\$ (17,497)	\$ 230,084
Exercise of stock options, net	800	1	—	—	1,164	—	—	1,165
Shares issued upon vesting of Restricted Stock Units, net	48	—	—	—	(283)	—	—	(283)
Shares issued upon vesting of Restricted Stock Awards, net	173	—	—	—	(164)	—	—	(164)
Shares issued in connection with ESPP	207	—	—	—	1,951	—	—	1,951
Stock-based compensation expense	—	—	—	—	19,531	—	—	19,531
Class B shares exchanged for Class A shares	6,500	7	(6,500)	(7)	—	—	—	—
Unrealized loss from available-for-sale investments, net of tax	—	—	—	—	—	—	(36)	(36)
Foreign currency translation adjustments and revaluations, net of tax	—	—	—	—	—	—	(10,219)	(10,219)
Net loss	—	—	—	—	—	(12,304)	—	(12,304)
Balance, December 31, 2022	50,014	50	100,307	100	244,820	12,507	(27,752)	229,725
Exercise of stock options, net	2,468	3	—	—	(29)	—	—	(26)
Shares issued upon vesting of Restricted Stock Units, net	511	1	—	—	(4,690)	—	—	(4,689)
Shares issued upon vesting of Restricted Stock Awards, net	198	—	—	—	(146)	—	—	(146)
Shares issued in connection with ESPP	152	—	—	—	2,486	—	—	2,486
Stock-based compensation expense	—	—	—	—	32,714	—	—	32,714
Class B shares exchanged for Class A shares	7,646	7	(7,646)	(7)	—	—	—	—
Unrealized gain from available-for-sale investments, net of tax	—	—	—	—	—	—	32	32
Foreign currency translation adjustments and revaluations, net of tax	—	—	—	—	—	(13,093)	5,978	5,978
Net loss	—	—	—	—	—	(13,093)	—	(13,093)
Balance, December 31, 2023	60,989	61	92,661	93	275,155	(586)	(21,742)	252,981
Exercise of stock options, net	2,455	2	—	—	1,435	—	—	1,437
Shares issued upon vesting of Restricted Stock Units, net	846	1	—	—	(14,205)	—	—	(14,204)
Shares issued upon vesting of Restricted Stock Awards, net	84	—	—	—	(290)	—	—	(290)
Shares issued in connection with ESPP	116	—	—	—	2,998	—	—	2,998
Stock-based compensation expense	—	—	—	—	44,811	—	—	44,811
Class B shares exchanged for Class A shares	6,180	7	(6,180)	(7)	—	—	—	—
Purchase of capped calls, net of tax	—	—	—	—	(31,517)	—	—	(31,517)
Tax impact on capped calls	—	—	—	—	2	—	—	2
Unrealized gain from available-for-sale investments, net of tax	—	—	—	—	—	—	13	13
Foreign currency translation adjustments and revaluations, net of tax	—	—	—	—	—	—	(24,150)	(24,150)
Net loss	—	—	—	—	—	(52,729)	—	(52,729)
Balance, December 31, 2024	70,670	71	86,481	86	278,389	(53,315)	(45,879)	179,352

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,		
	2024	2023	2022
Cash flows from operating activities:			
Net loss	\$ (52,729)	\$ (13,093)	\$ (12,304)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Depreciation and amortization	82,733	71,891	61,153
Amortization of cloud computing implementation costs	4,007	2,570	—
Provision for subscription cancellations and non-renewals	199	2,083	(196)
Amortization of deferred financing costs	2,033	266	245
Change in fair value of contingent consideration liabilities	14,925	—	—
Change in settlement value of deferred purchase commitment liability	423	—	—
Write-off of deferred financing costs	276	—	370
Stock-based compensation expense	47,425	33,919	19,729
Deferred income taxes	51,068	(11,574)	(1,345)
Non-cash operating lease costs	2,857	2,587	3,357
Other	(203)	5,335	4,052
Changes in operating assets and liabilities:			
Accounts receivable	(22,076)	(45,222)	(25,665)
Prepaid expenses and other current assets	(14,207)	(6,354)	(2,171)
Deferred commissions	(6,242)	(5,774)	(2,908)
Accounts payable	11,615	9,241	1,369
Accrued expenses	(12,323)	5,837	15,064
Accrued and deferred compensation	9,232	7,516	(12,005)
Deferred revenue	51,096	18,172	30,768
Operating lease liabilities	(3,999)	(4,224)	(4,041)
Payments for purchase commitment and contingent consideration liabilities in excess of initial fair value	(4,367)	—	—
Other	3,078	1,156	(11,624)
Net cash provided by operating activities	164,821	74,332	63,848
Cash flows from investing activities:			
Acquisition of businesses and assets, net of cash acquired	(71,755)	—	(474)
Property and equipment additions	(65,769)	(49,261)	(45,532)
Capitalized software additions	(21,344)	(18,972)	(14,888)
Purchase of investment securities, available-for-sale	(15,993)	(16,328)	(16,518)
Proceeds from sales and maturities of investment securities, available-for-sale	16,710	18,390	5,364
Net cash used in investing activities	(158,151)	(66,171)	(72,048)
Cash flows from financing activities:			
Net increase (decrease) in customer funds obligations	9,675	5,610	(11,340)
Proceeds from term loan	—	—	50,000
Proceeds from convertible senior notes	345,000	—	—
Principal payments on long-term debt	(46,875)	(2,188)	(938)
Payments on third-party debt	(3,904)	—	—
Payment for purchase of capped calls	(42,366)	—	—
Payments for deferred financing costs	(12,541)	(1,001)	(983)
Proceeds from purchases of stock under ESPP	2,998	2,486	1,951
Payments for taxes related to net share settlement of stock-based awards	(21,516)	(9,701)	(1,104)
Proceeds from exercise of stock options	8,459	4,839	1,821
Distributions under Tax Sharing Agreement	—	—	(536)
Payments for purchase commitment and contingent consideration liabilities	(7,580)	(6,424)	(423)
Payments of finance lease liabilities	(93)	(103)	(1,354)
Payments for deferred purchase commitments	—	(20,000)	(20,000)
Net cash provided by (used in) financing activities	231,257	(26,482)	17,094
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(1,012)	724	(352)
Net increase (decrease) in cash, cash equivalents and restricted cash	236,915	(17,597)	8,542
Cash, cash equivalents and restricted cash, beginning of period	89,151	106,748	98,206
Cash, cash equivalents and restricted cash, end of period	\$ 326,066	\$ 89,151	\$ 106,748
Reconciliation of cash, cash equivalents and restricted cash to the Consolidated Balance Sheets, end of period:			
Cash and cash equivalents	\$ 296,051	\$ 68,175	\$ 91,803
Restricted cash—funds held for customers	30,015	20,976	14,945
Total cash, cash equivalents and restricted cash, end of period	\$ 326,066	\$ 89,151	\$ 106,748

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 consolidated subsidiaries (collectively, the “Company”) operate as solutions providers of state, local and value added tax calculation, compliance, and analytics, offering software products that 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 August 30, 2024, the Company completed its acquisition of ecosio GmbH (“ecosio”). Upon its acquisition, ecosio became a wholly owned subsidiary of the Company, and its operations have been included in the Company’s consolidated financial statements commencing on the acquisition date.

The Company had an 80% and 65% controlling equity interest in Systax Sistemas Fiscais LTDA (“Systax”), a provider of Brazilian transaction tax content and software at December 31, 2023 and 2022, respectively. Systax was determined to be a variable interest entity and the accounts were included in the consolidated financial statements. Vertex did not have full decision-making authority over Systax; however, Vertex was the entity that most significantly participated in the variability of the fair value of Systax’s net assets and was considered the entity most closely associated to Systax. As such, Vertex was deemed the primary beneficiary of Systax and consolidated Systax into its consolidated financial statements. On June 5, 2024, Vertex acquired the remaining 20% equity interest in Systax. Systax is now a wholly owned subsidiary of the Company and continues to be consolidated into the consolidated financial statements.

Segments

The Company operates its business as one operating segment. Operating segments are defined as components of an enterprise that 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.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to credit risk consist principally of cash and cash equivalents, which includes highly liquid investment securities, available-for-sale securities, funds held for customers and accounts receivable.

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.

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

The Company does not require collateral from its customers. Allowances are maintained for credit losses. 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, 2024, 2023, and 2022.

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.

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.

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) expected credit losses associated with the allowance for doubtful accounts; (iii) allowance for credit losses on available-for-sale debt securities; (iv) the reserve for self-insurance; (v) assumptions related to achievement of technological feasibility for software developed for sale; (vi) product life cycles; (vii) estimated useful lives and potential impairment of long-lived assets, intangible assets, and capitalized cloud computing arrangement software implementation costs; (viii) potential impairment of goodwill; (ix) determination of the fair value of tangible and intangible assets acquired, liabilities assumed, and consideration transferred in acquisitions; (x) amortization period of deferred commissions; (xi) Black-Scholes-Merton option pricing model ("Black-Scholes model") input assumptions used to determine the fair value of certain stock-based compensation awards and Employee Stock Purchase Plan ("ESPP") purchase rights; (xii) measurement of future purchase commitment, fair value of contingent consideration liabilities related to cash and stock earn-out payments, and contingent consideration and deferred purchase consideration liabilities associated with acquisitions; and (xiii) 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 Accounting Standards Update ("ASU") No. 2016-18, *Restricted Cash*, the Company presents changes in restricted cash in the cash flow statement.

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

Funds Held for Customers

Funds held for customers in the consolidated balance sheets represents customer funds advanced for transaction tax return payments. 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 finance leases are recorded at the present value of future lease payments. Assets under finance 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

Software Development Costs

Internal-Use Software

The Company follows Accounting Standards Codification ("ASC") 350-40 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 and contracted labor, and related expenses. 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 use. 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 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

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

future revenues, estimated economic life, and changes in technology. Capitalized software includes direct and contracted 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 and are reflected in cost of revenues - software subscriptions in the consolidated statements of comprehensive loss. 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 each balance sheet date. 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.

Cloud Computing Software Implementation Costs

The Company follows ASC 350-40 to account for development costs incurred for cloud computing software implementations. ASC 350-40 requires such costs to be capitalized once certain criteria are met. Costs are primarily comprised of contracted labor, direct labor, and related expenses. ASC 350-40 includes specific guidance on costs not to be capitalized, such as overhead, general and administrative, and training costs. Costs are capitalized once the project is defined, funding is committed, and it is confirmed the software will be used for its intended use. 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.

Cloud computing software implementation costs incurred in hosting arrangements are capitalized and reported as a component of prepaid expenses and other current assets, and other assets, once available for their intended use. These costs are amortized using the straight-line method over their respective contract service periods, including periods covered by an option to extend, ranging from two to five years.

Amortization expense for capitalized cloud computing implementation costs for the years ended December 31, 2024 and 2023 were \$4,007 and \$2,570, respectively, and is included in general and administrative expense in the consolidated statements of comprehensive loss. There was no amortization expense for the year ended December 31, 2022.

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.

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

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

interests at the acquisition date. One of the most significant estimates relates to the determination of the fair value of these amounts. 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"). Thus, 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 during this Measurement Period. 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 would 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 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 reflected in the consolidated statements of comprehensive 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.

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 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 over its 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.

Convertible Senior Notes

The Company accounts for its Notes (as defined below) wholly as debt under ASU 2026-06 *Debt—Debt with Conversion and Other Options (Subtopic 470-20)*. Debt issuance costs incurred in connection with the issuance of the Notes are reflected in the consolidated balance sheets as a direct deduction from the carrying amount of the Notes. These costs are amortized on a straight-line basis, which approximates the effective interest method, over the contractual term of the Notes and are included within interest expense (income), net on the consolidated statements of comprehensive loss.

Capped Call Transactions

Capped call transactions cover the aggregate number of shares of the Company's common stock that will initially underlie the Notes. The Company also determined that the capped call option contracts meet the definition of a derivative under ASC Topic 815, *"Derivatives and Hedging,"* but are not required to be accounted for as a derivative as they meet the scope exception outlined in the guidance. The Company determined that the freestanding capped call option contracts qualify as equity under the accounting guidance and recognized the contract by recording an entry to additional paid-in capital in stockholders' equity in its consolidated balance sheets. The capped call options are not remeasured.

Vertex, Inc. and Subsidiaries
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 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

The 2020 Incentive Award Plan (the “2020 Plan”) and the ESPP provide for the award of stock appreciation rights (“SARs”), stock options (“options”), restricted stock awards (“RSAs”), restricted stock units (“RSUs”), performance stock units (“PSUs”), and participation in the ESPP (collectively, the “awards”).

