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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2020
or

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

For the transition period from to
Commission File Number: 001-38711

SolarWinds Corporation

(Exact name of registrant as specified in its charter)

Delaware	**81-0753267**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
7171 Southwest Parkway, Building 400	
Austin, Texas	**78735**
(address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (512) 682.9300

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

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common stock, $0.001 par value	SWI	New York Stock Exchange

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

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

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

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

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

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

Large accelerated filer	☑	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

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

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

As of June 30, 2020, the last business day of the registrant's most recently completed second fiscal quarter, the registrant's aggregate market value of its shares held by non-affiliates was approximately $838.4 million.

On February 24, 2021, 315,623,982 shares of common stock, par value $0.001 per share, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Part III of this Annual Report on Form 10-K incorporates certain information by reference from the definitive proxy statement for the registrant's 2021 Annual Meeting of Stockholders to be filed within 120 days of the registrant's fiscal year ended December 31, 2020 (the "Proxy Statement"). Except with respect to information specifically incorporated by reference in this Form 10-K, the Proxy Statement is not deemed to be filed as part of this Form 10-K.

SOLARWINDS CORPORATION

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PART I

INTRODUCTORY NOTE

On December 14, 2020, we announced that we had been the victim of a cyberattack on our Orion Software Platform and internal systems, or the “Cyber Incident.” Together with outside security professionals and other third parties, we are conducting investigations into the Cyber Incident which are on-going.

Our investigations to date revealed that as part of this attack, malicious code, or Sunburst, was injected into builds of our Orion Software Platform that we released between March 2020 and June 2020. If present and activated in a customer’s IT environment, Sunburst could potentially allow an attacker to compromise the server on which the Orion Software Platform was installed. We have not located Sunburst in any of our more than seventy non-Orion products and tools.

We released remediations for the versions of our Orion Software Platform known to be affected by Sunburst and have taken and continue to take extensive efforts to support and protect our customers. In addition, we shared our proprietary code with industry researchers to enable them to validate a “kill-switch” that is believed to have rendered Sunburst inert.

The Orion Software Platform is installed “on-premises” within customers’ IT environments, so we are unable to determine with specificity the number of customers that installed an affected version or that were compromised as a result of Sunburst. We believe the actual number of customers that could have installed an affected version of the Orion Software Platform to be fewer than 18,000. Based on our discussions with customers and our investigations into the nature and function of Sunburst and the tradecraft of the threat actor, we believe the number of organizations which were exploited by the threat actors through Sunburst to be substantially fewer than the number of customers that may have installed an affected version of the Orion Platform.

It has been widely reported that, due to its nature, sophistication and operational security, this “supply-chain” cyberattack was part of a broader nation-state level cyber operation designed to target public and private sector organizations. As of the date hereof, we have not independently attributed the Cyber Incident to any specific threat actor.

Through our investigations into the Cyber Incident, we hope to understand it better, apply our findings to further adapt and enhance our security measures across our systems and our software development and build environments and share our findings and adaptations with our customers, government officials and the technology industry more broadly to help them better understand and protect against these types of attacks in the future. We refer to these adaptations and enhancements as “Secure by Design.”

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This annual report on Form 10-K contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the Private Securities Litigation Reform Act of 1995. Such statements may be signified by terms such as "aim," "anticipate," "believe," "continue," "expect," "feel," "intend," "estimate," "seek," "plan," "may," "can," "could," "should," "will," "would" or similar expressions and the negatives of those terms. In this report, forward-looking statements include statements regarding our financial projections, future financial performance and plans and objectives for future operations including, without limitation, the following:

- expectations regarding our financial condition and results of operations, including revenue, revenue growth, cost of revenue, operating expenses, operating income, non-GAAP revenue, non-GAAP operating income, non-GAAP operating margin, adjusted EBITDA and adjusted EBITDA margin, cash flows and effective income tax rate;
- preliminary findings from our investigations into the Cyber Incident, including our understanding of the nature, source and duration of the attack and our plans to further investigate the attack, ensure our products and internal systems are secure and provide information regarding our findings, as well as our expectations regarding the impact of the Cyber Incident on our business and reputation, the success of our related mitigation and remediation efforts and the additional costs, liabilities and other adverse consequences that we may incur as a result of the Cyber Incident;
- expectations regarding the impact the government investigations and litigation resulting from the Cyber Incident may have on our business;
- expectations regarding investment in product development and our expectations about the results of those efforts;
- expectations concerning acquisitions and opportunities resulting from our acquisitions;
- expectations regarding hiring additional personnel globally in the areas of sales and marketing and research and development;
- expectations regarding our international earnings and investment of those earnings in international operations;
- expectations regarding our capital expenditures;
- expectations regarding the impact of the COVID-19 pandemic on our business, results of operations and financial condition;
- our beliefs regarding the sufficiency of our cash and cash equivalents, cash flows from operating activities and borrowing capacity; and
- expectations regarding the potential spin-off of our MSP business into a newly created and separately traded public company.

Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially and adversely different from any future results, performance or achievements expressed or implied by the forward-looking statements. Factors that may cause such differences include, but are not limited to, the risks described in the section titled "Risk Factors" and elsewhere in this Annual Report on Form 10-K, and those discussed in other documents we file with the Securities and Exchange Commission. Given these risks and uncertainties, you should not place undue reliance on these forward-looking statements. Also, forward-looking statements represent our management's beliefs and assumptions only as of the date of this annual report on Form 10-K. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially and adversely from those anticipated in these forward-looking statements, even if new information becomes available in the future.

In this report "SolarWinds," "Company," "we," "us" and "our" refer to SolarWinds Corporation and its consolidated subsidiaries. The term "Silver Lake Funds" refers to Silver Lake Partners IV, L.P., Silver Lake Technology Investors IV, L.P., and SLP Aurora Co-Invest, L.P., and the term "Silver Lake" refers to Silver Lake Group, L.L.C., the ultimate general partner of the Silver Lake Funds. The term "Thoma Bravo Funds" refers to Thoma Bravo Fund XI, L.P., Thoma Bravo Fund XI-A, L.P., Thoma Bravo Fund XII, L.P., Thoma Bravo Fund XII-A, L.P., Thoma Bravo Executive Fund XI, L.P., Thoma Bravo Executive Fund XII, L.P., Thoma Bravo Executive Fund XII-a, L.P., Thoma Bravo Special Opportunities Fund II, L.P. and Thoma Bravo Special Opportunities Fund II-A, L.P. and the term "Thoma Bravo" refers to Thoma Bravo, LLC, the ultimate general partner of the Thoma Bravo Funds. The term "Sponsors" refers collectively to Silver Lake and Thoma Bravo, together with the Silver Lake Funds and the Thoma Bravo Funds and, as applicable, their co-investors. The term "Lead Sponsors" refers collectively to the Silver Lake Funds, the Thoma Bravo Funds and their respective affiliates.

PART I

ITEM 1. BUSINESS

Overview

SolarWinds is a leading provider of information technology, or IT, infrastructure management software. Our products give organizations worldwide, regardless of type, size or IT infrastructure complexity, the power to monitor and manage the performance of their IT environments, whether on-premises, in the cloud, or in hybrid models. We combine powerful, scalable, affordable, easy to use products with a high-velocity, low-touch sales model to grow our business while also generating significant cash flow.

Our business is focused on building products that enable technology professionals to manage "all things IT." We continuously engage with technology professionals to understand the challenges they face maintaining high-performing and highly available on-premises, public and private cloud and hybrid IT infrastructures. The insights we gain from engaging with technology professionals allow us to build products that solve well-understood IT management challenges in ways that technology professionals want them solved. We sell a comprehensive portfolio of Core IT Management products that are designed for ITOps, DevOps and IT security professionals. We also sell cloud-based software solutions purpose-built to enable managed service providers, or MSPs, to support digital transformation and growth within small and medium-sized enterprises, or SMEs, around the world.

Our approach, which we call the "SolarWinds Model," enables us to market and sell our products directly to network and systems engineers, database administrators, storage administrators, DevOps and service desk professionals and MSPs. These technology professionals have become empowered to influence the selection, and often the purchase, of products needed to rapidly solve the problems they confront.

We serve the entire IT market uniquely and efficiently with our SolarWinds Model. Technology professionals use our products in organizations ranging in size from very small businesses to large enterprises. Our products are designed to do the complex work of monitoring and managing networks, systems and applications across on-premises, cloud and hybrid IT environments without the need for customization or professional services. Many of our products are built on common technology platforms that enable our customers to easily purchase and deploy our products individually or as integrated suites as their needs evolve. We utilize a cost-efficient, integrated global product development model and have expanded our offerings over time through both organic development and strategic acquisitions.

We market and sell our products directly to technology professionals primarily through a high-velocity, low-touch, digital marketing and direct inside sales approach that we call "selling from the inside." We have built a highly flexible and analytics-driven marketing model designed to efficiently drive website traffic and high-quality leads. We also engage with both existing and prospective customers using our online communities such as THWACK and MSP Institute. These communities are designed to train and inform technology professionals about our products, keep us connected to them and provide network effects to amplify word-of-mouth marketing for our products. Our sales team uses a prescriptive approach designed to manage these leads and quickly sell our products pursuant to our standard pricing and contract terms. We do not utilize an outside sales force or provide professional services.

Technology professionals often find our products when they are online searching for a solution to address a specific need and use our full-featured trials to experience our purpose-built, powerful and easy to use products in their own environments. These experiences often lead to initial purchases of one or more products and, over time, purchases of additional products and advocacy within both their organizations and their networks of technology professionals.

We also extend our sales reach through our MSP customers, who provide IT management as a service and rely on our products to deploy, manage and secure the IT environments of their end customers. Our MSP customer base enables us to reach across a fragmented end market opportunity consisting of millions of SMEs around the world. We benefit from the addition of end customers served by our MSP customers, the proliferation of devices managed by those MSPs and the expansion of products used by those MSPs to provide managed services to their end customers. We grow with our MSP customers as they add new customers and deliver new or enhanced services based on our solutions and when their SME customers add devices and services.

We have grown while maintaining high levels of operating efficiency. We derive our revenue from a combination of subscription revenue from the sale of our MSP, application performance management and IT service management, or ITSM products, and license and maintenance revenue from the sale of our on-premises network and IT operations management perpetual license products. Over time, we have significantly increased our subscription and maintenance revenue and intend to grow our revenue and cash flow by gaining new customers, increasing penetration within our existing customer base, expanding our international footprint, bringing new products to market and expanding into new markets through organic development and targeted acquisitions.

SolarWinds Corporation was incorporated in the State of Delaware in 2015.

Cyber Incident

On December 14, 2020, we announced that we had been the victim of a cyberattack on our Orion Software Platform and internal systems, or the "Cyber Incident." For further information about the Cyber Incident, see "*Risk Factors*" included in Item 1A of Part I of this Annual Report on Form 10-K, "*Management's Discussion and Analysis of Financial Condition and Results of Operations—Cyber Incident*" included in Item 7 of Part II of this Annual Report on Form 10-K and *Note 16. Commitments and Contingencies* in the *Notes to Consolidated Financial Statements* included in Item 8 of Part II of this Annual Report on Form 10-K.