The awards are subject to, and the Company applies, the guidance set forth in 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.

Stock-based compensation expense for stock options issued under the 2020 Plan 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 for RSAs and RSUs is recognized on a straight-line basis over the requisite service or performance period associated with the award. Stock-based compensation expense for PSUs is based on the fair value of the Company’s common stock on the date of grant and is subject to performance-based measurement criteria. Compensation cost for PSUs is recognized on a straight-line basis over the requisite service period associated with the award when the achievement of performance targets is deemed probable.

The ESPP permits participants to purchase Class A common stock through payroll deductions, up to a specified percentage of their eligible compensation. 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.

Leases

In accordance with ASU No. 2016-02, *Leases* (“ASC 842”), the Company determines if an arrangement is or contains a lease at its inception. The Company has elected not to recognize on the balance sheet leases with terms of one year or less as a practical expedient.

For leases with terms greater than 12 months, the Company records an operating lease right-of-use asset or finance lease asset and related lease liability at the present value of lease payments over the lease term. The implicit rate for

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

individual leases is generally not readily determinable; therefore, the Company uses its incremental borrowing rate at lease commencement to determine the present value of lease payments. Leases with an option to extend the related lease term or terminate early are reflected in the lease term when it is reasonably certain that the Company will exercise such options. The Company recognizes expense for operating leases on a straight-line basis over the lease term plus any variable lease costs.

The Company does not recognize a right-of-use asset or lease liability for leases with an initial term equal to or less than 12 months (“short-term leases”) on its consolidated balance sheets. The Company recognizes expense on short-term leases in the consolidated statements of comprehensive loss on a straight-line basis over the lease term.

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 \$2,240 and \$2,246 at December 31, 2024 and 2023, 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

The Company recognizes revenue in accordance with ASC 606, *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 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.

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. 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. Cloud-based contracts consistently provide a benefit to the customer during the subscription period; thus, the associated revenue is recognized ratably over the related subscription period.

Revenue from deliverable-based services is recognized as services are delivered. Revenue from fixed fee services is recognized as services are performed using the cost-to-cost input method.

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

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 judgment by management.

Payment Terms

Payment terms and conditions vary by contract, although the Company’s terms generally include a requirement of payment within 30-60 days. In instances where the timing of revenue recognition differs from the timing of payment, the 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 certain 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 loss. These amounts were \$431, \$17, and \$133 for the years ended December 31, 2024, 2023, and 2022, 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 loss.

Advertising

Advertising expense is recorded as incurred and is reflected in selling and marketing expense in the consolidated statements of comprehensive loss. Total advertising expense was \$26,333, \$26,000, and \$26,529 for the years ended December 31, 2024, 2023, and 2022, respectively.

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
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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 total stockholders' equity as a component of accumulated other comprehensive loss in the consolidated balance sheets. Related periodic movements in exchange rates are included in other comprehensive loss in the consolidated statements of comprehensive loss. Other operating expense, net in the consolidated statements of comprehensive loss includes net foreign exchange transaction (losses) of \$(1,067), \$(109), and \$(38) for the years ended December 31, 2024, 2023, and 2022, respectively.

Investments

The Company's investment securities portfolio consists of the following: money market mutual funds invested in high quality, short-term money market instruments which are issued and payable in U.S. dollars ("Money Market Funds"), bank and corporate issued commercial paper ("Commercial Paper"), corporate bonds ("Corporate Bonds"), and U.S. treasury securities ("Treasury Securities"). The Money Market Funds and a portion of the Commercial Paper are considered cash and cash equivalents due to their short maturity dates. These securities are carried at fair value, with the realized holding gains and (losses), net of tax, reported in the interest expense, net line of the consolidated statements of comprehensive loss. Realized holding gains and (losses), net of tax, were not material. The Money Market Funds qualify as equity securities per ASC 321, *Investments – Equity Securities*. The Commercial Paper, Corporate Bonds, and U.S. Treasury Securities qualify as debt securities per ASC 320, *Investments – Debt Securities*, and have been classified as available-for-sale as they may be liquidated and used for general corporate purposes. These securities are carried at fair value, with the unrealized holding gains and (losses), net of tax, reported in other comprehensive (income) loss and do not affect earnings until realized. None of the Company's debt securities are classified as trading or held-to-maturity.

Income Taxes

The Company accounts for income taxes using the asset and liability method, which recognizes deferred tax assets and liabilities for future tax consequences of events that have been previously recognized in the Company's consolidated financial statements or tax returns. The measurement of deferred tax assets and liabilities is based on provisions of the enacted tax law and rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect of a change in tax laws or rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date. The effects of future changes in tax laws or rates are not anticipated. Vertex and its subsidiaries are generally taxed at the corporate level, and the income tax provision or benefit is based on income or loss sourced to the U.S. federal and state jurisdictions as well as foreign jurisdictions at the tax rates applicable in those jurisdictions. A valuation allowance is recorded when it is more likely than not that some or all 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 Company records interest related to underpayment of income taxes as interest expense and penalties as other operating expenses in the consolidated statements of comprehensive loss.

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. Variations in the actual outcome of these future tax consequences could materially impact the consolidated financial statements.

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(Amounts in thousands, except per share data)

Total Comprehensive Loss

Total comprehensive loss consists of net 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 but are excluded from net loss. Other comprehensive (income) loss is comprised of foreign currency translation adjustments and revaluations, and unrealized (gains) losses on available-for-sale debt securities.

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 and if-converted methods. The basic net income (loss) per share attributable to Class A common stockholders includes RSAs, RSUs, PSUs, 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 and nonvested RSAs and RSUs are considered common stock equivalents. PSUs are included in the computation of diluted net income per share only to the extent that the underlying performance conditions are satisfied prior to the end of the reporting period or would be satisfied if the end of the reporting period were the end of the related performance period, and if the effect would be dilutive. The portion of ESPP shares for which the Company has received payments but for which the related shares are not yet issuable are also considered potential common stock equivalents. Additionally, the dilutive effect of shares issuable upon conversion of the Notes is included in the calculation of diluted EPS by application of the if-converted method. In connection with the issuance of the Notes, the Company entered into the Capped Calls Transactions, which are not included for purposes of calculating the number of diluted weighted-average shares outstanding, as their effect would be anti-dilutive. The Company has excluded the effect of its Class A common stock to be issued in connection with the Stock Earn-outs (as defined in Note 3) as the underlying performance conditions were not satisfied prior to the end of the reporting period, nor would they be satisfied if the end of the reporting period were the end of the related performance period. In periods of net loss available to common stockholders, diluted calculations are equal to basic calculations because the inclusion of potential common stock equivalents would be anti-dilutive.

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
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Supplemental Balance Sheet Information

Supplemental balance sheet disclosures are as follows for the respective periods:

	As of December 31,	
	2024	2023
Prepaid expenses and other current assets:		
Prepaid expenses	\$ 15,223	\$ 11,558
Unamortized cloud computing implementation costs	4,088	3,995
Prepaid insurance	1,488	521
Prepaid licenses and support	15,879	10,099
Prepaid expenses and other current assets	<u>\$ 36,678</u>	<u>\$ 26,173</u>
Other assets:		
Unamortized cloud computing implementation costs	\$ 10,173	\$ 12,475
Other assets	3,900	3,538
Total other assets	<u>\$ 14,073</u>	<u>\$ 16,013</u>
Accrued expenses:		
Accrued general expenses	\$ 14,862	\$ 25,998
Accrued contract labor and professional fees	15,152	13,372
Accrued income and other taxes	5,155	5,365
Accrued expenses	<u>\$ 35,169</u>	<u>\$ 44,735</u>

Supplemental Cash Flow Disclosures

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

	For the year ended December 31,		
	2024	2023	2022
Cash paid for:			
Interest	\$ 3,287	\$ 3,729	\$ 2,221
Income taxes, net of refunds	8,593	5,652	3,059
Cash paid included in the measurement of lease liabilities:			
Operating cash flows from operating leases	3,679	4,019	4,240
Non-cash investing and financing activities:			
Change in settlement value of deferred purchase commitment liability	423	4,020	990
Change in fair value of contingent consideration liabilities	14,925	1,549	2,300
Leased assets obtained in exchange for new finance lease liabilities	48	124	1,069

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
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Recently Adopted Accounting Pronouncements

Segment Reporting

In November 2023, the FASB issued ASU 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures*. The amendments in ASU 2023-07, improve reportable segment disclosure requirements through enhanced disclosures. These new requirements include: disclosure of significant segment expenses regularly provided to the CODM, the title and position of the CODM, and the extension of certain annual disclosures to interim periods, permitting the disclosure of multiple measures of segment profit or loss, provided that certain criteria are met. The standard also clarifies that entities with a single reportable segment are subject to new and existing segment reporting requirements. Entities must adopt the changes to the segment reporting guidance on a retrospective basis. The Company adopted the standard effective for its annual period ending December 31, 2024. The adoption of the standard only impacted disclosures. See Note 16, "Segment Disclosures."

Recently Issued Accounting Pronouncements

Income Tax Disclosures

In December 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures*. Entities will be required to disclose additional information in specified categories in the reconciliation of the effective tax rate to the statutory rate for federal, state, and foreign income taxes. The standard also requires greater detail about individual reconciling items in the rate reconciliation to the extent the impact of those items exceeds a specified threshold and eliminates certain existing disclosures. In addition to new disclosures associated with the rate reconciliation, the standard requires information pertaining to taxes paid (net of refunds received) to be disaggregated for federal, state, and foreign taxes and further disaggregated for specific jurisdictions to the extent the related amounts exceed a quantitative threshold. The standard will be effective for annual periods in fiscal years beginning after December 15, 2024, and for interim periods for fiscal years beginning after December 15, 2025 with early adoption permitted. The Company is continuing to assess the potential impacts of the standard, and it does not expect this pronouncement to have a material effect on its financial statements, other than the required changes to the income tax disclosures.

Disaggregation of Income Statement Expenses

On November 4, 2024, the FASB issued ASU 2024-03, *Income Statement - Reporting Comprehensive Income - Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses*. Entities will be required to provide disaggregation of certain expense captions into specified categories in disclosures within the footnotes to the financial statements for both interim and annual reporting periods. The standard does not change the expense captions that an entity presents on the face of the income statement. The standard will be effective for annual periods beginning after December 15, 2026, and for interim periods for fiscal years beginning after December 15, 2027, with early adoption permitted. Entities are required to adopt the standard prospectively; however, entities are permitted to apply the amendments retrospectively to any or all prior periods presented in the financial statements. The Company is continuing to assess the potential impacts of the standard, and it does not expect this pronouncement to have a material effect on its financial statements, other than the required changes to the disclosures.

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

Disaggregation of revenue

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

	For the year ended December 31,		
	2024	2023	2022
Software subscriptions:			
Software licenses	\$ 291,081	\$ 266,213	\$ 246,577
Cloud subscriptions	276,043	214,617	168,896
Software subscriptions	567,124	480,830	415,473
Services	99,652	91,557	76,151
Total revenues	<u>\$ 666,776</u>	<u>\$ 572,387</u>	<u>\$ 491,624</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. The Company's payment terms typically range from 30-60 days. 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 \$16,838 and \$16,272 at December 31, 2024 and 2023, respectively. The allowance is adjusted for expected credit losses based on management's assessment of collectability after considering factors including the age of each outstanding invoice, collection history of customers, current and forecasted economic conditions as well as estimated cancellations.

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

	2024	2023	2022
Balance, beginning of period	\$ 141,752	\$ 102,885	\$ 76,929
Balance, end of period	164,432	141,752	102,885
Increase	<u>\$ 22,680</u>	<u>\$ 38,867</u>	<u>\$ 25,956</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. Deferred revenue is reflected net of a related deferred allowance for subscription cancellations (the "deferred allowance") of \$12,028 and \$11,741 at December 31, 2024 and 2023, respectively. The deferred allowance represents the portion of the allowance for subscription cancellations associated with deferred revenue.