Potential Spin-Off of MSP Business

On August 6, 2020, we announced that our board of directors has authorized management to explore a potential spin-off of our MSP business into a newly created and separately traded public company, and on December 9, 2020, we announced that we confidentially submitted with the U.S. Securities and Exchange Commission ("SEC") a Form 10 registration statement with respect to the potential spin-off. If completed, the standalone entity would provide cloud-based software solutions for MSPs, enabling them to support digital transformation and growth within SMEs. SolarWinds would retain our Core IT Management business focused primarily on selling software and cloud-based services to corporate IT organizations. We believe that, if completed, the potential spin-off would allow each company to more effectively pursue its distinct operating priorities, strategies and capital allocation policies, while also allowing stockholders to separately evaluate and value the companies based on their distinct markets, strategies and performance. If we proceed with the spin-off, it would be intended to be structured as a tax-free, pro-rata distribution to all SolarWinds stockholders as of a record date to be determined by the board of directors of SolarWinds. If completed, upon effectiveness of the transaction, SolarWinds stockholders would own shares of both companies. Completion of any spin-off would be subject to various conditions, including final approval of our board of directors, and there can be no assurance that the potential spin-off will be completed in the manner described above, or at all. If we proceed with the spin-off, we currently are targeting to complete the transaction in the second quarter of 2021.

The SolarWinds Model

At the heart of everything we do as a company is the SolarWinds Model, which consists of five principles that guide our business and help explain why technology professionals choose our products:

Focus on the Technology Professional

We are committed to understanding technology professionals and the daily challenges that they face managing the complex, ever-changing demands of business-critical IT environments. We have a substantial customer base and community of technology professionals. We engage with them on a daily basis through digital marketing and online communications. These include THWACK, our online community that provides forums to registered members, tools and valuable resources. Additionally, through our MSP Institute, our MSP customers gain access to business, sales, marketing and technical training. We also manage several company-sponsored blogs in which we provide perspectives and information relevant to the IT management market, as well as web-based events designed to train and inform participants about deeper aspects of our products. We don't have to guess about what they need, we just ask.

Build Great Products for the Entire Market

Organizations of all sizes have complex IT environments that make managing IT challenging. Our commitment to technology professionals allows us to deliver products that solve well-understood IT problems simply, quickly and affordably for the entire market, from very small businesses to the largest of global enterprises, regardless of whether their IT is managed internally or through an MSP.

We design our products to be easy to access, try, buy, deploy and use. Many of our products are built on common technology platforms that enable our customers to purchase and implement our products individually, and then add additional product or products as needed. Or they can buy multiple products as integrated suites. This allows customers to buy what they need, when they need it, and grow as their needs evolve.

Capture Demand Using Cost-Efficient, Mass-Reach Digital Marketing

We utilize digital marketing to directly reach technology professionals of all levels of sophistication managing IT environments of all levels of complexity and size. They are online every day interacting with their peers, learning about new technologies and searching for solutions to their problems.

Over the past decade, we have honed our use of online tools to find, communicate with and sell to our potential customers of all levels of sophistication with environments of all levels of complexity and size. We believe we build credibility and confidence in our products by being present and active in the communities and on the sites that technology professionals trust.

Selling from the Inside

We are committed to selling from the inside. We adhere to a prescriptive process and metrics-based approach that drives predictability and consistency and has helped us add new customers and grow our relationships with existing customers.

The size and organization of our sales force enables us to reach thousands of technology professionals each day. We close the smallest and most simple transactions to our largest and most complex deals efficiently without the need for a traditional outside sales force, product customization or professional services. Our sales team uses a prescriptive approach designed to manage these leads and quickly sell our products pursuant to our standardized pricing and contract terms. We believe our selling motion reflects how our customers prefer to do business.

Focus on the Long-Term Value of the Relationship with Our Customers

When our customers experience the value of our products, our investment in our product portfolio and our responsiveness to their changing needs, they often grow their relationship with us and become our advocates within both their organizations and their networks of technology professionals. The power of our approach is evidenced by the long-term relationships we have with our customers which is reflected in our strong customer retention rates.

Growth Strategies

We intend to extend our leadership in IT infrastructure management and grow our market share in adjacent areas of IT operations with powerful yet easy to use software products designed to manage “all things IT” across hybrid IT environments. The following are key elements of our growth strategy:

Win New Customers Using the SolarWinds Model

The SolarWinds Model allows us to win new customers in existing markets where our products and our model give us a competitive advantage. Our efficient marketing and sales model and powerful brand recognition and trust among both internal IT professionals and MSPs have enabled us to increase our customer base. We intend to leverage our ability to efficiently attract new customers to continue to increase our overall customer base.

Increase Penetration Within Our Existing Customer Base

Many of our internal IT customers make an initial purchase to meet an immediate need, such as network or application performance monitoring in a small portion of their IT infrastructure, and then subsequently purchase additional products for other use cases or expansion across their organization. Similarly, our MSP customers expand usage of our offerings over time when they add new customers and when their customers add new devices and services. For example, our MSP customers may start with remote monitoring and management or backup and recovery, and subsequently purchase additional, integrated products offerings. Once our customers have used our products within their IT environment, we are well positioned to help identify additional products that offer further value to those customers. We continue to refine our sales effort to better target our marketing and sales efforts and expand the sales of our products within organizations, particularly those that have multiple purchasers of our IT management products.

Increase Our International Footprint

We believe a substantial market opportunity exists to increase our international footprint across all of our product lines. In particular, our application performance management and ITSM products, which are currently sold primarily in North America, have strong international expansion potential. We have made significant investments in recent years to increase our sales and marketing operations internationally, and expect to continue to invest to grow our international sales and global brand awareness.

Continue to Innovate

We intend to continue focusing on innovation and bringing new products and tools to market that address problems that technology professionals are asking us to solve. We also intend to continue providing frequent feature releases to our existing products. We are focused on enhancing the overall integration of our products to improve our value proposition and allow our customers to further benefit from expanding their usage of our products as their needs evolve.

Expand into New Markets Aligned with the SolarWinds Model

We have successfully entered new markets and expanded our product offerings to solve a broader set of challenges for customers. For example, in recent years we broadened our product offerings to address the database, storage, cloud, MSP and ITSM markets. We intend to further expand into markets where our SolarWinds Model provides us with competitive advantages.

Pursue Targeted Acquisitions of Products and Technologies

We have successfully acquired and integrated businesses and technologies in the past that provided us with new product offerings and capabilities and helped us to establish positions in new segments and markets. We intend to continue making targeted acquisitions that complement and strengthen our product portfolio and capabilities or provide access to new markets. We evaluate acquisition opportunities to assess whether they will be successful within the SolarWinds Model. We believe our ability to effectively transition acquired companies and products to the SolarWinds Model represents a unique opportunity for our business.

Our Customers and Market

We designed the SolarWinds Model to reach all sizes of businesses. Our customers represent organizations ranging in size from very small businesses to large enterprises. Customers often initially purchase one of our products to solve a known problem and then expand their purchases over time.

As of December 31, 2020, we had over 320,000 customers. We define customers as individuals or entities that have purchased one or more of our products under a unique customer identification number since our inception for our perpetual license products and individuals or entities that have an active subscription for at least one of our subscription products. Each unique customer identification number constitutes a separate customer regardless of the amount purchased. We may have multiple purchasers of our products within a single organization, each of which may be assigned a unique customer identification number and deemed a separate customer. Included among this number are more than 25,000 MSP customers serving over 500,000 SMEs globally as of December 31, 2020. We count MSP partners as active subscribers to one or more of our products at the end of the measurement period.

The SolarWinds Model allows us to both sell to a broad group of potential customers and close large transactions with significant customers. At the same time, we designed the SolarWinds Model to reach millions of SMEs around the world that outsource the management of some or all of their IT infrastructure to MSPs. We reach SMEs through MSPs and directly, including those SMEs that may purchase a single product to solve a known problem.

Organizations across industries are using technology and software to drive business success and competitive differentiation. As the landscape for IT infrastructure and software deployment worldwide rapidly changes to meet businesses' evolving needs, the performance, speed, availability and security of IT has become critical to business strategy. The job of the technology professionals who deploy and manage these environments is more challenging than ever.

Growing IT Complexity Creates Significant Challenges for Organizations

As organizations deploy and rely on a mix of on-premises, public and private cloud and hybrid IT environments, they require performance monitoring and management solutions that work across their increasingly complex environments and provide full visibility into performance.

Empowerment of the Technology Professional

The technology professionals charged with managing these infrastructures are increasingly responsible for making technology choices to help ensure the performance of their IT infrastructure meets the needs of the business. Additionally, the democratization of IT spend has shifted influence in software purchase decisions from the highest levels of an organization's IT department to technology professionals, who can have different perspectives from CIOs or other IT decision-makers. We have found that technology professionals prefer to trial software products in real time to determine if the products meet their needs. They also want the flexibility to select from a range of IT management products to find those best suited to address their specific challenges. In this environment, technology professionals are among the biggest influencers of software-purchasing decisions within their organizations.

Organizations Have Choices in Allocating Resources to Manage IT

As IT complexity grows, organizations must determine how to allocate their resources to best manage their IT needs. Organizations can choose to manage their own IT infrastructure or buy IT management as a service through MSPs. MSPs maintain and operate an organization's IT environment and can deliver the full range of IT solutions, including network monitoring, server and desktop management, backup and recovery and IT security. For many smaller organizations that lack the time, resources and technical expertise to manage complex IT environments, MSPs can improve the efficacy of their IT strategy without significant capital investment. For larger organizations, MSPs can replace or supplement in-house capabilities.

Limitations of Alternative Solutions

Alternative IT management solutions have limitations that impair their ability to efficiently serve the unique needs of technology professionals. These solutions can be expensive, complicated and inflexible and may require significant professional services to customize, implement, operate and maintain.

Given the challenges associated with operating across a complex range of dynamic, hybrid IT environments and the limited ability of existing solutions to address these challenges in the ways that technology professionals want them addressed, we believe there is a significant market opportunity for broad hybrid IT management solutions purpose-built to serve the needs of technology professionals.

Product Portfolio and Technology Platforms

We offer a broad portfolio of products to monitor and manage network, systems, desktop, application, storage, database, website infrastructures and IT service desks. We intend to continue to innovate and invest in areas of product development that bring new products to market and enhance the functionality, ease of use and integration of our current products. We may also introduce new technology through relationships with other technology companies. We believe this will strengthen the overall value proposition of our products in any IT environment.

Our product development is guided by principles that provide a development framework that allows us to respond quickly to the market and deliver a broad suite of products designed to solve problems that are commonly understood and shared by our customers. Our core product development principles are:

1. We purpose-build products for technology professionals.
2. Our roadmaps are guided by a large community of users rather than by a select few large customers.
3. We develop products that are intended to sell themselves and be easy to use, powerful and immediately valuable to users.
4. We design and develop our products to integrate and complement each other while providing a consistent user experience.

We believe we have one of the broader product portfolios of IT monitoring and management software across the industry, providing deep visibility into network, systems, desktop, application, storage, database, website infrastructures, and virtual resources performance. Our products monitor applications and their supporting infrastructure, regardless of whether that infrastructure is located on-premises, in the cloud or in hybrid model. Our products monitor applications in the cloud via an agent, agentlessly, or by using information from cloud providers' APIs.

Core IT Management Products

Targeted for ITOps, DevOps, and IT Security Professionals, our Core IT Management products provide hybrid IT performance management with deep visibility into applications, IT infrastructures, and the full IT stack, while remaining infrastructure-location agnostic. Our comprehensive product portfolio covers the needs of all IT professionals and their hybrid IT environments. A one-stop shop for IT management, our product capabilities include network management, infrastructure management, application performance management, IT service management and IT security. Our Core IT Management products include the products we categorized as IT Operations Management, or ITOM, in previous filings.