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
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The beginning and ending balances of and changes to the allowance and the deferred allowance are as follows:

	For the year ended December 31,					
	2024		2023		2022	
	Balance	Net Change	Balance	Net Change	Balance	Net Change
Allowance balance, January 1,	\$ (16,272)		\$ (9,554)		\$ (9,151)	
Allowance balance, December 31,	(16,838)		(16,272)		(9,554)	
Change in allowance		\$ 566		\$ 6,718		\$ 403
Deferred allowance balance, January 1,	11,741		7,133		6,537	
Deferred allowance balance, December 31,	12,028		11,741		7,133	
Change in deferred allowance		(287)		(4,608)		(596)
Net amount charged to revenues		\$ 279		\$ 2,110		\$ (193)

The amount of revenue recognized during the years ended December 31, 2024, 2023, and 2022 that was included in the opening deferred revenue balance of the same fiscal year was \$290,143, \$268,847, and \$237,344, 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. The tables provide information about the balances of and changes to deferred revenue for the following periods:

	As of December 31,	
	2024	2023
Balances:		
Deferred revenue, current	\$ 339,326	\$ 290,143
Deferred revenue, non-current	4,840	2,577
Total deferred revenue	\$ 344,166	\$ 292,720

	For the year ended December 31,		
	2024	2023	2022
Changes to deferred revenue:			
Beginning balance	\$ 292,720	\$ 279,136	\$ 249,010
Additional amounts deferred	718,222	585,971	521,750
Revenues recognized	(666,776)	(572,387)	(491,624)
Ending balance	\$ 344,166	\$ 292,720	\$ 279,136

Deferred revenue at December 31, 2024 will be recognized as follows for all future years:

Year Ending December 31,	
2025	\$ 339,326
2026	4,840
2027	—
Total	\$ 344,166

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.

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
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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 one to three years. Amortization of these costs are included in selling and marketing expense in the consolidated statements of comprehensive 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 changes to contract cost balances as of and for the following periods are:

	For the year ended December 31,		
	2024	2023	2022
Deferred commissions:			
Beginning balance	\$ 21,237	\$ 15,463	\$ 12,555
Additions	23,736	16,552	13,913
Amortization	(17,493)	(10,778)	(11,005)
Ending balance	<u>\$ 27,480</u>	<u>\$ 21,237</u>	<u>\$ 15,463</u>

3. ACQUISITIONS

Business Combination

ecosio GmbH

On August 30, 2024 (the “Acquisition Date”), the Company purchased 100% of the share interests in ecosio, a limited liability company incorporated under the laws of Austria and a provider of electronic data interchange (“EDI”) and e-invoicing services. The acquisition was completed with the goal of integrating ecosio’s cloud-based, scalable global network with the Company’s indirect tax solutions to enable customers to facilitate the creation, exchange, and clearance of jurisdictionally compliant e-invoices and seamlessly reconcile these invoices with their periodic filing requirements. Ecosio’s operations and offerings are being integrated into the Company’s one operating segment.

The acquisition was accounted for as a business combination. Upon its acquisition, ecosio became a wholly owned subsidiary of the Company, and its operations have been included in the Company’s consolidated financial statements commencing on the Acquisition Date.

Total Purchase Consideration

Total purchase consideration for the ecosio acquisition was \$169,041, net of \$788 cash acquired, which was comprised of the following:

	August 30, 2024
Upfront cash consideration	\$ 64,829
Cash and Stock Earn-outs, at fair value	105,000
Total	<u>\$ 169,829</u>

The initial cash consideration was \$65,000, adjusted for certain closing adjustments and transaction costs paid on behalf of ecosio. The cash consideration was paid with existing cash on hand.

The contingent consideration liabilities included in the consideration are in the form of cash, with an aggregate of up to \$94,355 (the “Cash Earn-outs”), and stock, with an aggregate value of up to \$35,000 (the “Stock Earn-outs,” and together with the Cash Earn-outs, the “Earn-outs”), assuming maximum payouts. The Earn-outs will be based upon ecosio’s monthly software revenues meeting specified annual targets over a three-year period. The Cash Earn-outs are payable

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

annually and also contain a catch-up mechanism. The Stock Earn-outs are payable annually and are settled in shares of the Company's Class A common stock. The fair value of the Cash and Stock Earn-outs at acquisition was \$71,000 and \$34,000, respectively, and was measured on the Acquisition Date using a Monte Carlo simulation in a risk-neutral framework, calibrated to management's revenue forecasts. The final payments may be adjusted depending on the actual amount, above or below the targets. The Stock Earn-outs are classified as a liability on the consolidated balance sheets in accordance with ASC Topic 815, "*Derivatives and Hedging*." For further information on the Earn-outs, including recurring fair value adjustments, refer to Note 5, "Financial Instruments and Fair Value Measurements."

Fair Value of Assets Acquired and Liabilities Assumed

The purchase price was allocated to the net assets acquired based on management's determination of their estimated fair values using available information as of the Acquisition Date. The excess of purchase consideration over the net assets acquired is recorded as goodwill, which primarily reflects the existence of intangible assets not recognized under U.S. GAAP such as the value of expected future synergies, the value of the assembled workforce and other market factors. The fair values of these amounts on the Acquisition Date, which are reflected in the table below, were finalized during the fourth quarter of 2024. These amounts include Measurement Period adjustments resulting in a decrease to deferred income tax liabilities of \$3,879, and various other adjustments resulting in a net reduction to goodwill of \$3,841. Any subsequent adjustments to these values will be recorded in the consolidated statements of comprehensive loss in the period in which the adjustment is identified.

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 sheets as of the Acquisition Date:

	<u>August 30, 2024</u>
Cash and cash equivalents	\$ 788
Accounts receivable	2,068
Prepaid expenses and other current assets	475
Property and equipment ⁽¹⁾	63,984
Other assets	263
Goodwill ⁽²⁾	119,668
Other intangibles	5,950
Accounts payable	(1,118)
Operating lease liabilities	(229)
Third-party debt	(3,904)
Accrued expenses	(5,222)
Deferred revenue	(752)
Deferred income tax	(12,142)
Total	<u>\$ 169,829</u>

⁽¹⁾ Includes \$63,800 of acquired developed technology.

⁽²⁾ Goodwill associated with the acquisition is not deductible for tax purposes.

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Notes to Consolidated Financial Statements (continued)
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The fair value, valuation methodologies, estimated useful lives, and significant assumptions of the identifiable intangibles acquired in the ecosio acquisition are summarized in the table below:

ecosio Identifiable Intangibles	Balance Sheet Location	August 30, 2024			
		Fair Value	Valuation Methodology	Estimated Useful Life	Discount Rate
Developed technology	Property and equipment, net	\$ 63,800	Multi-period excess earnings method - income approach	7 years	15.5 %
Trade name	Goodwill and other intangible assets	\$ 1,450	Relief from royalty method - income approach	3 years	15.5 %
Customer relationships	Goodwill and other intangible assets	\$ 4,500	With and without method - income approach	3 years	15.5 %

Third-party experts were engaged to assist in the valuation of identifiable intangible assets and Earn-out payments as part of the acquisition. All estimates, key assumptions, and forecasts were either provided or reviewed by the Company. Significant assumptions applied in the valuation of developed technology, tradename, and customer relationships include cash flow projections, revenue growth rates, cost of sales and margin projections, obsolescence curve, and royalty rates. While the Company chose to utilize a third-party valuation specialist for assistance, the fair value analysis and related valuations reflect the conclusions of the Company, and not those of any third-party.

Total transaction costs associated with the acquisition were \$1,698 for the year ended December 31, 2024, and are recorded in other operating expense (income), net in the consolidated statements of comprehensive loss.

Asset Acquisition

Artificial Intelligence Tax Categorization

On May 31, 2024, the Company entered into an asset purchase agreement with Ryan, LLC (“Ryan”) to acquire tax-specific artificial intelligence (“AI”) capabilities, designed to more effectively manage the complexity of tax mapping. The acquisition will accelerate the Company’s AI innovation strategy to help global companies manage tax complexity with greater speed and scale.

The Company paid \$6,075 in closing consideration, which included \$75 in transaction costs. The purchase agreement also includes the potential for earn-out payments and referral fees to Ryan over a five-year period. The earn-out payments will be paid annually in an amount equal to the (a) applicable percentage (ranging from 0% to 35%) multiplied by (b) new sales (excluding new sales to new customers). The referral fees will be paid annually to compensate Ryan for new customers in an amount equal to 35% multiplied by new sales from such new customers. The agreement also contained the assignment and assumption of certain immaterial contracts related to the software.

Following the guidance provided under the FASB Accounting Standards Update No. 2017-01, *Clarifying the Definition of a Business*, the transaction was accounted for as an asset acquisition and the entire consideration was allocated to the asset and recognized as in-process internal-use software within property and equipment on the consolidated balance sheets. Once placed into service, the asset will be reported as internal-use cloud-based customer solutions software, net of accumulated amortization within property and equipment on the consolidated balance sheets and will amortize over its assigned useful life of five years.

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Unaudited Pro Forma Financial Information

Unaudited proforma financial information has not been presented, as the information from the acquired companies would not have had a material impact individually or in the aggregate for the prior year periods.

4. INVESTMENTS

The table below presents the amortized cost, gross unrealized gains and losses, allowance for credit losses, and fair value aggregated by major security type as of December 31, 2024 and 2023. Accrued interest receivables of \$40 and \$20 as of December 31, 2024 and 2023, respectively, are not included in the tables.

As of December 31, 2024					
	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Allowance For Credit Losses	Fair Value
Investment securities available-for-sale:					
Commercial Paper	\$ 4,920	\$ —	\$ —	\$ —	\$ 4,920
Corporate Bonds	250	—	—	—	250
U.S. Treasury Securities	5,970	14	(1)	—	5,983
Total investment securities available-for-sale	<u>\$ 11,140</u>	<u>\$ 14</u>	<u>\$ (1)</u>	<u>\$ —</u>	<u>\$ 11,153</u>

As of December 31, 2023					
	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Allowance For Credit Losses	Fair Value
Investment securities available for sale:					
Commercial paper	\$ 7,169	\$ —	\$ (1)	\$ —	\$ 7,168
U.S. Treasury securities	3,628	—	(7)	—	3,621
Total investment securities available for sale	<u>\$ 10,797</u>	<u>\$ —</u>	<u>\$ (8)</u>	<u>\$ —</u>	<u>\$ 10,789</u>

Investment Securities in a Gross Unrealized Loss Position

The table below provides the gross unrealized losses and fair value of securities available-for-sale aggregated by major security type and the length of time that individual securities have been in a continuous unrealized loss position as of December 31, 2024 and 2023. The amounts include securities available-for-sale without an allowance for credit losses. As of December 31, 2024, the Company's available-for-sale investment securities consisted of 42 securities, 2 of which are in an immaterial unrealized loss position. As of December 31, 2023, the Company's available-for-sale investment securities consisted of 41 securities, 24 of which are in an immaterial unrealized loss position. As a result, there is no allowance for credit losses recorded for available-for-sale debt securities as of December 31, 2024 or 2023.

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

	As of December 31, 2024					
	Less than 12 Months		12 Months or Longer		Total	
	Fair Value	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss
Investment securities available-for-sale without an allowance for credit losses:						
U.S. Treasury Securities	\$ —	\$ —	\$ 600	\$ (1)	\$ 600	\$ (1)
Total investment securities available-for-sale	\$ —	\$ —	\$ 600	\$ (1)	\$ 600	\$ (1)

	As of December 31, 2023					
	Less than 12 Months		12 Months or Longer		Total	
	Fair Value	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss	Fair Value	Gross Unrealized Loss
Investment securities available for sale without an allowance for credit losses:						
Commercial paper	\$ 4,472	\$ (1)	\$ —	\$ —	\$ 4,472	\$ (1)
U.S. Treasury securities	—	—	2,043	(7)	2,043	(7)
Total investment securities available for sale	\$ 4,472	\$ (1)	\$ 2,043	\$ (7)	\$ 6,515	\$ (8)

Maturities of Investment Securities

The table below summarizes, as of December 31, 2024, the fair value of investment securities by major security type and contractual maturity as well as the total fair value, and amortized cost of investment securities by contractual maturity. Because borrowers may have the right to call or prepay certain obligations, the expected maturities of securities are likely to differ from the scheduled contractual maturities presented below.

	As of December 31, 2024				
	Due in 1 Year or Less	Due > 1 Year through 5 Years	Due > 5 Years through 10 Years	Due > 10 Years	Total
Fair value of investment securities available-for-sale:					
Commercial Paper	\$ 4,920	\$ —	\$ —	\$ —	\$ 4,920
Corporate Bonds	—	250	—	—	250
U.S. Treasury Securities	2,678	3,305	—	—	5,983
Total investment securities available-for-sale	\$ 7,598	\$ 3,555	\$ —	\$ —	\$ 11,153
Amortized cost of investment securities available-for-sale	\$ 7,595	\$ 3,545	\$ —	\$ —	\$ 11,140

The Company's debt securities portfolio had unaccreted discounts of \$59 and \$114 and had no remaining unamortized premiums as of December 2024 and 2023, respectively.

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Notes to Consolidated Financial Statements (continued)
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Net Securities Gains or Losses and Securities Pledged

The Company had no sales of debt securities during 2024 or 2022. During 2023, the Company had sales of debt securities totaling \$2,336, resulting in a realized loss of \$4. No securities were pledged during the years ended December 31, 2024, 2023 or 2022.

No net gains or losses and no unrealized gains or losses were recognized on equity securities held during the years ended December 31, 2024, 2023 or 2022.

5. FINANCIAL INSTRUMENTS AND FAIR VALUE MEASUREMENTS

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The following table summarizes the Company's fair value for its financial assets and liabilities measured at fair value on a recurring basis:

		Fair Value Measurements Using		
		Prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
As of December 31, 2024	Fair Value			
Money Market Funds	\$ 276,374	\$ 276,374	\$ —	\$ —
Commercial Paper	4,920	—	4,920	—
Corporate Bonds	250	—	250	—
U.S. Treasury Securities	5,983	—	5,983	—
ecosio Cash Earn-outs	74,400	—	—	74,400
ecosio Stock Earn-outs	48,100	—	—	48,100

		Fair Value Measurements Using		
		Prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
As of December 31, 2023	Fair Value			
Money Market Funds	\$ 53,049	\$ 53,049	\$ —	\$ —
Commercial Paper	7,168	—	7,168	—
U.S. Treasury Securities	3,621	—	3,621	—
Tellutax Contingent Consideration	4,900	—	—	4,900
Foreign Currency Forward Contracts	849	—	849	—

The Company has investments in Money Market Funds, 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 Fund fair values are known and observable through daily published floating net asset values. Securities classified as available-for-sale are reported at fair value using Level 2 inputs. For the Commercial Paper, Corporate Bonds, and U.S. Treasury Securities, the Company believes that Level 2 designation is appropriate under ASC 820-10, *Fair Value Measurements and Disclosures*, as these securities are fixed income securities, none are exchange traded, and all are priced by correlation to observed market data. For these securities the Company obtains fair value measurements from an independent pricing service. The fair value measurements consider observable data that may include dealer quotes, market spreads, cash flows, U.S. government and agency yield curves, live trading levels, trade

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execution data, market consensus prepayment speeds, credit information, and the security's terms and conditions, among other factors.

ecosio Earn-outs

In connection with the August 2024 ecosio acquisition, the sellers are entitled to three annual Earn-outs based on ecosio's achievement of certain monthly software revenue targets measured over an aggregate of 12 months and paid within 90 days after the relevant measurement period. The fair values of the Cash Earn-outs and the Stock Earn-outs were measured on the Acquisition Date using a Monte Carlo simulation in a risk-neutral framework, calibrated to management's revenue forecasts. Additional information on the Cash Earn-outs and the Stock Earn-outs is presented in the following table below.

Cash Earn-outs/ Period	Maximum Payout	Fair Value December 31, 2024	Fair Value at Acquisition Date
Year 1 - December 1, 2024 - December 1, 2025	\$ 19,600	\$ 17,900	\$ 16,700
Year 2 - December 1, 2025 - December 1, 2026	30,625	24,400	23,200
Year 3 - December 1, 2026 - December 1, 2027	44,130	32,100	31,100
Total Cash Earn-outs	\$ 94,355	\$ 74,400	\$ 71,000
Stock Earn-outs/ Period	Maximum Payout ⁽¹⁾	Fair Value December 31, 2024	Fair Value at Acquisition Date
Year 1 - December 1, 2024 - December 1, 2025	\$ 12,000	\$ 17,200	\$ 12,200
Year 2 - December 1, 2025 - December 1, 2026	12,000	16,300	11,400
Year 3 - December 1, 2026 - December 1, 2027	11,000	14,600	10,400
Total Stock Earn-outs	\$ 35,000	\$ 48,100	\$ 34,000

⁽¹⁾ Maximum payout based on Vertex's August 6, 2024 opening share price of \$37.02, as referenced in the purchase agreement.

Actual payouts are further adjusted depending on ecosio's software revenue attainment for each of the measurement periods. In the event that actual software revenues exceed 100% of the target, additional payments may be made up to a maximum of 122.5% of the annual target. If actual software revenues are below 85% of the target, no payouts are made for that measurement period. The Stock Earn-outs are paid in shares of the Company's Class A common stock.

These Earn-outs represent recurring fair value measurements with significant unobservable inputs, which management considers to be Level 3 measurements under the fair value hierarchy. The final payments may be adjusted depending on the actual amount, above or below the target. Both the Cash Earn-outs and the Stock Earn-outs are recorded at fair value and are included in purchase commitment and contingent consideration liabilities, net of current portion in the consolidated balance sheets. The Earn-outs will be revalued and adjusted quarterly until the end of the Earn-out periods, and any fair value adjustments will be recorded in the change in fair value of acquisition contingent earn-outs line of the consolidated statement of loss.

Adjustments to the fair values of the Cash Earn-outs and the Stock Earn-outs of \$3,400 and \$14,100, respectively, were recorded in change in fair value of acquisition contingent earn-outs for the year ended December 31, 2024. At December 31, 2024, the Cash Earn-outs and the Stock Earn-outs of \$17,900 and \$17,200, respectively, are included in purchase commitment and contingent consideration liabilities, current in the consolidated balance sheets. At December 31, 2024, the Cash Earn-outs and the Stock Earn-outs of \$56,500 and \$30,900, respectively, are included in the purchase commitment and contingent consideration liabilities, net of current portion in the consolidated balance sheets.

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The fair values of the Cash Earn-outs and the Stock Earn-outs as of December 31, 2024 and the Acquisition Date, and unobservable inputs used for the Monte Carlo Simulation valuation, are shown in the tables below:

December 31, 2024				
Liabilities	Fair Value	Valuation Technique	Unobservable Inputs	
ecosio Contingent Consideration - Cash Earn-outs	\$74,400	Monte Carlo Simulation	Revenue volatility	21.0 %
			Revenue discount rate	7.7 %
			Term (in years)	3.2
ecosio Contingent Consideration - Stock Earn-outs	\$48,100	Monte Carlo Simulation	Revenue volatility	21.0 %
			Revenue discount rate	7.7 %
			Term (in years)	3.2

Acquisition Date				
Liabilities	Fair Value	Valuation Technique	Unobservable Inputs	
ecosio Contingent Consideration - Cash Earn-outs	\$71,000	Monte Carlo Simulation	Revenue volatility	21.0 %
			Revenue discount rate	7.6 %
			Term (in years)	3.5
ecosio Contingent Consideration - Stock Earn-outs	\$34,000	Monte Carlo Simulation	Revenue volatility	21.0 %
			Revenue discount rate	7.6 %
			Term (in years)	3.5

Tellutax, LLC Contingent Consideration

The 2021 Tellutax, LLC (“Tellutax”) acquisition entitled the sellers to contingent consideration if sales targets are met during a period of time following the acquisition (the “Tellutax Contingent Consideration”). The estimated fair value of the Tellutax Contingent Consideration as of the acquisition date of January 25, 2021 was \$2,200.

The Tellutax Contingent Consideration was based on three potential earn-out payments determined by periodic revenue achievements over a thirty-month period. Such estimates represented recurring fair value measurements with significant unobservable inputs, which management considered to be Level 3 measurements under the Fair Value Hierarchy. The significant assumptions used in these calculations included forecasted results and the estimated likelihood for each performance scenario. The fair value of Tellutax Contingent Consideration was estimated using a Monte Carlo Simulation to compute the expected cash flows from earn-out payments specified in the purchase agreement. The earn-out payments had no maximum limit, but when certain targets were not met, there was no earn-out payment for the applicable measurement period.

Adjustments to the Tellutax Contingent Consideration fair value of \$(2,575), \$1,549, and \$2,300 were recorded in other operating expense, net for the years ended December 31, 2024, 2023, and 2022, respectively. At December 31, 2024, the Tellutax Contingent Consideration balance was \$0. At December 31, 2023, the Tellutax Contingent Consideration of \$2,300 and \$2,600 is included in purchase commitment and contingent consideration liabilities, current, and purchase

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commitment and contingent consideration liabilities, net of current portion, respectively, in the consolidated balance sheets.

Tellutax Contingent Consideration fair value and unobservable inputs used for the Monte Carlo Simulation valuation were as follows:

Liability	December 31, 2023			
	Fair Value	Valuation Technique	Unobservable Inputs	
Tellutax Contingent Consideration	\$ 4,900	Monte Carlo Simulation	Revenue volatility	60.0 %
			Revenue discount rate	20.8 %
			Term (in years)	1.3

Beginning and ending balances in fair value of the Company's Level 3 liabilities were as follows:

	Tellutax Contingent Consideration	ecosio Contingent Consideration Cash Earn-outs	ecosio Contingent Consideration Stock Earn-outs
Balance, January 1, 2022	\$ 2,500	\$ —	\$ —
Fair value adjustments	2,300	—	—
Balance, December 31, 2022	4,800	—	—
Fair value adjustments	1,549	—	—
Payments	(1,449)	—	—
Balance, December 31, 2023	4,900	—	—
ecosio acquisition (Note 3)	—	71,000	34,000
Fair value adjustments	(2,575)	3,400	14,100
Payments	(2,325)	—	—
Balance, December 31, 2024	\$ —	\$ 74,400	\$ 48,100

Assets and Liabilities for Which Fair Value is Only Disclosed

The carrying amounts 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 amount of our bank debt approximates fair value as the variable rates on the debt approximate those commercially available in the market, and is considered a Level 3 measurement.

Non-recurring Fair Value Measurements

The ecosio acquisition on August 30, 2024, the Tellutax acquisition on January 25, 2021, and the Systax acquisition on January 10, 2020, were accounted for as business combinations and the total purchase price for each acquisition was allocated to the net assets acquired and liabilities assumed based on their estimated fair values.

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On January 7, 2020, the Company acquired a 60% controlling interest in Systax, a provider of Brazilian transaction tax content and software. The Company had a contractual commitment to acquire the remaining equity interest from the original Systax Quotaholders incrementally through 2024. Purchase commitment payments for these incremental acquisition amounts were based on a multiple of Systax revenue and earnings before interest, depreciation, amortization, and income taxes (“EBITDA”) performance at the end of 2022 and 2023. Management determined these incremental 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 at the acquisition date was finalized to be \$12,592. This amount has fluctuated as a result of changes in foreign currency exchange rates and was reflected in purchase commitment and contingent consideration liabilities in the consolidated balance sheets, with such changes in exchange rates being reflected in other comprehensive loss or income in the consolidated statements of comprehensive loss. Adjustments to the settlement date value that arose as a result of remeasurement at each balance sheet were recorded as interest expense related to financing costs in the consolidated statements of comprehensive loss in the period the change was identified. The Company recorded increases in interest expense of \$423, \$4,020 and \$990 during 2024, 2023, and 2022, respectively, associated with recording an increase in the settlement value.

The Company acquired an additional 5% equity interest of Systax during 2021 for \$788, increasing the Company’s equity interest in Systax to 65%. The Company acquired an additional 15% equity interest of Systax through a Purchase Commitment Liability payment of \$4,975 during 2023, increasing the Company’s equity interest in Systax to 80%. During the year ended December 31, 2024, the Company paid \$9,622 to acquire the remaining 20% equity interest of Systax, which increased the Company’s ownership percentage of Systax to 100%, and settled the outstanding Purchase Commitment Liability.

The Purchase Commitment Liability at December 31, 2023 included in purchase commitment and contingent consideration liabilities, current, in the consolidated balance sheets was \$9,601. The carrying amount approximated its respective fair value at December 31, 2023 and was considered a Level 3 non-recurring fair value measurement.

The Company estimated the initial fair value of the Purchase Commitment Liability using a Monte Carlo Simulation, which the Company considers 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.

Derivative Instruments

The Company may periodically enter into derivative contracts to reduce its exposure to foreign currency exchange rates. Historically the Company has not designated derivative contracts as hedges. The derivative contracts are typically designed to manage specific risks according to the Company’s strategies, which may change from time to time.

The Company entered into a series of foreign currency forward contracts to reduce its exposure to adverse fluctuations in the Brazilian Real associated with a portion of the Purchase Commitment Liability. Such forward contracts, were not designated as a hedge, did not qualify for hedge accounting and were not material to the consolidated financial statements. During 2024, the forward currency contracts matured as the Company settled the outstanding Purchase Commitment Liability. These forward contracts were remeasured at fair value on a recurring basis and are included in other assets in the December 31, 2023 consolidated balance sheets, with changes in their estimated fair value recognized as interest expense in the consolidated statements of comprehensive loss. The Company’s fair value determinations were based on foreign currency exchange rates in active markets, which are considered to be Level 2 measurements within the Fair Value Hierarchy.