Our suite of network management software provides real-time visibility into network utilization and bandwidth as well as the ability to quickly detect, diagnose and resolve network performance problems. Our suite of infrastructure management products monitors and analyzes the performance of applications and their supporting infrastructure, including websites, servers, physical, virtual and cloud infrastructure, storage and databases. We also help our customers strengthen their security and compliance posture with our automated network configuration, backup and log and event management products.

Our suite of application performance management software enables visibility into log data, cloud infrastructure metrics, applications, tracing, and web performance management.

Our service management software provides a robust and easy-to use comprehensive, ITIL-compliant service desk solution for companies of all sizes. We help our customers manage their employee service challenge needs whether through simple ticketing or a powerful ITSM solution, removing the manual burden of managing incoming tickets and tracking technology assets with the products cutting-edge automation, artificial intelligence and machine learning capabilities.

Our hybrid IT offerings are highly scalable and can be added alongside existing products in a modular fashion. The integration of our products combines data from multiple parts of the IT stack to provide a single, unified application centric view and customer experience. Our Core IT Management products also enable a single dashboard to view real-time application metrics regardless of whether the applications are deployed across multiple data centers or cloud vendors globally.

MSP Products

We deliver a portfolio of integrated products that enable MSPs to deploy, manage, and secure technologies for their SME end customers, as well as and more efficiently manage their own businesses. Purpose-built to address a wide range of MSP partner needs, our multi-tenant, subscription-based platform is scalable, extensible and easy to deploy. Beginning in the first quarter of 2021, we rebranded our MSP products and began selling them under the "N-able" brand.

We provide three categories of products to our MSP customers: remote monitoring and management, security and data protection and business management. Our broad remote monitoring and management capabilities include real-time availability and performance of networks and devices and automation of policies and workflows. We provide a layered protection approach spanning network and systems infrastructure, applications, and end user devices through our data protection, patch management, endpoint security, web protection, e-mail security and archiving and vulnerability assessment solutions. Our fully cloud-based data protection capabilities include storage efficient backup, high-speed restoration and disaster recovery for servers, workstations, files, data and key cloud-based applications. In addition, our business management solutions help improve the technical and service delivery efficiencies of our MSP partners and include professional services automation and password and documentation management.

Marketing and Sales

We market and sell our products directly to technology professionals with a low-touch, high-velocity digital marketing and "selling from the inside" motion that we believe is unique and hard to replicate in the software industry. Our marketing efforts and selling motion allow us to effectively capture demand and maintain high levels of sales productivity at low customer acquisition costs.

We target our marketing efforts and selling motion directly at network, systems, DevOps and MSP professionals within organizations. We believe this approach provides us with a significant advantage in today's environment in which purchasing influence and power is shifting from traditional procurement to the technology professionals themselves.

Marketing

We have built a highly flexible and analytics-driven direct marketing model designed to efficiently drive website traffic and high-quality leads that are typically trials of full-featured products from our websites. By providing trials of full-featured products we enable prospective customers to easily explore the capabilities of our products and easily transition from trial to sale. We also have a marketing motion directed at current customers designed to educate them about features of products they own, products they do not own and how to trial new products.

We make broad use of digital marketing tools including search engines, targeted email campaigns, localized websites, virtual events, free IT management tools, display advertising, affiliate marketing, social media, e-book distribution, video content, blogging and webinars.

We also engage using our online community, THWACK. Within THWACK, we provide forums, solutions, tools, webinars, content and other valuable resources relevant to the IT management market. This community is designed to train and inform technology professionals about our products, keep us connected to them and provide network effects to amplify word-of-mouth marketing for our products. Additionally, through our MSP Institute, our MSP customers gain access to business, sales, marketing and technical training from industry experts and leaders.

Sales

We refer to our selling motion as "selling from the inside." This approach is rooted in having our sales organization physically located in our offices, selling online or over the phone, using a prescriptive approach to managing leads and adhering to standardized pricing and contract terms. We close transactions of all sizes and locations through our selling from the inside approach.

Our sales organization is divided into our dedicated sales team and our retention and maintenance renewal team. Our dedicated sales team focuses exclusively on sales of new products to new and existing customers. Our dedicated sales team receives high-quality leads from our marketing motion and engages with the prospect to close the sale. We adhere to a disciplined, data-driven approach to converting leads quickly and efficiently based on our understanding of the prospect’s specific product demands and the inflection points in the selling process.

Our retention and maintenance renewal team focuses exclusively on renewing our subscription and maintenance agreements with our customers. Our conversations with these customers begin months before the renewal date to support our customers, and we work with them through the renewal process.

In addition to selling to SMEs directly, our alignment with our MSP partners gives us the leverage and sales reach to efficiently and effectively serve the SME market and to grow with our MSP partners as they expand their customer bases, deliver new services powered by our solutions and when their customers add devices and services.

We also sell our software through distributors and resellers to supplement our direct sales force, expand our global presence, reach various market segments and help us to initiate and fulfill sales orders from state, local and federal governments and those commercial customers that prefer to make purchases through a particular reseller. We contract directly with end customers when we sell our products through channel partners. We have a number of resellers who are proactively creating demand for our products and bring new opportunities and customers to us.

Research and Development

Our research and development organization is primarily responsible for the design, development, testing and deployment of new products and improvements to existing products, with a focus on ensuring that our products integrate and complement one another. As part of our new "Secure by Design" framework, we are making adaptations and enhancements to the security of our internal environment, software development processes and deployment of our products.

In our software development process, we work closely with our user community throughout the development process to build what is needed for the problems technology professionals face every day. This includes regularly having a subset of our customers participate in validating that our product use cases and features will solve their problems.

Over more than a decade, we have honed our approach to building a development organization that allows us to build products and enhance existing products quickly and efficiently. Our global development model allows us to source from a large pool of talented resources by participating in multiple labor markets to match the best person to each role. We utilize small scrum teams, each dedicated to specific product modules that follow a standard set of practices to build and test their code continuously. We share our development values across our offices and aim to assign meaningful design and development work to our international locations.

We believe that we have developed a differentiated process that allows us to release new software rapidly, efficiently and with a high level of quality.

Competition

We operate in a highly competitive industry that is characterized by constant change and innovation. Changes in networks, applications, devices, operating systems and deployment environments result in evolving customer requirements. Our competitors and potential competitors include:

- large network management and IT vendors such as Cisco Systems, MicroFocus, CA Technologies, IBM and BMC Software; and
- smaller companies in the cloud and application monitoring and the MSP IT tools markets, including MSP pure-play vendors and niche or domain-specific vendors that provide solutions focused on a particular service that may be sold by MSPs, where we do not believe that a single or small group of companies has achieved market leadership.

We believe the principal competitive factors in our market are:

- brand awareness and reputation among technology professionals, including IT professionals, DevOps professionals and MSPs;
- product capabilities, including scalability, performance, security and reliability;
- ability to solve problems for companies of all sizes and infrastructure complexities;
- ease of use;
- total cost of ownership;
- flexible deployment models, including on-premises, in the cloud or in a hybrid environment;
- strength of sales and marketing efforts; and
- focus on customer success.

We believe that we compete effectively across these factors as our products and marketing efforts have been designed with these criteria as guideposts.

Intellectual Property

We rely on a combination of patent, copyright, trademark, trade dress and trade secret laws, as well as confidentiality procedures and contractual restrictions, to establish and protect our proprietary rights. These laws, procedures and restrictions provide only limited protection. As of December 31, 2020, we owned approximately 38 issued U.S. patents and 194 issued foreign patents, with expiration dates ranging from December 2026 to March 2038. We have also filed approximately 66 currently pending patent applications, but we cannot guarantee that patents will be issued with respect to our current patent applications in a manner that gives us the protection that we seek or at all. Our patents and any future patents issued to us may be challenged, invalidated or circumvented and may not provide sufficiently broad protection or may not prove to be enforceable in actions against alleged infringers.

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

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

Human Capital Management

As of December 31, 2020, we had 3,340 employees fully dedicated to our business, of which 1,191 were employed in the United States and 2,149 were employed outside of the United States. We strive to be a people-centric company and believe we have a positive relationship with our employees, which we continue to nurture and develop. We are not party to any collective bargaining agreement.

Our success is the result of our talented, experienced and high performing employees across our organization, including functions such as research and development, sales and marketing, partner success and general and administrative.

As a global company, we have the distinct advantage of employing talented and diverse individuals across different ethnicities, genders, races, religions, sexual orientations and generations, all supported by a culture of innovation and inclusion. Our culture of collaboration enables us to deliver strong financial performance and build lasting relationships with our communities around the world.

We believe the combination of our relationship with our employees, strength of our software platform, alignment with our customers and business model differentiates us in the market. Our ability to achieve our goals has always been, and continues to be, a result of the strong values and tremendous passion of our people. We continue to invest heavily in attracting top talent, training and development initiatives and motivating and retaining high potential employees.

Additional Information

Our website address is www.solarwinds.com. Our website and the contents therein or connected thereto are not intended to be incorporated into this Annual Report on Form 10-K. Through a link on the Investor Relations section of our website, we make available the following filings as soon as reasonably practicable after they are electronically filed with or furnished to the SEC: our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act. All such filings are available free of charge. In addition, the SEC maintains an Internet site (http://www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

ITEM 1A. RISK FACTORS

Summary of Risk Factors

Below is a summary of the principal factors that make an investment in our common stock speculative or risky. This summary does not address all of the risks that we face. Additional discussion of the risks summarized in this risk factor summary, and other risks that we face, can be found below under the heading "Risk Factors" and should be carefully considered, together with other information in this Form 10-K and our other filings with the SEC, before making an investment decision regarding our common stock.

Risks Related to Cybersecurity and the Cyber Incident

- Cyberattacks, including the Cyber Incident, and other security incidents have resulted, and in the future may result, in compromises or breaches of our and our customers' systems, the insertion of malicious code, malware, ransomware or other vulnerabilities into our systems and products and in our customers' systems, the exploitation of vulnerabilities in our and our customers' environments, theft or misappropriation of our and our customers' proprietary and confidential information, interference with our and our customers' operations, expose us to legal and other liabilities, result in higher customer, employee and partner attrition and the loss of key personnel, negatively impact our sales, renewals and upgrade and expose us to reputational harm and other serious negative consequences, any or all of which could materially harm our business.
- The Cyber Incident has and is likely to continue to have an adverse effect on our business, reputation, customer, employee and partner relations, results of operations, financial condition or cash flows.

Risks Related to Our Business and Industry

- Our quarterly revenue and operating results may fluctuate in the future.
- If we are unable to capture significant volumes of high quality sales leads from our digital marketing initiatives, it could adversely affect our revenue and operating results.
- If we are unable to sell products to new customers or to sell additional products or upgrades to our existing customers, it could adversely affect our revenue.
- Any decline in renewals of maintenance or subscription agreements or a decline in our net retention rates could harm our current and future operating results.

Risks Related to the Potential Spin-Off

- The potential spin-off of our MSP business may not achieve some or all of its anticipated benefits with respect to either business and may not be completed in accordance with the expected plans or anticipated timelines, or at all.

Risks Related to Government Regulation

- We are subject to various global data privacy and security regulations, which could result in additional costs and liabilities to us.
- We are subject to governmental export controls and economic sanctions laws that could impair our ability to compete in international markets and subject us to liability.