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Notes to Consolidated Financial Statements (continued)
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Convertible Senior Notes

At December 31, 2024 and 2023, the fair value of the Notes were \$539,494 and \$0, respectively. The fair value was determined based on the quoted price of the Notes in an over-the-counter market on the last trading day of the reporting period and has been classified as Level 2 in the Fair Value Hierarchy. For further information on the Notes, refer to Note 10, "Debt."

6. PROPERTY AND EQUIPMENT

The major components of property and equipment are as follows:

	As of December 31,	
	2024	2023
Leasehold improvements	\$ 20,096	\$ 20,662
Equipment	14,386	22,012
Computer software purchased	1,344	2,690
Internal-use software developed:		
Cloud-based customer solutions	237,232	142,302
Internal systems and tools	72,406	39,430
Furniture and fixtures	7,292	7,669
In-process internal-use software	28,916	28,883
Property and equipment	381,672	263,648
Less accumulated depreciation and amortization	(204,113)	(162,914)
Property and equipment, net	<u>\$ 177,559</u>	<u>\$ 100,734</u>

Depreciation expense for property and equipment, excluding all internal-use software developed and finance leases, was \$4,394, \$5,847, and \$6,445 for the years ended December 31, 2024, 2023, and 2022, respectively. Depreciation for 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 loss.

Finance lease amortization was \$78, \$610, and \$1,082 for the years ended December 31, 2024, 2023, and 2022, respectively. Finance lease amortization is included in depreciation and amortization in the consolidated statements of comprehensive loss.

Assets under finance leases of \$172, and \$297, net of accumulated amortization of \$97 and \$190, at December 31, 2024 and 2023, respectively, are included in property and equipment in the consolidated balance sheets.

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

	As of December 31,	
	2024	2023
Internal-use software developed	\$ 309,638	\$ 181,732
Less accumulated depreciation	(171,181)	(121,646)
Internal-use software developed, net of accumulated depreciation	138,457	60,086
In-process internal-use software	28,916	28,883
Internal-use software developed, net	<u>\$ 167,373</u>	<u>\$ 88,969</u>

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Notes to Consolidated Financial Statements (continued)
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Amounts included in property and equipment additions related to capitalized internal-use software on the consolidated statements of cash flows are as follows:

	For the year ended December 31,		
	2024	2023	2022
Cloud-based customer solutions	\$ 45,374	\$ 29,496	\$ 28,918
Internal systems and tools	19,024	17,751	13,356
Total	<u>\$ 64,398</u>	<u>\$ 47,247</u>	<u>\$ 42,274</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, 2024, 2023, and 2022, was \$35,312, \$34,592, and \$27,682, respectively, and is included in cost of revenues, software subscriptions in the consolidated statements of comprehensive loss. Developed technology for cloud-based customer solutions with an acquisition date fair value of \$63,800 was recorded in connection with the ecosio acquisition and is reflected in property and equipment, net, in the consolidated balance sheets at December 31, 2024. Depreciation expense related to this developed technology was \$2,962 for the year ended December 31, 2024, and is reflected in cost of revenues - software subscriptions in the consolidated statement of comprehensive loss.

Depreciation expense for internal-use software developed for internal systems and tools for the years ended December 31, 2024, 2023, and 2022 was \$16,481, \$8,745, and \$4,913, respectively, and is included in depreciation and amortization in the consolidated statements of comprehensive loss.

Amortization expense of internal-use software developed, excluding in-process internal-use software not yet available for its intended use at December 31, 2024 is as follows for all future years:

Year Ending December 31,	Internal Systems and Tools	Cloud-Based Customer Solutions
2025	\$ 17,779	33,764
2026	12,607	24,864
2027	4,113	13,699
2028	207	8,570
2029	—	22,854
Total	<u>\$ 34,706</u>	<u>\$ 103,751</u>

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Notes to Consolidated Financial Statements (continued)
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7. 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.

The major components of capitalized software are as follows:

	As of December 31,	
	2024	2023
Capitalized software	\$ 140,562	\$ 115,152
Less accumulated amortization	(105,175)	(81,410)
Capitalized software, net of accumulated depreciation	35,387	33,742
In-process capitalized software	963	5,029
Capitalized software, net	<u>\$ 36,350</u>	<u>\$ 38,771</u>

Software development costs capitalized for the years ended December 31, 2024, 2023, and 2022, excluding acquisitions, were \$21,344, \$18,972, and \$14,888, respectively. Capitalized software amortization expense, including amortization of acquired technology, for the years ended December 31, 2024, 2023, and 2022 was \$23,765, \$19,213, and \$17,018, respectively, and is included in cost of revenues, software subscriptions in the consolidated statements of comprehensive loss.

In-process capitalized software at December 31, 2024 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, 2024 is as follows for all future years:

Year Ending December 31,	
2025	\$ 19,159
2026	12,350
2027	3,877
2028	—
2029	—
Total	<u>\$ 35,387</u>

8. LEASES

The Company leases office space, IT equipment and office equipment. The Company's leases have remaining terms of up to 4 years.

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Notes to Consolidated Financial Statements (continued)
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The following table sets forth the Company's lease assets and liabilities and their balance sheet location as follows:

	Balance Sheet Location	As of December 31,		
		2024	2023	
Lease assets:				
Operating lease right-of-use assets	Operating lease right-of-use assets	\$ 11,956	\$ 14,605	
Finance lease assets	Property and equipment, net (Note 6)	75	107	
Total lease assets		<u>\$ 12,031</u>	<u>\$ 14,712</u>	
Lease liabilities:				
Current:				
Operating lease liabilities	Current portion of operating lease liabilities	\$ 3,995	\$ 3,717	
Finance lease liabilities	Current portion of finance lease liabilities	77	74	
Total current lease liabilities		<u>\$ 4,072</u>	<u>\$ 3,791</u>	
Non-current:				
Operating lease liabilities	Operating lease liabilities, net of current portion	\$ 12,585	\$ 16,567	
Finance lease liabilities	Finance lease liabilities, net of current portion	10	51	
Total non-current lease liabilities		<u>12,595</u>	<u>16,618</u>	
Total lease liabilities		<u>\$ 16,667</u>	<u>\$ 20,409</u>	

The major components of lease cost are as follows:

	For the year ended December 31,		
	2024	2023	2022
Operating lease cost	\$ 3,679	\$ 4,019	\$ 3,714
Finance lease cost:			
Amortization of lease assets	79	788	1,275
Interest on lease liabilities	6	8	18
Total lease cost	<u>\$ 3,764</u>	<u>\$ 4,815</u>	<u>\$ 5,007</u>

The weighted-average term and discount rate for leases are as follows:

	As of December 31,	
	2024	2023
Weighted-average remaining lease term (years):		
Operating leases	3.7	4.7
Finance leases	1.1	2.1
Weighted-average discount rate:		
Operating leases	2.4 %	2.3 %
Finance leases	6.1 %	5.6 %

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Notes to Consolidated Financial Statements (continued)
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Lease liability maturities for the next five years and thereafter are as follows as of December 31, 2024:

	Operating Leases	Finance Leases
2025	\$ 4,340	\$ 78
2026	4,766	11
2027	4,738	—
2028	3,482	—
2029	—	—
Thereafter	—	—
Total lease payments	17,326	89
Less: Imputed interest	(746)	(2)
Present value of lease liabilities	<u>\$ 16,580</u>	<u>\$ 87</u>

9. GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill and other intangible assets are as follows for the periods presented:

	As of December 31,	
	2024	2023
Goodwill	\$ 357,823	\$ 257,842
Other intangible assets, net	5,198	2,396
Total	<u>\$ 363,021</u>	<u>\$ 260,238</u>

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Notes to Consolidated Financial Statements (continued)
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The changes in the carrying amount of goodwill are as follows for the periods presented:

	As of December 31,	
	2024	2023
Balance, January 1	\$ 257,842	\$ 251,842
ecosio acquisition	119,668	—
Foreign currency translation adjustments	(19,687)	6,000
Balance, December 31, gross	357,823	257,842
Accumulated impairment losses	—	—
Balance, December 31, net	<u>\$ 357,823</u>	<u>\$ 257,842</u>

The Company recorded other intangible assets of \$5,950 during the year ended December 31, 2024 in connection with the ecosio acquisition. Amortization expense related to these intangible assets was \$644 for the year ended December 31, 2024, and is reflected in selling and marketing expense in the consolidated statement of net loss. The Company also recognized various amortizable other intangible assets in connection with previous acquisitions, including customer relationships, technology, and tradenames. The following tables provide additional information for our other intangible assets, which are individually not material to the consolidated financial statements:

	2024	2023
Weighted average amortization period (years)	3.3	3.5

	As of December 31, 2024		As of December 31, 2023	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Customer relationships	\$ 12,276	\$ 8,362	\$ 8,348	\$ 6,385
Trademarks and tradenames	2,515	1,231	1,303	1,119
Developed technology	1,027	1,027	1,309	1,060
Total	<u>\$ 15,818</u>	<u>\$ 10,620</u>	<u>\$ 10,960</u>	<u>\$ 8,564</u>

	Cost of Revenues, Software Subscriptions	Selling and Marketing Expense	Total Expense
For the year ended December 31,			
2024	\$ 225	\$ 2,478	\$ 2,703
2023	243	2,641	2,884
2022	234	3,779	4,013

The following table presents estimated future amortization of intangible assets over their remaining estimated useful lives:

Year Ending December 31,	
2025	\$ 2,089
2026	1,865
2027	1,244
2028	—
2029	—
Total	<u>\$ 5,198</u>

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10. DEBT

Credit Agreement

On March 31, 2020, the Company entered into a credit agreement (the “Previous Credit Agreement”) with a bank consisting of a \$175,000 term loan (the “Previous Term Loan”) and a \$100,000 committed line of credit (the “Previous Line of Credit”).

On March 8, 2022, the Company entered into the Second Amendment to Credit Agreement (the “Second Amendment”), with a banking syndicate, which amended the Previous Credit Agreement, providing for, among other modifications, (i) a new term loan in the aggregate amount of \$50,000 (the “Term Loan”); (ii) an extension of the maturity date of the revolving facility (the “Line of Credit”) from March 2025 to March 2027; (iii) an increase in the Line of Credit commitment from \$100,000 to \$200,000; (iv) the Company’s option to select an applicable interest rate at either the bank base rate plus an applicable margin (the “New Base Rate Option”) or Secured Overnight Financing Rate (“SOFR”) plus an applicable margin (the “SOFR Option”); (v) modifications to the financial covenant performance levels which determine applicable margins; and (vi) modifications to certain covenants and events of default. Net proceeds from the Term Loan were used to fund ongoing working capital, capital expenditures, permitted distributions, permitted acquisitions, and general corporate purposes of the Company and its subsidiaries.

The Company paid \$983 in financing costs in connection with the Second Amendment during 2022, which are amortizing over the remaining term of the Credit Agreement. The Company wrote off \$370 in deferred financing fees pertaining to the Previous Credit Agreement associated with a bank exiting the Second Amendment. The remaining balance of deferred financing costs of \$277 pertaining to the remaining bank associated with the Previous Credit Agreement are amortizing over the remaining term of the Credit Agreement. The portion of the deferred financing costs associated with the Line of Credit is reflected in other assets in the consolidated balance sheets at December 31, 2024 and 2023. The portion of the deferred financing costs associated with the Term Loan is reflected as a reduction of the Term Loan in the consolidated balance sheets at December 31, 2023.

On December 12, 2023, the Company entered into the Third Amendment to Credit Agreement (the “Third Amendment” and collectively with the Previous Credit Agreement and the Second Amendment, the “Credit Agreement”), with the existing banking syndicate, which provided funding for a proposed acquisition. On January 14, 2024, the Company withdrew its public tender offer related to the proposed acquisition. Certain provisions under the Third Amendment expired on April 30, 2024. The majority of the provisions provided by the Third Amendment were contingent upon the completion of the proposed acquisition, and therefore, immediately reverted to the terms of the Second Amendment due to the withdrawal of the public tender offer.

The Company incurred \$1,112 in financing costs in connection with the Third Amendment during 2023, which are amortizing over the remaining term of the Credit Agreement. The portion of the deferred financing costs associated with the Line of Credit are reflected in other assets in the consolidated balance sheets at December 31, 2024. The portion of the deferred financing costs associated with the Line of Credit and the Term Loan are reflected in other assets, and as a reduction of the Term Loan, respectively, in the consolidated balance sheets at December 31, 2023.

On April 19, 2024, the Company entered into the Fourth Amendment to the Credit Agreement (the “Fourth Amendment”) with a banking syndicate, which provided for, among other things, amendments to certain definitions.

On November 4, 2024, the Company entered into a Fifth Amendment to the Credit Agreement (the “Fifth Amendment”), with a banking syndicate, which provided for, among other modifications, an increase in the Line of Credit commitment from \$200,000 to \$300,000 and an extension of the maturity date to November 4, 2029.

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The Company incurred \$1,167 in financing costs in connection with the Fifth Amendment during 2024, which are amortizing over the term of the Credit Agreement. The portion of the deferred financing costs associated with the Line of Credit are reflected in other assets in the consolidated balance sheets at December 31, 2024.

Outstanding borrowings under the Credit Agreement are collateralized by nearly all of the assets of the Company and contain financial and operating covenants. The Company was in compliance with these covenants at December 31, 2024 and 2023. The Credit Agreement also limits the declaration or payment of certain dividends, not to exceed, from and after the Credit Agreement closing date, the greater of (i) \$15,000 and (ii) 15% of Consolidated EBITDA (as defined in the Credit Agreement) for the most recently ended test period.

Line of Credit

The Line of Credit expires in March 2029. The Company is required to pay a quarterly fee on the difference between the \$300,000 allowed maximum borrowings and the unpaid principal balance outstanding under the Line of Credit at the applicable rate. At December 31, 2024, the New Base Rate Option and SOFR Option applicable to the Line of Credit borrowings were 8.00% and 5.99%, respectively. There were no outstanding borrowings under the Line of Credit at December 31, 2024 or 2023.

Term Loan

On May 10, 2024, the Company repaid the outstanding Term Loan balance of \$46,332, which included \$82 of interest. The Company also wrote off \$276 in deferred financing fees pertaining to the Term Loan. The Term Loan required quarterly principal payments over five years, with a balloon payment due on March 8, 2027. The interest rate on the Term Loan was 6.46% at December 31, 2023, as the Company selected the SOFR Option. Outstanding borrowings under the Term Loan were \$46,875 at December 31, 2023 and are reported in current portion of long-term debt and long-term debt, net of current portion, in the consolidated balance sheets.

Indenture and Notes

On April 26, 2024, the Company closed its offering of \$345,000 aggregate principal amount of 0.750% Convertible Senior Notes due 2029 (the “Notes”) to qualified institutional buyers in accordance with Rule 144A under the Securities Act of 1933, as amended. The Notes were issued pursuant to, and are governed by, an indenture (the “Indenture”) between the Company and U.S. Bank Trust Company, National Association, as trustee. The Notes, issued on April 26, 2024, include an additional \$45,000 aggregate principal amount of Notes, issued pursuant to the full exercise by the initial purchasers of the Notes of their option to purchase additional Notes.

The Notes are the senior, unsecured obligations of the Company and are (i) ranked equal in right of payment with the Company’s senior unsecured indebtedness, (ii) senior in right of payment to the Company’s indebtedness that is expressly subordinated to the Notes, (iii) effectively subordinated to the Company’s senior secured indebtedness, to the extent of the value of the collateral securing that indebtedness, and (iv) structurally subordinated to all indebtedness and other liabilities, including trade payables, and (to the extent the Company is not a holder thereof) preferred equity, if any, of the Company’s subsidiaries.

The Notes bear interest at a rate of 0.750% per annum on the principal amount thereof, payable semi-annually in arrears on May 1 and November 1 of each year, beginning on November 1, 2024. The Notes will mature on May 1, 2029 (the “maturity date”), unless earlier repurchased, redeemed or converted in accordance with their terms. On November 1, 2028, and thereafter, holders may convert their Notes anytime at their election, until the close of business on the second scheduled trading day immediately before the maturity date. Before November 1, 2028, holders have the right to convert their Notes only upon the occurrence of the following events:

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- During any calendar quarter after June 30, 2024 if the closing price of the Company's common stock for at least 20 trading days in a period of 30 consecutive trading days ending on and including the last trading day of the preceding calendar quarter is more than 130% of the then applicable conversion price (effectively \$47.21) for the Notes per share of common stock.
- During the five business days immediately after any ten consecutive trading day period in which the trading price per \$1,000 principal amount of Notes, as determined following a request by a holder of Notes, for each day of that period was less than 98% of the product of the closing price of the Company's common stock and the then applicable conversion rate.
- If the Company calls any or all of the Notes for redemption, holders may convert all or any portion of their notes at any time prior to the close of business on the scheduled trading day prior to the redemption date, even if the Notes are not otherwise convertible at such time.
- If specified distributions to holders of the Company's common stock are made or specified corporate events occur.

As of December 31, 2024, the last reported sale price of the Company's Class A common stock for at least 20 trading days during the 30 consecutive trading days ending on, and including, December 31, 2024, was greater than or equal to 130% of the conversion price of the Notes on each applicable trading day. Therefore, the Notes are convertible at the option of the holders of the Notes during the first quarter of 2025.

If a holder converts upon a make-whole fundamental change (as defined in the Indenture) or Company redemption, the holder may be eligible to receive a make-whole premium through an increase to the conversion rate.

Upon conversion, the Company will pay or deliver, as applicable, cash, shares of Class A common stock or a combination of cash and shares of Class A common stock at the Company's election. The initial conversion rate for the Notes is 27.5315 shares of Class A common stock per \$1,000 principal amount of Notes, which represents an initial conversion price of approximately \$36.32 per share of Class A common stock and is subject to adjustment upon the occurrence of certain specified events as set forth in the Indenture.

The net proceeds from the offering of the Notes were \$333,716, after deducting the initial purchasers' discount and commissions, and other transaction and offering expenses. The Company used \$42,366 of the net proceeds from this offering to fund the cost of the Capped Call Transactions (as defined below) and intends to use the remainder for working capital or other general corporate expenses, which may include capital expenditures, potential acquisitions, and strategic transactions.

Capped Call Transactions

In connection with the pricing of the Notes on April 23, 2024, the Company entered into privately negotiated capped call transactions (the "Base Capped Calls") with certain financial institutions (together, the "Option Counterparties"). In connection with the exercise of the option to purchase the additional Notes in full, the Company entered into additional capped call transactions with the Option Counterparties (together, the "Additional Capped Call Transactions" and, together with the Base Capped Call Transactions, the "Capped Call Transactions").

The cap price of the Capped Call Transactions will initially be \$55.88 per share of Class A common stock, and is subject to certain adjustments under the terms of the Capped Call Transactions. The Capped Call Transactions are expected generally to reduce the potential dilution to the Class A common stock upon any conversion of the Notes and/or to offset any cash payments the Company is required to make in excess of the principal amount of the converted Notes, as the case may be, upon any conversion of the Notes. The Capped Call Transactions cover, subject to anti-dilution adjustments substantially similar to those applicable to the Notes, approximately 12,348 shares of the Company's common

Vertex, Inc. and Subsidiaries
Notes to Consolidated Financial Statements (continued)
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stock. The cost of the Capped Call Transactions was \$42,366, which was included in additional paid-in capital, net of tax, in the consolidated balance sheets, with no remeasurement in subsequent periods as it meets the conditions for equity classification.

Our indebtedness at December 31, 2024 and 2023 was as follows:

	As of December 31, 2024			As of December 31, 2023		
	Principal Amount	Discounts and Deferred Financing Costs	Net Carrying Amount	Principal Amount	Discounts and Deferred Financing Costs	Net Carrying Amount
Term Loan	\$ —	\$ —	\$ —	\$ 2,500	\$ —	\$ 2,500
Current portion of long-term debt	—	—	—	2,500	—	2,500
Term Loan	—	—	—	44,375	(316)	44,059
Debt, net of current portion	—	—	—	44,375	(316)	44,059
Convertible senior notes, non-current	345,000	(9,780)	335,220	—	—	—
Total debt	<u>\$ 345,000</u>	<u>\$ (9,780)</u>	<u>\$ 335,220</u>	<u>\$ 46,875</u>	<u>\$ (316)</u>	<u>\$ 46,559</u>

Our interest expense related to the Notes is as follows:

	For the year ended December 31,	
	2024	2023
Contractual interest expense	\$ 1,761	\$ —
Amortization of issuance costs	1,505	—
Total interest expense, convertible senior Notes	<u>\$ 3,266</u>	<u>\$ —</u>

Principal debt maturities under the Credit Agreement and Notes for the next five years and thereafter are as follows as of December 31, 2024:

Year Ending December 31,	
2025	\$ —
2026	—
2027	—
2028	—
2029 and thereafter	345,000
Total debt, net of financing costs	<u>\$ 345,000</u>

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11. STOCKHOLDERS' EQUITY

Common Stock

During 2024, the Company issued 2,455 shares of Class A common stock ("Class A") related to the exercise of options, net of 267 shares returned to the Company in lieu of payment of the exercise price and taxes due on these exercises. The Company issued 846 shares of Class A in 2024 in connection with the vesting of RSUs, net of 499 shares returned to the Company in lieu of payment of taxes due on the vesting of these awards. The Company issued 84 shares of Class A in 2024 in connection with the vesting of RSAs, net of 7 shares returned to the Company in lieu of payment of taxes due on the vesting of these awards. The Company also issued 116 shares in connection with the ESPP Plan in 2024. During 2024, stockholders exchanged 6,180 shares of Class B common stock ("Class B") for an equivalent number of shares of Class A.

During 2023, the Company issued 2,468 shares of Class A related to the exercise of options, net of 314 shares returned to the Company in lieu of payment of the exercise price and taxes due on these exercises. The Company issued 511 shares of Class A in 2023 in connection with the vesting of RSUs, net of 285 shares returned to the Company in lieu of payment of taxes due on the vesting of these awards. The Company issued 198 shares of Class A in 2023 in connection with the vesting of RSAs, net of 7 shares returned to the Company in lieu of payment of taxes due on the vesting of these awards. The Company also issued 152 shares in connection with the ESPP Plan in 2023. During 2023, stockholders exchanged 7,646 shares of Class B for an equivalent number of shares of Class A.

During 2022, the Company issued 800 shares of Class A related to the exercise of options, net of 91 shares returned to the Company in lieu of payment of the exercise price and taxes due on these exercises. The Company issued 48 shares of Class A in 2022 in connection with the vesting of RSUs, net of 20 shares returned to the Company in lieu of payment of taxes due on the vesting of these awards. The Company issued 173 shares of Class A in 2022 in connection with the vesting of RSAs, net of 15 shares returned to the Company in lieu of payment of taxes due on the vesting of these awards. The Company also issued 207 shares in connection with the ESPP Plan in 2022. During 2022, stockholders exchanged 6,500 shares of Class B for an equivalent number of shares of Class A.

Tax Sharing Agreement Payments

In connection with revocation of the Company's S-Corporation election effective July 27, 2020, the Company entered into an agreement with the S-Corporation stockholders pursuant to which the Company 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 effective date of the S Election revocation (the "Tax Sharing Agreement"). All obligations of the Company under the Tax Sharing Agreement are satisfied by adjustments of additional paid in capital.

No payments were required under the Tax Sharing Agreement in 2024 or 2023. On March 15, 2022, the Company distributed \$536 to the former S-Corporation shareholders under the Tax Sharing Agreement to settle the Company's obligation for income taxes related to the allocation of taxable income to the S-Corporation short tax period ended July 26, 2020.

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12. EARNINGS PER SHARE

The tables below illustrate the calculation of basic and diluted net loss per common share for the Class A and Class B for the periods reflected below.

	For the year ended December 31,					
	2024		2023		2022	
	Class A	Class B	Class A	Class B	Class A	Class B
Basic net loss per share:						
Numerator						
Allocation of net loss ⁽¹⁾	\$ (21,974)	\$ (30,755)	\$ (4,721)	\$ (8,372)	\$ (3,771)	\$ (8,533)
Denominator						
Total shares used in per share computation	64,724	90,586	54,753	97,106	45,864	103,781
Basic net loss per share:	<u>\$ (0.34)</u>	<u>\$ (0.34)</u>	<u>\$ (0.09)</u>	<u>\$ (0.09)</u>	<u>\$ (0.08)</u>	<u>\$ (0.08)</u>
Diluted net loss per share:						
Numerator						
Allocation of net loss ⁽¹⁾	\$ (21,974)	\$ (30,755)	\$ (4,721)	\$ (8,372)	\$ (3,771)	\$ (8,533)
Total net loss used in per diluted computation	<u>\$ (21,974)</u>	<u>\$ (30,755)</u>	<u>\$ (4,721)</u>	<u>\$ (8,372)</u>	<u>\$ (3,771)</u>	<u>\$ (8,533)</u>
Denominator						
Number shares used in basic per share computation	64,724	90,586	54,753	97,106	45,864	103,781
Dilutive effect of common stock equivalents	—	—	—	—	—	—
Total shares used in per share computation	<u>64,724</u>	<u>90,586</u>	<u>54,753</u>	<u>97,106</u>	<u>45,864</u>	<u>103,781</u>
Dilutive net loss per share:	<u>\$ (0.34)</u>	<u>\$ (0.34)</u>	<u>\$ (0.09)</u>	<u>\$ (0.09)</u>	<u>\$ (0.08)</u>	<u>\$ (0.08)</u>

⁽¹⁾ Allocation of net loss is based on the percentages of shares outstanding.