Risks Related to Our Intellectual Property

- The success of our business depends on our ability to obtain, maintain, protect and enforce our intellectual property rights.
- Exposure related to any future intellectual property litigation could adversely affect our results of operations.

Risks Related to Our Indebtedness

- Our substantial indebtedness could adversely affect our financial health and our ability to obtain financing in the future, react to changes in our business and meet our obligations with respect to our indebtedness.
- We may be able to incur substantially more indebtedness, which could further exacerbate the risks associated with our substantial indebtedness.

Risks Related to Accounting and Taxation

- We are subject to fluctuations in interest rates.
- Failure to maintain proper and effective internal controls could have a material adverse effect on our business.

Risks Related to Ownership of Our Common Stock

- The trading price of our common stock could be volatile, which could cause the value of your investment to decline.
- The requirements of being a public company may strain our resources, increase our costs and distract management.

Risks Related to Our Organizational Structure

- Our charter and bylaws contain anti-takeover provisions that could delay or discourage takeover attempts.

Risks Related to Cybersecurity and the Cyber Incident

Cyberattacks, including the Cyber Incident, and other security incidents have resulted, and in the future may result, in compromises or breaches of our and our customers' systems, the insertion of malicious code, malware, ransomware or other vulnerabilities into our systems and products and in our customers' systems, the exploitation of vulnerabilities in our and our customers' environments, theft or misappropriation of our and our customers' proprietary and confidential information, interference with our and our customers' operations, expose us to legal and other liabilities, result in higher customer, employee and partner attrition, negatively impact our sales, renewals and upgrade and expose us to reputational harm and other serious negative consequences, any or all of which could materially harm our business.

We are heavily dependent on our technology infrastructure to operate our business, and our customers rely on our products to help manage and secure their own IT infrastructure and environments, including their and their customers' confidential information. Despite our implementation of security measures and controls, our systems and those of third parties upon whom we rely are vulnerable to attack from numerous threat actors, including sophisticated nation-state and nation-state-supported actors. Threat actors have and may in the future be able to compromise our security measures or otherwise exploit vulnerabilities in our systems, including vulnerabilities that may have been introduced through the actions of our employees or contractors or defects in the design or manufacture of our products and systems or the products and systems that we procure from third parties. In doing so, they have and may in the future be able to breach or compromise our IT systems, including those which we use to design, develop, deploy and support our products, and misappropriate proprietary and confidential information, introduce malware, ransomware or vulnerabilities into our products and systems and create system disruptions or shutdowns. In addition, threat actors have and may in the future, access and exfiltrate our software source code. By virtue of the role our products play in helping to manage and secure the environments and systems of our customers, attacks on our systems and products can result in similar impacts on our customers' systems and data.

Moreover, the number and scale of cyberattacks have continued to increase and the methods and techniques used by threat actors, including sophisticated "supply-chain" attacks such as the Cyber Incident, continue to evolve at a rapid pace. As a result, we may be unable to identify current attacks, anticipate future attacks or implement adequate security measures. We may also experience security breaches that may remain undetected for an extended period and, therefore, have a greater impact on our systems, our products, the proprietary data contained therein, our customers and ultimately, our business. In addition, our ability to defend against and mitigate cyberattacks depends in part on prioritization decisions that we and third parties upon whom we rely make to address vulnerabilities and security defects. While we endeavor to address all identified vulnerabilities in our products, we must make determinations as to how we prioritize developing and deploying the respective fixes, and we may be unable to do so prior to an attack. Likewise, even once a vulnerability has been addressed, for certain of our products, the fix will only be effective once a customer has updated the impacted product with the latest release, and customers that do not install and run the latest supported versions of our products may remain vulnerable to attack.

Cyberattacks, including the Cyber Incident, and other security incidents have resulted, and in the future may result, in numerous risks and adverse consequences to our business, including that (a) our prevention, mitigation and remediation efforts may not be successful or sufficient, (b) our and our customers' confidential and proprietary information, including personal information, may be exfiltrated, misappropriated, compromised or corrupted, (c) we incur significant financial, legal, reputational and other harms to our business, including loss of business, decreased sales, severe reputational damage adversely affecting current and prospective customer, employee or vendor relations and investor confidence, U.S. or foreign regulatory investigations and enforcement actions, litigation, indemnity obligations, damages for contractual breach, penalties for violation of applicable laws or regulations, including laws and regulations in the United States and other jurisdictions relating to the collection, use and security of user and other personally identifiable information and data, significant costs for remediation, impairment of our ability to protect our intellectual property, stock price volatility and other significant liabilities, (d) our insurance coverage, including coverage relating to certain security and privacy damages and claim expenses, may not be available or sufficient to compensate for all liabilities we incur related to these matters or that we may face increased costs to obtain and maintain insurance in the future and (e) our steps to secure our internal environment, adapt and enhance our software development and build environments and ensure the security and integrity of the products that we deliver to customers may not be successful or sufficient to protect against threat actors or cyberattacks.

The Cyber Incident has had and may continue to have an adverse effect on our business, reputation, customer, employee and partner relations, results of operations, financial condition and cash flows.

The Cyber Incident has harmed, and is likely to continue to harm, our reputation and brand positioning, our customer, employee and partner relations and our operations and business as a result of both the impact it has had on our relationships with existing and prospective customers and the significant time and resources that our personnel have had to devote to responding to the Cyber Incident. Customers have and may in the future defer purchasing or choose to cancel or not renewal their agreements or subscriptions with us.

We have and expect to continue to expend significant costs and expenses related to the Cyber Incident including in connection with our investigations, our Secure By Design and related initiatives and to address the damage to our reputation, customer, employee and partner relations. If we are unable to rebuild the trust of our current and prospective customers and partners, negative publicity continues and/or our personnel continue to have to devote significant time to the Cyber Incident, our business, market share, results of operations and financial condition will be negatively affected.

We are party to lawsuits and the subject of governmental investigations related to the Cyber Incident. Numerous domestic and foreign governmental authorities are investigating events related to the Cyber Incident, including how it occurred, the consequences thereof and our response thereto, in addition to inquiries under various data protection and privacy regulations such as the European Union's General Data Protection Regulation. We are a party to lawsuits in the U.S. and additional claims may be asserted by or on behalf of customers, stockholders or others seeking monetary damages or other relief. These investigations and claims are resulting, and are expected to result in the future, in the incurrence of significant costs and expenses (which may not be covered by insurance), the diversion of management's attention from the operation of our business and have a negative impact on employee morale. The resolution of these investigations and claims, including providing indemnity to our officers and directors, may result in additional costs and other liabilities, which may not be covered by insurance.

As a result of the Cyber Incident and market forces beyond our control, the cost of our insurance may increase substantially, and we may not be able to obtain additional or comparable insurance coverage on commercially reasonable terms. In addition, governmental authorities investigating the Cyber Incident may seek to impose undertakings, injunctive relief, consent decrees, or other civil or criminal penalties, which could, among other things, materially increase our software development and related expenses or otherwise require us to alter how we operate our business. Further, any legislative or regulatory changes adopted in reaction to the Cyber Incident could require us to make modifications to the operation of our business that could have an adverse effect and/or increase or accelerate our compliance costs.

In addition, we are still investigating the Cyber Incident. While our investigations to date have not identified Sunburst in any of our non-Orion products, the threat actor had access to our source code across our products and exfiltrated source code from our systems. The discovery of new or different information regarding the Cyber Incident, including with respect to its scope and impact on our systems, products or customers, could increase our costs and liabilities related to the Cyber Incident and result in further damage to our business, reputation, intellectual property, results of operations and financial condition. The Cyber Incident also may embolden other threat actors to further target our systems, which could result in additional harm to our business. Although we have and expect to continue to deploy significant resources as part of our "Secure by Design" plan, we cannot ensure that our steps to secure our internal environment, improve our software development and build environments and protect the security and integrity of the products that we deliver will be successful to protect against threat actors or cyberattacks or perceived by existing and prospective customers as sufficient to address the harm caused by the Cyber Incident.

Risks Related to Our Business and Industry

Our quarterly revenue and operating results may fluctuate in the future because of a number of factors, which makes our future results difficult to predict and could cause our operating results to fall below expectations or the guidance we may provide in the future.

We believe our quarterly revenue and operating results may vary significantly in the future. As a result, you should not rely on the results of any one quarter as an indication of future performance and period-to-period comparisons of our revenue and operating results may not be meaningful.

Our quarterly results of operations may fluctuate as a result of a variety of factors, including, but not limited to, those listed below, many of which are outside of our control:

- our ability to maintain and increase sales to existing customers and to attract new customers;

- decline in maintenance or subscription renewals;
- our ability to capture a significant volume of qualified sales leads;
- our ability to convert qualified sales leads into new business sales at acceptable conversion rates;
- the amount and timing of operating expenses and capital expenditures related to the expansion of our operations and infrastructure and customer acquisition;
- our failure to achieve the growth rate that was anticipated by us in setting our operating and capital expense budgets;
- potential foreign exchange gains and losses related to expenses and sales denominated in currencies other than the functional currency of an associated entity;
- fluctuations in foreign currency exchange rates that may negatively impact our reported results of operations;
- the timing of revenue and expenses related to the development or acquisition of technologies, products or businesses;
- potential goodwill and intangible asset impairment charges and amortization associated with acquired businesses;
- the timing and success of new product, enhancements or functionalities introduced by us or our competitors;
- our ability to obtain, maintain, protect and enforce our intellectual property rights;
- changes in our pricing or licensing model or those of our competitors;
- the impact of new accounting pronouncements;
- occasional large customer orders, including in particular those placed by the U.S. federal government;
- unpredictability and timing of buying decisions by the U.S. federal government;
- general economic, industry and market conditions that impact expenditures for enterprise IT management software in the United States and other countries where we sell our software;
- significant security breaches, such as the Cyber Incident, technical difficulties or interruptions to our products;
- changes in tax rates in jurisdictions in which we operate; and
- uncertainties arising from the impact of the COVID-19 pandemic on the market and our business operations.

Fluctuations in our quarterly operating results might lead analysts to change their models for valuing our common stock. As a result, our stock price could decline rapidly, and we could face costly securities class action suits or other unanticipated issues.

If we are unable to capture significant volumes of high quality sales leads from our digital marketing initiatives, it could adversely affect our revenue growth and operating results.

Our digital marketing program is designed to efficiently and cost-effectively drive a high volume of website traffic and deliver high quality leads, which are generally trials of our products, to our sales teams. We drive website traffic and capture leads through various digital marketing initiatives, including search engine optimization, or SEO, targeted email campaigns, localized websites, social media, e-book distribution, video content, blogging and webinars. If we fail to drive a sufficient amount of website traffic or capture a sufficient volume of high quality sales leads from these activities, our revenue may not grow as expected or could decrease. If these activities are unsuccessful, we may be required to increase our sales and marketing expenses, which may not be offset by additional revenue, and could adversely affect our operating results.

Our digital marketing initiatives may be unsuccessful in driving high volumes of website traffic and generating trials of our products, resulting in fewer high quality sales leads, for a number of reasons. For example, technology professionals often find our products when they are online searching for a solution to address a specific need. Search engines typically provide two types of search results, algorithmic and purchased listings, and we rely on both. The display, including rankings, of unpaid search results can be affected by a number of factors, many of which are not in our direct control, and may change frequently. Our SEO techniques have been developed to work with existing search algorithms used by the major search engines. However, major search engines frequently modify their search algorithms and such modifications could cause our websites to receive less favorable placements, which could reduce the number of technology professionals who visit our websites. In addition, websites must comply with search engine guidelines and policies that are complex and may change at any time. If we fail to follow such guidelines and policies properly, search engines may rank our content lower in search results or could remove our content altogether from their indexes. If our websites are displayed less prominently, or fail to appear in search result listings in response to search inquiries regarding IT management problems through Internet search engines for any reason, our website traffic could significantly decline, requiring us to incur increased marketing expenses to replace this traffic. Any failure to replace this traffic could reduce our revenue.

In addition, the success of our digital marketing initiatives depends in part on our ability to collect customer data and communicate with existing and potential customers online and through phone calls. As part of the product evaluation trial process and during our sales process, most of our customers agree to receive emails and other communications from us. We also use tracking technologies, including cookies and related technologies, to help us track the activities of the visitors to our websites. However, as discussed in greater detail below, we are subject to a wide variety of data privacy and security laws and regulations in the U.S. and internationally that affect our ability to collect and use customer data and communicate with customers through email and phone calls. Several jurisdictions have proposed or adopted laws that restrict or prohibit unsolicited email or "spam" or regulate the use of cookies, including the European Union's General Data Protection Regulation. These new laws and regulations may impose significant monetary penalties for violations and complex and often burdensome requirements in connection with sending commercial email or other data-driven marketing practices. As a result of such regulation, we may be required to modify or discontinue our existing marketing practices, which could increase our marketing costs.

If we are unable to sell products to new customers or to sell additional products or upgrades to our existing customers, it could adversely affect our revenue growth and operating results.

To increase our revenue, we must regularly add new customers, including new customers within existing client organizations, and sell additional products or upgrades to existing customers. Even if we capture a significant volume of leads from our digital marketing activities, we must be able to convert those leads into sales of our products in order to achieve revenue growth.

We primarily rely on our direct sales force to sell our products to new and existing customers and convert qualified leads into sales using our low-touch, high-velocity sales model. Accordingly, our ability to achieve significant growth in revenue in the future will depend on our ability to recruit, train and retain sufficient numbers of sales personnel, and on the productivity of those personnel. We plan to continue to expand our sales force both domestically and internationally. Our recent and planned personnel additions may not become as productive as we would like or in a timely manner, and we may be unable to hire or retain sufficient numbers of qualified individuals in the future in the markets where we do or plan to do business. If we are unable to sell products to new customers and additional products or upgrades to our existing customers through our direct sales force or through our channel partners, which supplement our direct sales force by distributing our products and generating sales opportunities, we may be unable to grow our revenue and our operating results could be adversely affected.

We offer and sell our products to two main groups of customers: technology professionals, who use our Core IT Management products to manage their organization's own IT infrastructure, and managed service providers, or MSPs, who use our MSP products to manage their end clients' IT infrastructure. In addition to the growth in our Core IT Management offerings since our inception, since 2013, we have also devoted significant resources to expanding our MSP offerings. If we fail to continue to add MSP customers, our business and operating results may be harmed.

Our business depends on customers renewing their maintenance or subscription agreements. Any decline in renewal or net retention rates could harm our future operating results.

The significant majority of our revenue is recurring and consists of maintenance revenue and subscription revenue. Our perpetual license products typically include the first year of maintenance as part of the initial price. Our subscription products generally have recurring monthly or annual subscription periods. Our customers have no obligation to renew their maintenance or subscription agreements after the expiration of the initial period. Additionally, customers could cancel their subscription agreements prior to the expiration of the subscription period, which could result in us recognizing less subscription revenue than expected over the term of the agreement.

It is difficult to accurately predict long-term customer retention. Our customers' maintenance renewal rates and subscription net retention rates may decline or fluctuate as a result of a number of factors, such as the Cyber Incident, our customers' level of satisfaction with our products, the prices of our products, the prices of products and services offered by our competitors or reductions in our customers' spending levels. If our customers do not renew their maintenance or subscription arrangements or if they renew them on less favorable terms, our revenue may decline and our business will suffer. A substantial portion of our quarterly maintenance and subscription revenue is attributable to agreements entered into during previous quarters. As a result, if there is a decline in renewed maintenance or subscription agreements in any one quarter, only a small portion of the decline will be reflected in our revenue recognized in that quarter and the rest will be reflected in our revenue recognized in the following four quarters or more.

The global COVID-19 pandemic may adversely affect our business, results of operations and financial condition.

The global coronavirus disease 2019, or COVID-19, pandemic has created significant volatility, uncertainty and disruption in the global economy. Although we have implemented measures to mitigate the impact of the COVID-19 pandemic on our business, financial condition and results of operations, including reducing our expenses in certain areas of our business, these measures may not fully mitigate the impact of the COVID-19 pandemic on our business, financial condition and results of operations. The extent to which the COVID-19 pandemic may continue to impact our business, results of operations and financial condition is uncertain and will depend on numerous evolving factors outside of our control that we are not able to accurately predict, including:

- the duration and scope of the COVID-19 pandemic;
- governmental actions taken in response to the COVID-19 pandemic that restrict or disrupt global economic activity, including restrictions imposed on the operation of our business in our U.S. and international locations;
- business failures, reductions in information technology spending, late or missed payments, or delays in purchasing decisions by our customers, their end-customers and our prospective customers, in particular among SMEs that we or our MSP customers' serve, and the resulting impact on demand for our products, our ability to collect payments for our products or our ability to add new customers and retain existing customers;
- our ability to continue to effectively market, sell and support our products through disruptions to our operations, the operations of our customers and partners and the communities in which our and their employees are located, including disruptions resulting from the spread of the virus, quarantines, office closures, reallocation of internal resources and transitions to remote working arrangements;
- the ability of our products to address our customers' needs in a rapidly evolving business environment and any interruptions or performance problems associated with the increased use of our products as a result of the shift to more remote working environments, including disruptions at any third-party data centers upon which we rely;
- our ability to develop new products, enhance our existing products and acquire new products in this uncertain business environment;
- delays in the U.S. federal government's budget and appropriations process and changes in spending priorities of the U.S. federal government that result in the loss or delay of sales of our products to the U.S. federal government; and
- public and private litigation based upon, arising out of or related to COVID-19 and our actions and responses thereto.

In addition to the adverse impact any of these factors could have on our business, results of operations and financial condition, these factors and the other impacts of the COVID-19 pandemic also could cause, contribute to, or increase the likelihood of the risks and uncertainties identified elsewhere in this Annual Report on Form 10-K, any of which could materially adversely affect our business, results of operations and financial condition. Additionally, because an increasing portion of our business is based on a recurring revenue model, the effect of COVID-19 on our business will not be fully reflected in our financial results for some time.

We have experienced substantial growth in recent years, and if we fail to manage our growth effectively, we may be unable to execute our business plan, maintain high levels of customer satisfaction or adequately address competitive challenges, and our financial performance may be adversely affected.

Our business has rapidly grown, which has resulted in large increases in our number of employees, expansion of our infrastructure, new internal systems and other significant changes and additional complexities. We increased our total number of employees to 3,340 as of December 31, 2020 from 3,251 as of December 31, 2019. While we intend to further expand our overall business, customer base, and number of employees, our historical growth rate is not necessarily indicative of the growth that we may achieve in the future. The growth in our business generally and our management of a growing workforce and customer base geographically dispersed across the U.S. and internationally will require substantial management effort, infrastructure and operational capabilities. To support our growth, we must continue to improve our management resources and our operational and financial controls and systems, and these improvements may increase our expenses more than anticipated and result in a more complex business. We will also have to anticipate the necessary expansion of our relationship management, implementation, customer service and other personnel to support our growth and achieve high levels of customer service and satisfaction. Our success will depend on our ability to plan for and manage this growth effectively. If we fail to anticipate and manage our growth or are unable to provide high levels of customer service, our reputation, as well as our business, results of operations and financial condition, could be harmed.

Because our long-term success depends on our ability to operate our business internationally and increase sales of our products to customers located outside of the United States, our business is susceptible to risks associated with international operations.

We have international operations in the Republic of Ireland, the United Kingdom, Canada, the Czech Republic, Poland, Belarus, Romania, Austria, Germany, Portugal, the Netherlands, Sweden, Switzerland, Israel, Australia, Japan, Singapore and the Philippines and we market and sell our products worldwide. We expect to continue to expand our international operations for the foreseeable future. The continued international expansion of our operations requires significant management attention and financial resources and results in increased administrative and compliance costs. Our limited experience in operating our business in certain regions outside the United States increases the risk that our expansion efforts into those regions may not be successful. In particular, our business model may not be successful in particular countries or regions outside the United States for reasons that we currently are unable to anticipate. We are subject to risks associated with international sales and operations including, but not limited to:

- fluctuations in currency exchange rates (which we hedge only to a limited extent at this time);
- the complexity of, or changes in, foreign regulatory requirements;
- reduced or varied protection for intellectual property rights in some countries and the risk of potential theft or compromise of our technology, data or intellectual property in connection with our international operations, whether by state-sponsored malfeasance or other foreign entities or individuals;
- difficulties in managing the staffing of international operations, including compliance with local labor and employment laws and regulations;
- potentially adverse tax consequences, including the complexities of foreign value added tax systems, overlapping tax regimes, restrictions on the repatriation of earnings and changes in tax rates;
- dependence on resellers and distributors to increase customer acquisition or drive localization efforts;
- the burdens of complying with a wide variety of foreign laws and different legal standards;
- increased financial accounting and reporting burdens and complexities;
- longer payment cycles and difficulties in collecting accounts receivable;
- longer sales cycles;
- political, social and economic instability;
- war, terrorist attacks and security concerns in general;
- laws and policies of the U.S. and other jurisdictions affecting international trade (including import and export control laws, tariffs and trade barriers);
- the risk of U.S. regulation of foreign operations; and
- other factors beyond our control such as natural disasters and pandemics.

The occurrence of any one of these risks could negatively affect our international business and, consequently, our operating results. We cannot be certain that the investment and additional resources required to establish, acquire or integrate operations in other countries will produce desired levels of revenue or profitability. If we are unable to effectively manage our expansion into additional geographic markets, our financial condition and results of operations could be harmed.

In particular, we operate much of our research and development activities internationally and outsource a portion of the coding and testing of our products and product enhancements to contract development vendors. We believe that performing research and development in our international facilities and supplementing these activities with our contract development vendors enhances the efficiency and cost-effectiveness of our product development. Unrest in certain countries, such as Belarus, may pose security risks to our people, our facilities, our operations and infrastructure, such as utilities and network services, and the disruption of any or all of them could materially adversely affect our operations and/or financial results. Whether in these countries or in others in which we operate, civil unrest, political instability or uncertainty, military activities, or broad-based sanctions, should they continue for the long term or escalate, could require us to re-balance our geographic concentrations and could have a material adverse effect on our operations.