The following weighted-average outstanding shares of common stock equivalents by award type were excluded from the computation of diluted net loss per share attributable to Class A stockholders, as the impact of including them would have been anti-dilutive.

	For the year ended December 31,		
	2024	2023	2022
Stock Options ⁽¹⁾	4,398	6,892	8,222
Out-of-the Money Stock Options	136	482	760
RSAs	63	168	285
RSUs	4,559	3,910	2,254
ESPP	31	42	52
Convertible Senior Notes	6,480	—	—

⁽¹⁾ Total excludes out-of-the money stock options.

13. EMPLOYEE BENEFIT AND DEFERRED COMPENSATION PLANS

The Company maintains a 401(k) plan that covers eligible employees. The Company matches up to 6% of eligible compensation during the period in which an eligible participant contributes to the plan. Matching 401(k) contributions were \$12,641, \$11,285, and \$10,056 for the years ended December 31, 2024, 2023, and 2022, respectively.

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Long-Term Rewards Plan

The Company had a long-term reward (“LTR”) compensation plan for certain key employees related to growth in certain financial measures over a three-year measurement period (the “Reward Performance Period”), subject to the terms of the plan. After December 31, 2020, no new awards were granted under the LTR plan as future long-term awards will only be made under the 2020 Plan.

Eligible LTR plan participants received an individual target award opportunity for a new three-year Reward Performance Period (i.e., target award grant made in 2019 is for years 2019 through 2021). 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 minimum 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. At December 31, 2022, the Company had one open Reward Performance Period, which was paid in 2023.

There was no compensation expense associated with the LTR plan for the years ended December 31, 2024 and 2023. Compensation expense associated with the LTR plan was \$892 for the year ended December 31, 2022. Amounts paid in 2023 and 2022 for the LTR plan were \$2,237, and \$4,023, respectively.

Stock-Based Award Plans

The 2020 Incentive Award Plan (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, and other cash compensation. The ESPP provides eligible employees with rights during each six-month ESPP offering period to purchase shares of the Company’s Class A at the ESPP discount through payroll deductions. 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 periods ending May 31, 2025 and 2024 aggregated \$496 and \$371 as of December 31, 2024 and 2023, respectively.

2020 Plan

Upon commencement of the 2020 Plan, an aggregate of 16,500 shares of our Class A were available for issuance. The number of shares available for issuance are 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 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 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, 2024, 20,663 shares of our Class A 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, 2024.

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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Options under 2020 Plan

The following table summarizes activity for options outstanding under the 2020 Plan:

2020 Plan Option Activity	Units	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Outstanding at January 1, 2024	5,692	\$ 5.32	4.7	\$ 124,327
Exercised	(2,722)	\$ 3.56		
2020 Plan options outstanding at December 31, 2024	2,970	\$ 6.93	4.4	\$ 137,857
2020 Plan options exercisable at December 31, 2024	2,504	\$ 6.35	4.2	\$ 117,670

The detail of options outstanding, vested and exercisable under the 2020 Plan as of December 31, 2024 is as follows:

Exercise Prices	Options Outstanding		Options Vested and Exercisable	
	Units	Weighted Average Life (Years)	Units	Weighted Average Life (Years)
\$0.15 to \$0.71	347	*	347	*
\$2.50	598	1.6	598	1.6
\$3.17	113	3.1	113	3.1
\$3.73	908	4.9	908	4.9
\$4.70	466	5.1	125	5.1
\$18.47	190	6.9	136	6.9
\$18.96	80	6.6	80	6.6
\$19.00	46	6.7	30	6.7
\$32.16	222	6.2	167	6.2
	<u>2,970</u>		<u>2,504</u>	

* These options have indefinite contractual lives.

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 underlying the options on the date of grant. Compensation expense to participants under the 2020 Plan is measured based on the grant date fair value of the awards and recognized in the consolidated statements of comprehensive loss over the period during which the participant is required to perform the requisite services. The vesting period is generally one to four years. No options were issued during 2024, 2023 or 2022. At December 31, 2024, \$595 of unrecognized compensation expense associated with the options is expected to be recognized over a weighted average period of approximately 0.7 years.

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Restricted Stock Units

The following table summarizes RSU activity for the year ended December 31, 2024:

	Units	Weighted Average Grant Date Fair Value Per Share
Outstanding at January 1, 2024	4,171	\$ 16.11
Granted	1,833	26.09
Vested	(1,345)	16.70
Forfeited	(125)	16.33
Outstanding at December 31, 2024	4,534	\$ 19.96

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. Compensation cost will be recognized on a straight-line basis in the consolidated statements of comprehensive 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. At December 31, 2024, \$54,191 of unrecognized compensation cost for RSUs is expected to be recognized over a weighted average period of approximately 2.4 years.

Performance Stock Units

In connection with the ecosio acquisition, current and newly hired employees of ecosio have or may receive RSUs that vest upon continuing service and performance conditions ("Performance Stock Units" or "PSUs"). These performance conditions are based upon ecosio's monthly software revenues meeting specified annual targets over a three-year period. The annual targets are based on a range of performance targets in which grantees may earn a prorated portion of the base number of awards granted up to 100%. For further information on the ecosio acquisition, refer to Note 3, "Acquisitions."

On December 17, 2024, the Company granted 192 PSUs to ecosio employees. The fair value for PSUs is calculated based on the closing stock price on the date of grant. Assuming all conditions are met, the maximum amount of compensation expense that can be recognized by the Company for these awards is \$10,259.

The stock-compensation expense associated with the awards will be accounted for as compensation expense over the vesting periods based on the Company's assessment of probability of achievement of the targets. If the required conditions are not met, no compensation cost is recognized and any previously recognized compensation cost is reversed. As of December 31, 2024, the Company determined that it is probable that the performance target for the first annual measurement period would be achieved and has recorded \$285 in stock-based compensation expense for the year ended December 31, 2024. No compensation expense has been recorded in connection with the second or third annual targets as the Company has not yet deemed it probable that the performance targets will be achieved.

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At December 31, 2024, a maximum of \$9,974 of unrecognized compensation cost for PSUs, pending achievement of targets, may be recognized over a weighted average period of approximately 2.9 years.

The following table summarizes PSU activity for the year ended December 31, 2024:

	Units	Average Grant Date Fair Value Per Share
Outstanding at January 1, 2024	—	\$ —
Granted	192	53.46
Outstanding at December 31, 2024	<u>192</u>	<u>\$ 53.46</u>

Restricted Stock Awards

The following table summarizes RSA activity for the year ended December 31, 2024:

	Units	Weighted Average Grant Date Fair Value Per Share
Outstanding at January 1, 2024	91	\$ 21.50
Granted	34	35.06
Vested	<u>(91)</u>	<u>21.50</u>
Outstanding at December 31, 2024	<u>34</u>	<u>\$ 35.06</u>

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. Compensation cost will be recognized on a straight-line basis in the consolidated statements of comprehensive 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. At December 31, 2024, \$532 of unrecognized compensation cost for RSAs is expected to be recognized over a weighted average period of approximately 0.5 years.

Employee Stock Purchase Plan

The ESPP permits participants to purchase Class A primarily through payroll deductions of up to a specified percentage of their eligible compensation. 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.

A total of 1,000 shares of Class A were initially reserved for issuance under the ESPP. The number of shares available for issuance under the ESPP increases 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 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 may be issued. The ESPP is administered by a committee of the Board. As of December 31, 2024, there were 6,335 shares available for issuance under the ESPP.

On the first trading day of each offering period, each participant will automatically be granted an option to purchase shares of Class A. 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 on the first or last

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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. 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.

As of December 31, 2024 and 2023, there was approximately \$423 and \$375, respectively, 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 periods ending on May 31, 2025 and 2024, respectively.

The fair value of ESPP purchase rights for the offering periods is comprised of the value of the 15% ESPP discount and the value associated with the call or put over the respective ESPP offering period. ESPP offering periods reflected in the December 31, 2024, financial statements include the periods noted below in the table. The value of the call or put was estimated using the Black-Scholes model with the following assumptions:

	Offering Period Ending				
	5/31/2025	11/30/2024	5/31/2024	11/30/2023	5/31/2023
Fair market value of common stock	\$ 54.64	\$ 33.26	\$ 27.82	\$ 21.76	\$ 17.21
Volatility	26.4 %	41.7 %	36.6 %	39.4 %	46.4 %
Expected term (years)	0.5	0.5	0.5	0.5	0.5
Expected dividend yield	— %	— %	— %	— %	— %
Risk-free interest rate	4.4 %	5.4 %	5.3 %	5.4 %	4.7 %

Volatility is representative of expected stock price volatility over the offering period. The Company's volatility is applied to current and future offering periods. The expected term represents the term of the ESPP offering period, which is six months. The Company does not expect to pay dividends. 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 to the offering term.

Stock-Based Compensation

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

	For the year ended December 31,		
	2024	2023	2022
Stock-based compensation expense:			
Stock options	\$ 6,768	\$ 6,349	\$ 7,081
RSUs	37,770	24,257	9,286
RSAs	1,617	2,496	2,768
PSUs	285	—	—
ESPP	985	817	594
Total stock-based compensation expense	<u>\$ 47,425</u>	<u>\$ 33,919</u>	<u>\$ 19,729</u>

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

	For the year ended December 31,		
	2024	2023	2022
Stock-based compensation expense:			
Cost of revenues, software subscriptions	\$ 4,349	\$ 2,834	\$ 2,090
Cost of revenues, services	2,768	1,846	1,433
Research and development	9,548	5,994	1,798
Selling and marketing	13,204	8,380	6,284
General and administrative	17,556	14,865	8,124
Total stock-based compensation expense	<u>\$ 47,425</u>	<u>\$ 33,919</u>	<u>\$ 19,729</u>

The total recognized tax benefit related to the stock-based compensation expense for the years ended December 31, 2024, 2023, and 2022 was \$33,739, \$16,541, and \$3,324, respectively. The tax benefit from stock options exercised during the years ended December 31, 2024, 2023, and 2022 was \$25,306, \$13,079, and \$2,710, respectively.

14. RELATED PARTIES

In connection with the termination of the Company's S-corporation status and our establishment of a new capital structure, which both occurred in July 2020, the Company entered into the Third Amended and Restated Stockholders' Agreement (the "Stockholders' Agreement") with the Class B shareholders. The Stockholders' Agreement entitles these individuals to require the Company to register shares held by them for sale (the "Selling Shareholder Registrations"). The Stockholders' Agreement requires the Company to pay the expenses relating to Selling Shareholder Registrations and to indemnify the parties participating in these offerings against liabilities that may arise from the offering process. No offering costs related to the sale of shares associated with the Selling Shareholder Registration were incurred during the years ended December 31, 2024 or 2023. For the year ended December 31, 2022, the Company incurred \$688 in offering costs related to the sale of shares associated with the Selling Shareholder Registration.

15. COMMITMENTS AND CONTINGENCIES

In January 2022, the Company filed a complaint against a competitor alleging claims of unfair competition, intentional interference with contractual relations, and trade secret misappropriation. The outcome of the case is subject to a number of uncertainties; therefore, the Company has not recognized any potential impact to the consolidated financial statements.

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 the Company's business. The Company is not aware of any such legal proceedings or claims that management believes will have a material adverse effect on its business, financial condition, or operating results.

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Purchase Obligations

In the ordinary course of business, the Company enters into non-cancelable agreements with third-party providers, primarily for subscriptions and the use of cloud services. Future minimum payments as of December 31, 2024 are summarized in the table below:

2025	\$ 14,352
2026	5,928
2027	4,067
2028	3,076
2029	—
	<u>\$ 27,423</u>

16. SEGMENT DISCLOSURES

The Company operates its business as one operating segment. Operating segments are defined as components of an enterprise that separate financial information is evaluated regularly by the chief operating decision maker (“CODM”) in deciding how to allocate resources and assess performance. The Company’s CODM, the Chief Executive Officer, reviews financial information regularly at the consolidated level. Net income (loss) and adjusted earnings before interest, taxes, depreciation, and amortization (“Adjusted EBITDA”), a non-GAAP measure, are both used as metrics to evaluate performance of the business in deciding whether to reinvest profits into software development, acquisitions or into other areas of the Company. The Company believes that Adjusted EBITDA is a useful supplemental measure to evaluate overall operating performance as it measures business performance by focusing on cash related results and it is an important metric to lenders under the Company’s Credit Agreement. The most directly comparable GAAP measure to Adjusted EBITDA is net income (loss).

The CODM monitors forecasted versus actual net income (loss) and Adjusted EBITDA results for the purpose of determining the general health of the Company and assessing the performance of the Company as compared to management’s expectations.

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The following significant expense categories and measures of segment income (loss) are regularly reported to the CODM for the Company's single segment:

	For the year ended December 31,		
	2024	2023	2022
Total Revenues	\$ 666,776	\$ 572,387	\$ 491,624
Less:			
Cost of revenues – software subscriptions	175,580	162,920	142,071
Cost of revenues – services	65,071	60,888	51,061
Research & development	66,666	58,212	41,877
Selling & marketing	170,574	140,237	125,335
General & administrative	152,835	145,936	121,651
Depreciation & amortization	20,953	15,202	12,440
Change in fair value of acquisition contingent earn-outs	17,500	—	—
Other segment items ⁽¹⁾	(175)	6,502	5,271
Interest (income) expense, net	(4,137)	4,164	2,048
Income tax expense (benefit)	54,638	(8,581)	2,174
Net loss (GAAP)	\$ (52,729)	\$ (13,093)	\$ (12,304)
Adjustments:			
Interest expense (income), net ⁽²⁾	(4,137)	4,164	2,048
Income tax expense (benefit)	54,638	(8,581)	2,174
Depreciation and amortization – property and equipment	20,953	15,202	12,440
Depreciation and amortization of capitalized software and acquired intangible assets – cost of subscription revenues	59,302	54,048	44,934
Amortization of acquired intangible assets – selling and marketing expense	2,478	2,641	3,779
Amortization of cloud computing implementation costs – general and administrative	4,007	2,570	—
Stock-based compensation expense	47,425	33,919	19,729
Severance expense	3,048	3,576	877
Acquisition contingent consideration	(2,575)	1,549	2,300
Litigation settlements	—	—	2,000
Change in fair value of acquisition contingent earn-outs	17,500	—	—
Transaction costs ⁽³⁾	2,032	4,853	696
Adjusted EBITDA (Non-GAAP)	\$ 151,942	\$ 100,848	\$ 78,673

- ⁽¹⁾ Other segment items include professional fees, contracted labor, transaction costs, acquisition related earn-out adjustments and foreign currency exchange gains (losses).
- ⁽²⁾ The years ended December 31, 2024 and 2023 include \$423 and \$4,020, respectively, for the change in the settlement value of a deferred purchase commitment liability recorded as interest expense.
- ⁽³⁾ The year ended December 31, 2023 includes costs associated with a public tender offer, which was withdrawn by the Company in January 2024. The year ended December 31, 2022 includes offering costs related to the sale of shares of certain of our Class B shareholders, which are not representative of normal business operations.

Additionally, the Company considers stock-based compensation expense a significant expense category. For further information, refer to Note 13, "Employee Benefit and Deferred Compensation Plans."

As the Company operates solely within one segment, total assets, property and equipment, net, and capitalized software, net are reported at the consolidated level on the consolidated balance sheets. The Company's assets include both

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current and long-lived assets, and corporate assets. As of December 31, 2024 and 2023, \$687 and \$827, respectively, of the Company's property and equipment assets were held outside of the U.S.

Depreciation and amortization, property and equipment additions, and capital software additions are reported at the consolidated level on the Consolidated Statements of Cash Flows.

The Company disaggregates revenue from contracts with customers based on geographical regions, timing of revenue recognition, and the major product and service types as described in Note 1, "Summary of Significant Accounting Policies." For each of the years ended December 31, 2024, 2023, and 2022, approximately 8% of the Company's revenues were generated outside of the U.S. None of the Company's customers represented more than 10% of total revenues for the years ended December 31, 2024, 2023 or 2022. For further information including disaggregation of revenues, refer to Note 2, "Revenue Recognition."

17. INCOME TAXES

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

	For the year ended December 31,		
	2024	2023	2022
U.S.	\$ 9,174	\$ (3,126)	\$ 5,827
Foreign	(7,265)	(18,548)	(15,957)
Net income (loss) before income taxes	<u>\$ 1,909</u>	<u>\$ (21,674)</u>	<u>\$ (10,130)</u>

Income tax expense (benefit) consists of the following:

	For the year ended December 31,		
	2024	2023	2022
Current income taxes:			
Federal	\$ 1,448	\$ (279)	\$ 1,696
State and local	855	1,568	1,068
Foreign	2,204	1,347	577
Total current	<u>4,507</u>	<u>2,636</u>	<u>3,341</u>
Deferred income taxes:			
Federal	42,346	(9,224)	904
State and local	9,111	(1,552)	72
Foreign	(1,326)	(441)	(2,143)
Total deferred	<u>50,131</u>	<u>(11,217)</u>	<u>(1,167)</u>
Income tax expense (benefit)	<u>\$ 54,638</u>	<u>\$ (8,581)</u>	<u>\$ 2,174</u>

During the year ended December 31, 2024, the Company recognized a \$37 income tax benefit in accumulated other comprehensive loss relating to unrealized gains (losses) from foreign currency translation adjustments and revaluations, and available-for-sale securities, and in stockholder's equity related to increases in contributed capital. During the year ended December 31, 2023, the Company recognized a \$27 income tax expense in accumulated other comprehensive income (loss) relating to unrealized gains from foreign currency translation adjustments and revaluations, and available-for-sale securities.

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

	2024		2023		2022	
	Total	Tax Rate	Total	Tax Rate	Total	Tax Rate
Pretax net income (loss)	\$ 1,909		\$ (21,674)		\$ (10,130)	
Taxes:						
U.S. federal income tax at statutory rate	\$ 401	21.0 %	\$ (4,552)	21.0 %	\$ (2,128)	21.0 %
State income taxes	900	47.1 %	289	(1.3)%	441	(4.4)%
Stock-based compensation expense	(20,559)	(1,077.0)%	(6,236)	28.8 %	1,787	(17.6)%
Impact of foreign operations	833	43.6 %	1,463	(6.8)%	1,352	(13.3)%
Transaction costs	431	22.6 %	—	0.0 %	176	(1.7)%
U.S. taxation of foreign earnings	2	0.1 %	(245)	1.1 %	(179)	1.8 %
Nondeductible compensation	3,948	206.8 %	2,822	(13.0)%	485	(4.8)%
Tax credits	(4,920)	(257.7)%	(5,818)	26.8 %	(341)	3.4 %
Change in valuation allowance	67,135	3,516.8 %	3,386	(15.6)%	427	(4.2)%
Purchase commitment and contingent consideration liabilities	6,186	324.0 %	—	0.0 %	—	0.0 %
Changes in prior year unrecognized tax benefits	98	5.1 %	451	(2.1)%	—	0.0 %
Other permanent items, net	183	9.7 %	(141)	0.7 %	154	(1.7)%
Taxes and effective tax rate	<u>\$ 54,638</u>	<u>2,862.1 %</u>	<u>\$ (8,581)</u>	<u>39.6 %</u>	<u>\$ 2,174</u>	<u>(21.5)%</u>

The effective tax rate in 2024 increased to 2,862.1% from 39.6% in 2023. The increase in income tax expense in 2024 was primarily driven by changes in valuation allowances on net deferred tax assets established for U.S. and certain foreign jurisdictions, nondeductible purchase commitment and contingent consideration liabilities, and pre-tax income, partially offset by the favorable impact of tax benefits on exercises and vesting of stock awards, net of limitations on deductions of certain employees' compensation under Internal Revenue Code ("IRC") Section 162(m).

The effective tax rate in 2023 increased to 39.6% from (21.5)% in 2022. The increase in income tax benefit in 2023 was primarily driven by changes in tax benefits on exercises and vesting of stock awards, tax credits, valuation allowances on net deferred tax assets established for certain foreign jurisdictions, loss before income tax, and limitations on deductions of certain employees' compensation under IRC Section 162(m).

The impact of foreign operations in 2024, 2023, and 2022 primarily reflects losses in Ireland taxed at 12.5%, as well as income or losses taxed at rates in other foreign jurisdictions, as opposed to the statutory U.S. federal income tax rate.

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

	As of December 31,	
	2024	2023
Deferred tax assets:		
Deferred revenue	\$ 1,512	\$ 3,523
State operating loss carry forwards	3,674	2,682
Federal and foreign loss carry forwards	8,651	4,361
Accrued expenses	1,754	2,239
Accrued compensation	3,440	2,339
Deferred and stock-based compensation	13,826	19,008
Operating lease liabilities	4,185	5,151
Tax credits	5,160	3,662
Original issue discount	9,396	—
Depreciation and amortization	14,964	6,417
Other	—	2,721
Deferred tax assets	66,562	52,103
Valuation allowance	(72,285)	(5,941)
Total deferred tax assets	(5,723)	46,162
Deferred tax liabilities:		
Prepaid expenses	(671)	(1,026)
Right of use asset	(3,006)	(3,428)
Other	(499)	—
Total deferred tax liabilities	(4,176)	(4,454)
Net deferred tax assets (liabilities)	\$ (9,899)	\$ 41,708
Classification in the consolidated balance sheets:		
Deferred income tax assets	\$ 19	\$ 41,708
Deferred income tax liabilities	(9,918)	—
Net deferred tax assets (liabilities)	\$ (9,899)	\$ 41,708

At December 31, 2024, the Company has U.S. state operating loss carry forwards of \$58,869. The state operating losses will expire at varying dates beginning in 2029 through 2044 or will carry forward indefinitely. A full valuation allowance is recorded for the U.S. state operating losses at December 31, 2024.

At December 31, 2024, the Company has available foreign operating losses of approximately \$48,238 and nontrading losses of \$44, which generally carry forward indefinitely. A valuation allowance for a portion of the foreign operating and non-operating losses is recorded at December 31, 2024 and 2023. A portion of the foreign operating losses could be forfeited if certain changes in the business occur in future years, which the Company continues to monitor.

At December 31, 2024, the Company has available U.S. federal R&D tax credit carryovers of \$5,160. The credits will expire from 2043 through 2044. A full valuation allowance is recorded for the U.S. federal R&D tax credit carryovers at December 31, 2024.

At December 31, 2024 and 2023, the Company has a valuation allowance of \$(72,285) and \$(5,941), respectively, primarily against certain U.S. and foreign deferred tax assets. The increase in the total valuation allowance of \$(66,344) during December 31, 2024, primarily related to recording a valuation allowance on the U.S. deferred tax assets, partially offset by decreases in valuation allowances in certain foreign jurisdictions as well as changes in foreign exchange rates.

During the fourth quarter of 2024, the Company established a valuation allowance against our U.S. deferred tax assets as it was determined to be more likely than not that these assets will not be realized. This determination was made based

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on weighing all negative evidence, specifically cumulative losses recognized in our U.S. entity over the past three years. These cumulative losses were mainly due to significant windfall tax benefits realized from the exercises of stock options during the fourth quarter of 2024, driven by an increase in our Class A common stock price during that period. Despite positive evidence of projected future business profitability in our U.S. entity, management determined that this did not outweigh the negative evidence to allow us to conclude it was more likely than not the deferred tax assets would be realized and therefore we recorded a full valuation allowance against these U.S. deferred tax assets as of December 31, 2024.

The changes in the valuation allowance were as follows:

	For the year ended December 31,		
	2024	2023	2022
Valuation allowance, at beginning of year	\$ (5,941)	\$ (2,285)	\$ (1,839)
Increase in valuation allowance recorded through earnings	(68,377)	(3,656)	(624)
Decrease in valuation allowance recorded through earnings	2,033	—	178
Valuation allowance, at end of year	<u>\$ (72,285)</u>	<u>\$ (5,941)</u>	<u>\$ (2,285)</u>

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

Significant judgement is required in evaluating our uncertain tax positions and determining our provision for income taxes. The total amount of gross unrecognized tax benefits was \$1,427, \$666, and \$0 as of December 31, 2024, 2023, and 2022, respectively, which would affect our effective tax rate if recognized. Accrued interest and penalties were not material for the years ended December 31, 2024, 2023, or 2022.

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, 2021 through December 31, 2024 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, 2019 through December 31, 2024 remain subject to examination by the respective authorities.