In June 2016, the United Kingdom's electorate voted in a referendum to voluntarily depart from the European Union, commonly referred to as "Brexit." The United Kingdom's withdrawal from the European Union occurred on January 31, 2020, but the United Kingdom remained in the European Union's customs union and single market for a transition period that expired on December 31, 2020. On December 24, 2020, the United Kingdom and the European Union entered into a trade and cooperation agreement (the "*Trade and Cooperation Agreement*"), which was applied on a provisional basis from January 1, 2021. While the economic integration does not reach the level that existed during the time the United Kingdom was a member state of the European Union, the Trade and Cooperation Agreement sets out preferential arrangements in areas such as trade in goods and in services, digital trade and intellectual property. Negotiations between the United Kingdom and the European Union are expected to continue in relation to the relationship between the United Kingdom and the European Union in certain other areas which are not covered by the Trade and Cooperation Agreement. The long term effects of Brexit will depend on the effects of the implementation and application of the Trade and Cooperation Agreement and any other relevant agreements between the United Kingdom and the European Union. We have operations in the United Kingdom and the European Union and, as a result, we face risks associated with the potential uncertainty and disruptions that may follow Brexit and the implementation and application of the Trade and Cooperation Agreement, including with respect to volatility in exchange rates and interest rates, disruptions to the free movement of data, goods, services, people and capital between the United Kingdom and the European Union and potential material changes to the regulatory regime applicable to our operations in the United Kingdom.

In addition, global privacy and data protection legislation, enforcement and policy activity are rapidly expanding and evolving, and may be inconsistent from jurisdiction to jurisdiction. For example, on July 16, 2020, the Court of Justice of the European Union, Europe's highest court, held in the Schrems II case that the E.U.-U.S. Privacy Shield, a mechanism for the transfer of personal data from the European Union to the United States, was invalid and imposed additional obligations in connection with the use of standard contractual clauses approved by the European Commission. The impact of this decision on the ability to lawfully transfer personal data from the European Union to the United States is being assessed and guidance from European regulators and advisory bodies is awaited. It is possible that the decision will restrict the ability to transfer personal data from the European Union to the United States and we may, in addition to other impacts, experience additional costs associated with increased compliance burdens, and we and our customers face the potential for regulators in the European Economic Area ("*EEA*") to apply different standards to the transfer of personal data from the EEA to the United States, and to block, or require ad hoc verification of measures taken with respect to, certain data flows from the EEA to the United States.

If one or more of these risks occurs, it could require us to dedicate significant resources to remedy, and if we are unsuccessful in finding a solution, our financial results will suffer.

We operate in highly competitive markets, which could make it difficult for us to acquire and retain customers at historic rates.

We operate in a highly competitive industry. Competition in our market is based primarily on brand awareness and reputation; product capabilities, including scalability, performance, security and reliability; ability to solve problems for companies of all sizes and infrastructure complexities; ease of use; total cost of ownership; flexible deployment models, including on-premises, in the cloud or in a hybrid environment; strength of sales and marketing efforts; and focus on customer service. We often compete to sell our products against existing products or systems that our potential customers have already made significant expenditures to install. Many of our current and potential competitors enjoy substantial competitive advantages over us, such as greater brand awareness and substantially greater financial, technical and other resources. In addition, many of our competitors have established marketing relationships and access to larger customer bases, and have major distribution agreements with consultants, system integrators and resellers. Given their larger size, greater resources and existing customer relationships, our competitors may be able to compete and respond more effectively than we can to new or changing opportunities, technologies, standards or customer requirements.

We face competition from both large network management and IT vendors offering enterprise-wide software frameworks and services and smaller companies in the cloud and application monitoring and the MSP IT tools markets. We also compete with network equipment vendors and IT operations management product providers, as well as infrastructure providers and their native applications, whose products and services also address network and IT management requirements. Our principal competitors vary depending on the product we offer and include large network management and IT vendors such as Cisco Systems, Inc., Micro Focus International plc, CA, Inc., International Business Machines Corporation and BMC Software, Inc., and smaller companies in the cloud and application monitoring and the MSP IT tools markets, including MSP pure-play vendors and niche or domain-specific vendors that provide solutions focused on a particular service that may be sold by MSPs, where we do not believe that a single or small group of companies has achieved market leadership.

Some of our competitors have made acquisitions or entered into strategic relationships with one another to offer more comprehensive or bundled or integrated product offerings. We expect this trend to continue as companies attempt to strengthen or maintain their market positions in an evolving industry and as companies enter into partnerships or are acquired. Companies and alliances resulting from these possible consolidations and partnerships may create more compelling product offerings and be able to offer more attractive pricing, making it more difficult for us to compete effectively.

Our actual operating results may differ significantly from information we may provide in the future regarding our financial outlook.

From time to time, we may provide information regarding our financial outlook in our quarterly earnings releases, quarterly earnings conference calls, or otherwise, that represents our management's estimates as of the date of release. This information regarding our financial outlook, which includes forward-looking statements, will be based on projections, including those related to certain of the factors listed above, prepared by our management. Neither our independent registered public accounting firm nor any other independent expert or outside party will compile or examine the projections nor, accordingly, will any such person express any opinion or any other form of assurance with respect thereto.

These projections will be based upon a number of assumptions and estimates that, while presented with numerical specificity, will be inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which will be beyond our control, and will also be based upon specific assumptions with respect to future business decisions, some of which will change. We intend to state possible outcomes as high and low ranges, which will be intended to provide a sensitivity analysis as variables are changed, but will not be intended to represent that actual results could not fall outside of the suggested ranges. The principal reason that we may in the future release such information is to provide a basis for our management to discuss our business outlook with analysts and investors. We do not accept any responsibility for any projections or reports published by analysts.

Information regarding our financial outlook would be necessarily speculative in nature, and it can be expected that some or all of the assumptions underlying such information furnished by us will not materialize or will vary significantly from actual results. Accordingly, information that we may provide regarding our financial outlook will only be an estimate of what management believes is realizable as of the date of release. Actual results will vary from our financial outlook, and the variations may be material and adverse. In light of the foregoing, investors are urged to consider these factors, not to rely exclusively upon information we may provide regarding our financial outlook in making an investment decision regarding our common stock, and to take such information into consideration only in connection with other information included in our filings filed with or furnished to the SEC, including the "*Risk Factors*" sections in such filings.

Any failure to implement our operating strategy successfully or the occurrence of any of the events or circumstances set forth under "*Risk Factors*" in this Annual Report on Form 10-K could result in our actual operating results being different from information we provide regarding our financial outlook, and those differences might be adverse and material.

Acquisitions present many risks that could have an adverse effect on our business and results of operations.

In order to expand our business, we have made several acquisitions and expect to continue making similar acquisitions and possibly larger acquisitions as part of our growth strategy. The success of our future growth strategy will depend on our ability to identify, negotiate, complete and integrate acquisitions and, if necessary, to obtain satisfactory debt or equity financing to fund those acquisitions. Acquisitions are inherently risky, and any acquisitions we complete may not be successful. Our past acquisitions and any mergers and acquisitions that we may undertake in the future involve numerous risks, including, but not limited to, the following:

- difficulties in integrating and managing the operations, personnel, systems, technologies and products of the companies we acquire;
- diversion of our management's attention from normal daily operations of our business;
- our inability to maintain the key business relationships and the reputations of the businesses we acquire;
- uncertainty of entry into markets in which we have limited or no prior experience and in which competitors have stronger market positions;
- our dependence on unfamiliar affiliates, resellers, distributors and partners of the companies we acquire;
- our inability to increase revenue from an acquisition for a number of reasons, including our failure to drive demand in our existing customer base for acquired products and our failure to obtain maintenance renewals or upgrades and new product sales from customers of the acquired businesses;
- increased costs related to acquired operations and continuing support and development of acquired products;
- our responsibility for the liabilities of the businesses we acquire;
- potential goodwill and intangible asset impairment charges and amortization associated with acquired businesses;
- adverse tax consequences associated with acquisitions;
- changes in how we are required to account for our acquisitions under U.S. generally accepted accounting principles, including arrangements that we assume from an acquisition;
- potential negative perceptions of our acquisitions by customers, financial markets or investors;
- failure to obtain required approvals from governmental authorities under competition and antitrust laws on a timely basis, if at all, which could, among other things, delay or prevent us from completing a transaction, or otherwise restrict our ability to realize the expected financial or strategic goals of an acquisition;
- potential increases in our interest expense, leverage and debt service requirements if we incur additional debt to pay for an acquisition;
- our inability to apply and maintain our internal standards, controls, procedures and policies to acquired businesses; and
- potential loss of key employees of the companies we acquire.

Additionally, acquisitions or asset purchases made entirely or partially for cash may reduce our cash reserves or require us to incur additional debt under our credit agreements or otherwise. We may seek to obtain additional cash to fund an acquisition by selling equity or debt securities. We may be unable to secure the equity or debt funding necessary to finance future acquisitions on terms that are acceptable to us. If we finance acquisitions by issuing equity or convertible debt securities, our existing stockholders will experience ownership dilution.

The occurrence of any of these risks could have a material adverse effect on our business, results of operations, financial condition or cash flows, particularly in the case of a larger acquisition or substantially concurrent acquisitions.

Businesses that we acquire may have greater than expected liabilities for which we become responsible.

Businesses that we acquire may have liabilities or adverse operating issues, or both, that we fail to discover through due diligence or the extent of which we underestimate prior to the acquisition. For example, to the extent that any business that we acquire or any prior owners, employees or agents of any acquired businesses or properties (i) failed to comply with or otherwise violated applicable laws, rules or regulations; (ii) failed to fulfill or disclose their obligations, contractual or otherwise, to applicable government authorities, their customers, suppliers or others; or (iii) incurred tax or other liabilities, we, as the successor owner, may be financially responsible for these violations and failures and may suffer harm to our reputation and otherwise be adversely affected. An acquired business may have problems with internal control over financial reporting, which could be difficult for us to discover during our due diligence process and could in turn lead us to have significant deficiencies or material weaknesses in our own internal control over financial reporting. These and any other costs, liabilities and disruptions associated with any of our past acquisitions and any future acquisitions could harm our operating results.

Charges to earnings resulting from acquisitions may adversely affect our operating results.

When we acquire businesses, we allocate the purchase price to tangible assets and liabilities and identifiable intangible assets acquired at their acquisition date fair values. Any residual purchase price is recorded as goodwill, which is also generally measured at fair value. We also estimate the fair value of any contingent consideration. Our estimates of fair value are based upon assumptions believed to be reasonable, but which are uncertain and involve significant judgments by management. After we complete an acquisition, the following factors could result in material charges and adversely affect our operating results and may adversely affect our cash flows:

- costs incurred to combine the operations of companies we acquire, such as transitional employee expenses and employee retention or relocation expenses;
- impairment of goodwill or intangible assets;
- a reduction in the useful lives of intangible assets acquired;
- impairment of long-lived assets;
- identification of, or changes to, assumed contingent liabilities;
- changes in the fair value of any contingent consideration;
- charges to our operating results due to duplicative pre-merger activities;
- charges to our operating results from expenses incurred to effect the acquisition; and
- charges to our operating results due to the expensing of certain stock awards assumed in an acquisition.

Substantially all of these costs will be accounted for as expenses that will decrease our net income and earnings per share for the periods in which those costs are incurred. Charges to our operating results in any given period could differ substantially from other periods based on the timing and size of our acquisitions and the extent of integration activities.

Our operating margins and cash flows from operations could fluctuate as we make further expenditures to expand our operations in order to support additional growth in our business.

We have made significant investments in our operations to support additional growth, such as hiring substantial numbers of new personnel, investing in new facilities, acquiring other companies or their assets and establishing and broadening our international operations in order to expand our business. We have made substantial investments in recent years to increase our sales and marketing operations in the EMEA and APAC regions and expect to continue to invest to grow our international sales and global brand awareness. We also expect to continue to invest to grow our research and development organization, particularly internationally. We have made multiple acquisitions in recent years and expect these acquisitions will continue to increase our operating expenses in future periods. These investments may not yield increased revenue, and even if they do, the increased revenue may not offset the amount of the investments. We also expect to continue to pursue acquisitions in order to expand our presence in current markets or new markets, many or all of which may increase our operating costs more than our revenue. As a result of any of these factors, our operating income could fluctuate and may continue to decline as a percentage of revenue relative to our prior annual periods.

The ability to recruit, retain and develop key employees and management personnel is critical to our success and growth, and our inability to attract and retain qualified personnel could harm our business.

Our business requires certain expertise and intellectual capital, particularly within our management team. We rely on our management team in the areas of operations, security, marketing, sales, support and general and administrative functions. The loss of one or more of our management team could have a material adverse effect on our business.

For us to compete successfully and grow, we must retain, recruit and develop key personnel who can provide the needed expertise for our industry and products. As we move into new geographic areas, we will need to attract, recruit and retain qualified personnel in those locations. In addition, acquisitions could cause us to lose key personnel of the acquired businesses. The market for qualified personnel is competitive and we may not succeed in retaining and recruiting key personnel or may fail to effectively replace current key personnel who depart with qualified or effective successors. We believe that replacing our key personnel with qualified successors is particularly challenging as we feel that our business model and approach to marketing and selling our products are unique. Any successors that we hire from outside of the company would likely be unfamiliar with our business model and may therefore require significant time to understand and appreciate the important aspects of our business or fail to do so altogether. Our effort to retain and develop personnel may also result in significant additional expenses, including stock-based compensation expenses, which could adversely affect our profitability. New regulations and volatility or lack of performance in our stock price could also affect the value of our equity awards, which could affect our ability to attract and retain our key employees. We have made significant changes, and may make additional changes in the future, to our senior management team and other key personnel, including, for example, the recent departure of our former chief executive officer, Kevin Thompson. We have a new chief executive officer, Sudhakar Ramakrishna, who started in January 2021. Leadership transitions can be inherently difficult to manage, and an inadequate transition may cause disruption to our business. In addition, we cannot provide assurances that key personnel, including our executive officers, will continue to be employed by us or that we will be able to attract and retain qualified personnel in the future. Failure to retain or attract key personnel could have a material adverse effect on our business.

Our success depends on our ability to maintain a product portfolio that responds to the needs of technology professionals and the evolving IT management market.

Our product portfolio has grown from on-premises network management products to broad-based on-premises systems monitoring and management and products for the growing but still emerging cloud and MSP markets. We offer a broad portfolio of products designed to solve the day-to-day problems encountered by technology professionals managing complex IT infrastructure, spanning on-premises, cloud and hybrid IT environments. Our long-term growth depends on our ability to continually enhance and improve our existing products and develop or acquire new products that address the common problems encountered by technology professionals on a day-to-day basis in an evolving IT management market. The success of any enhancement or new product depends on a number of factors, including its relevance to our existing and potential customers, timely completion and introduction and market acceptance. New products and enhancements that we develop or acquire may not sufficiently address the evolving needs of our existing and potential customers, may not be introduced in a timely or cost-effective manner and may not achieve the broad market acceptance necessary to generate the amount of revenue necessary to realize returns on our investments in developing or acquiring such products or enhancements. If our new products and enhancements are not successful for any reason, certain products in our portfolio may become obsolete, less marketable and less competitive, and our business will be harmed.

If we are unable to develop and maintain successful relationships with channel partners, our business, results of operations and financial condition could be harmed.

We have established relationships with certain channel partners to distribute our products and generate sales opportunities, particularly internationally. We believe that continued growth in our business is dependent upon identifying, developing and maintaining strategic relationships with our existing and potential channel partners that can drive substantial revenue and provide additional valued-added services to our customers. Our agreements with our existing channel partners are non-exclusive, meaning our channel partners may offer customers the products of several different companies, including products that compete with ours. They may also cease marketing our products with limited or no notice and with little or no penalty. We expect that any additional channel partners we identify and develop will be similarly non-exclusive and not bound by any requirement to continue to market our products. If we fail to identify additional channel partners in a timely and cost-effective manner, or at all, or are unable to assist our current and future channel partners in independently distributing and deploying our products, our business, results of operations and financial condition could be harmed. If our channel partners do not effectively market and sell our products, or fail to meet the needs of our customers, our reputation and ability to grow our business may also be harmed.

We depend on the U.S. federal government in certain calendar quarters for a meaningful portion of our on-premises license sales, including maintenance renewals associated with such products, and orders from the U.S. federal government are unpredictable. The delay or loss of these sales may harm our operating results.

A portion of our on-premises license sales, including maintenance renewals associated with such products, are to a number of different departments of the U.S. federal government. In certain calendar quarters, particularly the third calendar quarter, this portion may be meaningful. Any factors that cause a decline in government expenditures generally or government IT expenditures in particular could cause our revenue to grow less rapidly or even to decline. Following the Cyber Incident, our government contracts have received enhanced scrutiny and negative media attention. If we are unable to repair the reputational damage cause by the Cyber Incident and ensure the security of the data we maintain, our ability to maintain our existing and acquire new government contracts may be substantially impacted. Other factors include, but are not limited to, constraints on the budgetary process, including changes in the policies and priorities of the U.S. federal government, deficit-reduction legislation, and any shutdown of the U.S. federal government. Furthermore, sales orders from the U.S. federal government tend to be dependent on many factors and therefore unpredictable in timing. Any sales we expect to make in a quarter may not be made in that quarter or at all, and our operating results for that quarter may therefore be adversely affected.

If we fail to develop and maintain our brands cost-effectively, our financial condition and operating results might suffer.

We believe that developing and maintaining awareness and integrity of our brands in a cost-effective manner are important to achieving widespread acceptance of our existing and future products and are important elements in attracting new customers. We believe that the importance of brand recognition will increase as we enter new markets and as competition in our existing markets further intensifies. Successful promotion of our brands will depend on the effectiveness of our marketing efforts and on our ability to provide reliable, secure and useful products at competitive prices. Any brand promotion activities may not yield increased revenue, and even if they do, the increased revenue may not offset the expenses we incur in building our brands. We rely on resellers and distributors to some extent in the distribution of our products. We have limited control over these third parties, and actions by these third parties could negatively impact our brand. We also rely on our customer base and community of end-users in a variety of ways, including to give us feedback on our products and to provide user-based support to our other customers through THWACK, our online community. If poor advice or misinformation regarding our products is spread among users of THWACK, it could adversely affect our reputation, our financial results and our ability to promote and maintain our brands. If we fail to promote and maintain our brands successfully, fail to maintain loyalty among our customers and our end-user community, or incur substantial expenses in an unsuccessful attempt to promote and maintain our brands, we may fail to attract new customers or retain our existing customers and our financial condition and results of operations could be harmed.

Adverse economic conditions may negatively affect our business.

Our business depends on the overall demand for information technology and on the economic health of our current and prospective customers. Any significant weakening of the economy in the United States, EMEA, APAC and of the global economy, more limited availability of credit, a reduction in business confidence and activity, decreased government spending, economic uncertainty, and other difficulties may affect one or more of the sectors or countries in which we sell our products. Global economic and political uncertainty may cause some of our customers or potential customers to curtail spending generally or IT management spending specifically, and may ultimately result in new regulatory and cost challenges to our international operations. In addition, a strong dollar could reduce demand for our products in countries with relatively weaker currencies. These adverse conditions could result in reductions in sales of our products, longer sales cycles, slower adoption of new technologies and increased price competition. Any of these events could have an adverse effect on our business, operating results and financial position.

Interruptions or performance problems associated with our internal infrastructure, and its reliance on technologies from third parties, may adversely affect our ability to manage our business and meet reporting obligations.

Currently, we use NetSuite to manage our order management and financial processes, salesforce.com to track our sales and marketing efforts and other third-party vendors to manage online marketing and web services. We believe the availability of these services is essential to the management of our high-volume, transaction-oriented business model. We also use third-party vendors to manage our equity compensation plans and certain aspects of our financial reporting processes. As we expand our operations, we expect to utilize additional systems and service providers that may also be essential to managing our business. Although the systems and services that we require are typically available from a number of providers, it is time-consuming and costly to qualify and implement these relationships. Therefore, if one or more of our providers suffer an interruption in their business, or experience delays, disruptions or quality-control problems in their operations, or we have to change or add additional systems and services, our ability to manage our business and produce timely and accurate financial statements would suffer.

Interruptions or performance problems associated with our products, including disruptions at any third-party data centers upon which we rely, may impair our ability to support our customers.

Our continued growth depends in part on the ability of our existing and potential customers to access our websites, software or cloud-based products within an acceptable amount of time. We have experienced, and may in the future experience, service disruptions, outages and other performance problems due to a variety of factors, including infrastructure changes, human or software errors, capacity constraints due to an overwhelming number of users accessing our website simultaneously and denial of service or fraud or security attacks. In some instances, we may not be able to identify the cause or causes of these website performance problems within an acceptable period of time. It may become increasingly difficult to maintain and improve our website performance, especially during peak usage times and as our user traffic increases. If our websites are unavailable or if our customers are unable to access our software or cloud-based products within a reasonable amount of time or at all, our business would be negatively affected. Additionally, our data centers and networks and third-party data centers and networks may experience technical failures and downtime, may fail to distribute appropriate updates, or may fail to meet the increased requirements of a growing customer base.

We provide certain of our application performance management, MSP and ITSM products through third-party data center hosting facilities located in the United States and other countries. While we control and have access to our servers and all of the components of our network that are located in such third-party data centers, we do not control the operation of these facilities. Following expiration of the current agreement terms, the owners of the data center facilities have no obligation to renew their agreements with us on commercially reasonable terms, or at all. If we are unable to renew these agreements on commercially reasonable terms, or if one of our data center operators is acquired, we may be required to transfer our servers and other infrastructure to new data center facilities, and we may incur significant costs and possible service interruptions in connection with doing so.

If we fail to integrate our products with a variety of operating systems, software applications, platforms and hardware that are developed by others or ourselves, our products may become less competitive or obsolete and our results of operations would be harmed.

Our products must integrate with a variety of network, hardware and software platforms, and we need to continuously modify and enhance our products to adapt to changes in hardware, software, networking, browser and database technologies. We believe a significant component of our value proposition to customers is the ability to optimize and configure our products to integrate with our systems and those of third parties. If we are not able to integrate our products in a meaningful and efficient manner, demand for our products could decrease and our business and results of operations would be harmed.

In addition, we have a large number of products, and maintaining and integrating them effectively requires extensive resources. Our continuing efforts to make our products more interoperative may not be successful. Failure of our products to operate effectively with future infrastructure platforms and technologies could reduce the demand for our products, resulting in customer dissatisfaction and harm to our business. If we are unable to respond to changes in a cost-effective manner, our products may become less marketable, less competitive or obsolete and our business and results of operations may be harmed.

Material defects or errors in our products could harm our reputation, result in significant costs to us and impair our ability to sell our products.

Software products are inherently complex and often contain defects and errors when first introduced or when new versions are released. Any defects or errors in our products could result in:

- lost or delayed market acceptance and sales of our products;
- a reduction in subscription or maintenance renewals;
- diversion of development resources;
- legal claims; and
- injury to our reputation and our brand.

The costs incurred in correcting or remediating the impact of defects or errors in our products may be substantial and could adversely affect our operating results.

Risks Related to the Potential Spin-Off

The potential spin-off of our MSP business into a newly created and separately traded public company could involve significant time and expense and management attention, could disrupt or adversely affect the consolidated or separate businesses, results of operations and financial condition and may not be completed in accordance with the expected plans or anticipated timelines, or at all.

On August 6, 2020, we announced that our board of directors authorized management to explore a potential spin-off of our MSP business into a newly created and separately traded public company, and on December 9, 2020, we announced that we confidentially submitted with the SEC a Form 10 registration statement with respect to the potential spin-off. We expect that the process of continuing to explore and, if approved, completing the potential spin-off of our MSP business will be time-consuming and involve significant costs and expenses, which could disrupt the ongoing businesses and adversely affect the results of operations and financial condition of the consolidated or separate businesses. We also may experience increased difficulties in attracting, retaining and motivating employees or maintaining or initiating relationships with partners, customers and other parties with which we currently do business, or may do business in the future, during the pendency of the potential spin-off and following its completion, which may adversely affect our business, results of operations and financial condition, or the businesses, results of operations and financial condition of the separate businesses following the completion of the potential spin-off.

Even if approved by our board of directors, we cannot ensure that we will be able to successfully complete the potential spin-off of our MSP business. Various factors, including changes in business or industry conditions, such as the Cyber Incident, and changes in global economic and financial market conditions, could delay or prevent the completion of the potential spin-off, or cause the potential spin-off to occur on terms or conditions that are different or less favorable than expected.

The separation may not achieve some or all of the anticipated benefits.

We may not realize some or all of the anticipated strategic, financial, operational, marketing or other benefits from the spin-off, or such benefits may be delayed by a variety of circumstances, which may not be under our control or the control of the MSP business. As independent publicly-traded companies, SolarWinds and the independent MSP business will be smaller, less diversified companies with a narrower business focus and may be more vulnerable to changing market conditions, which could materially and adversely affect their respective business, financial condition and results of operations. Following the potential spin-off, we or the newly independent MSP business, may not be successful in achieving our respective business and operational objectives and the combined value of the common stock of the two companies may not be equal to or greater than what the value of our common stock would have been had the proposed separation not occurred.

If the potential spin-off does not qualify as a transaction that is generally tax-free for U.S. federal income tax purposes, we, our stockholders or the MSP business could be subject to significant tax liabilities.

We expect to obtain an opinion of tax counsel and tax advisors regarding qualification of the separation and distribution, together with certain related transactions, as a transaction that is generally tax-free for U.S. federal income tax purposes under Sections 355 and 368(a)(1)(D) of the Code. The opinion of tax counsel and tax advisors would be based upon and rely on, among other things, certain facts and assumptions, as well as certain representations, statements and undertakings of us and the MSP business, including those relating to the past and future conduct. If any of these representations, statements or undertakings are, or become, incomplete or inaccurate, or if we or the MSP business breaches any of the respective covenants in any of the separation-related agreements, the opinion of tax counsel and tax advisors could be invalid and the conclusions reached therein could be jeopardized.

Notwithstanding any opinion of tax counsel and tax advisors, the Internal Revenue Service (the “IRS”) could determine that the separation and distribution should be treated as a taxable transaction if it were to determine that any of the facts, assumptions, representations, statements or undertakings upon which any opinion of tax counsel and tax advisors was based were false or had been violated, or if it were to disagree with the conclusions in any opinion of tax counsel and tax advisors. Any opinion of tax counsel and tax advisors would not be binding on the IRS or the courts, and we cannot assure that the IRS or a court would not assert a contrary position. We have not requested, and do not intend to request, a ruling from the IRS with respect to the treatment of the distribution or certain related transactions for U.S. federal income tax purposes.

If the separation and distribution were to fail to qualify as a transaction that is generally tax-free for U.S. federal income tax purposes under Sections 355 and 368(a)(1)(D) of the Code, in general, we would recognize taxable gain as if we had sold our common stock in a taxable sale for its fair market value, and our stockholders who receive shares of MSP common stock in the distribution would be subject to tax as if they had received a taxable distribution equal to the fair market value of such shares.

Risks Related to Government Regulation

We are subject to various global data privacy and security regulations, which could result in additional costs and liabilities to us.

Our business is subject to a wide variety of local, state, national and international laws, directives and regulations that apply to the collection, use, retention, protection, disclosure, transfer and other processing of personal data. These data protection and privacy-related laws and regulations continue to evolve and may result in ever-increasing regulatory and public scrutiny and escalating levels of enforcement and sanctions and increased costs of compliance. In the United States, these include rules and regulations promulgated under the authority of the Federal Trade Commission, and state breach notification laws. If we experience another security incident with personal data issue, we may be required to inform the representative state attorney general or federal or country regulator, media and credit reporting agencies, and any customers whose information was stolen, which could further harm our reputation and business. Other states and countries have enacted different requirements for protecting personal information collected and maintained electronically. We expect that there will continue to be new proposed laws, regulations and industry standards concerning privacy, data protection and information security in the United States, the European Union and other jurisdictions, and we cannot yet determine the impact such future laws, regulations and standards will have on our business or the businesses of our customers, including, but not limited to, the European Union’s General Data Protection Regulation, which came into force in May 2018 and created a range of new compliance obligations, and significantly increased financial penalties for noncompliance, as well as the July 2020 Schrems II case that the E.U.-U.S. Privacy Shield, a mechanism for the transfer of personal data from the European Union to the United States, was invalid and imposed additional obligations in connection with the use of standard contractual clauses approved by the European Commission.

Failure to comply with laws concerning privacy, data protection and information security could result in enforcement action against us, including fines, imprisonment of company officials and public censure, claims for damages by end customers and other affected individuals, damage to our reputation and loss of goodwill (both in relation to existing end customers and prospective end customers), any of which could have a material adverse effect on our operations, financial performance and business. In addition, we could suffer adverse publicity and loss of customer confidence were it known that we did not take adequate measures to assure the confidentiality of the personally identifiable information that our customers had given to us. This could result in a loss of customers and revenue that could jeopardize our success. We may not be successful in avoiding potential liability or disruption of business resulting from the failure to comply with these laws and, even if we comply with laws, may be subject to liability because of a security incident such as the Cyber Incident. If we were required to pay any significant amount of money in satisfaction of claims under these laws, or any similar laws enacted by other jurisdictions, or if we were forced to cease our business operations for any length of time as a result of our inability to comply fully with any of these laws, our business, operating results and financial condition could be adversely affected. Further, complying with the applicable notice requirements in the event of a security breach could result in significant costs.

Additionally, our business efficiencies and economies of scale depend on generally uniform product offerings and uniform treatment of customers across all jurisdictions in which we operate. Compliance requirements that vary significantly from jurisdiction to jurisdiction impose added costs on our business and can increase liability for compliance deficiencies.

We are subject to governmental export controls and economic sanctions laws that could impair our ability to compete in international markets and subject us to liability if we are not in full compliance with applicable laws.

Certain of our products are subject to U.S. export controls, including the U.S. Department of Commerce's Export Administration Regulations and economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Control. These regulations may limit the export of our products and provision of our services outside of the United States, or may require export authorizations, including by license, a license exception or other appropriate government authorizations, including annual or semi-annual reporting and the filing of an encryption registration. Export control and economic sanctions laws may also include prohibitions on the sale or supply of certain of our products to embargoed or sanctioned countries, regions, governments, persons and entities. In addition, various countries regulate the importation of certain products, through import permitting and licensing requirements, and have enacted laws that could limit our ability to distribute our products. The exportation, re-exportation and importation of our products and the provision of services, including by our partners, must comply with these laws or else we may be adversely affected, through reputational harm, government investigations, penalties, and a denial or curtailment of our ability to export our products or provide services. Complying with export control and sanctions laws may be time consuming and may result in the delay or loss of sales opportunities. If we are found to be in violation of U.S. sanctions or export control laws, it could result in substantial fines and penalties for us and for the individuals working for us. Changes in export or import laws or corresponding sanctions may delay the introduction and sale of our products in international markets, or, in some cases, prevent the export or import of our products to certain countries, regions, governments, persons or entities altogether, which could adversely affect our business, financial condition and results of operations.

We are also subject to various domestic and international anti-corruption laws, such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, as well as other similar anti-bribery and anti-kickback laws and regulations. These laws and regulations generally prohibit companies and their employees and intermediaries from authorizing, offering or providing improper payments or benefits to officials and other recipients for improper purposes. Although we take precautions to prevent violations of these laws, our exposure for violating these laws increases as our international presence expands and as we increase sales and operations in foreign jurisdictions.

Government regulation of the Internet and e-commerce is evolving, and unfavorable changes or our failure to comply with regulations could harm our operating results.

As Internet commerce continues to evolve, increasing regulation by federal, state or foreign agencies becomes more likely. In addition to data privacy and security laws and regulations, taxation of products and services provided over the Internet or other charges imposed by government agencies or by private organizations for accessing the Internet may also be imposed. Any regulation imposing greater fees for Internet use or restricting information exchange over the Internet could result in a decline in the use of the Internet and the viability of Internet-based services and product offerings, which could harm our business and operating results.

Risks Related to Our Intellectual Property

The success of our business depends on our ability to obtain, maintain, protect and enforce our intellectual property rights.

Our success depends, in part, on our ability to protect proprietary methods and technologies that we develop or license so that we can prevent others from using our inventions and proprietary information. If we fail to protect our intellectual property rights adequately, our competitors might gain access to our technology, and our business might be adversely affected. However, protecting and enforcing our intellectual property rights might entail significant expenses. Any of our intellectual property rights may be challenged by others, weakened or invalidated through administrative process or litigation. We rely primarily on a combination of patent, copyright, trademark, trade dress, unfair competition and trade secret laws, as well as confidentiality procedures and contractual restrictions, to establish and protect our proprietary rights. These laws, procedures and restrictions provide only limited protection.

As of December 31, 2020, we had approximately 38 issued U.S. patents and have also filed patent applications, but patents may not be issued with respect to these applications. The process of obtaining patent protection is expensive and time-consuming, and we may not be able to prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. Even if issued, there can be no assurance that these patents, or our existing patents, will adequately protect our intellectual property, as the legal standards relating to the validity, enforceability and scope of protection of patent and other intellectual property rights are uncertain. Our patents and any future patents issued to us may be challenged, invalidated or circumvented, and may not provide sufficiently broad protection or may not prove to be enforceable in actions against alleged infringers. Any patents that are issued may subsequently be invalidated or otherwise limited, allowing other companies to develop offerings that compete with ours, which could adversely affect our competitive business position, business prospects and financial condition. In addition, issuance of a patent does not guarantee that we have a right to practice the patented invention. Patent applications in the United States are typically not published until 18 months after filing or, in some cases, not at all, and publications of discoveries in industry-related literature lag behind actual discoveries. We cannot be certain that third parties do not have blocking patents that could be used to prevent us from marketing or practicing our patented software or technology.

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

Our exposure to risks related to the protection of intellectual property may be increased in the context of acquired technologies as we have a lower level of visibility into the development process and the actions taken to establish and protect proprietary rights in the acquired technology. In connection with past acquisitions, we have found that some associated intellectual property rights, such as domain names and trademarks in certain jurisdictions, are owned by resellers, distributors or other third parties. In the past, we have experienced difficulties in obtaining assignments of these associated intellectual property rights from third parties.

Furthermore, effective patent, trademark, trade dress, copyright and trade secret protection may not be available in every country in which our products are available. The laws of some foreign countries may not be as protective of intellectual property rights as those in the United States (in particular, some foreign jurisdictions do not permit patent protection for software), and mechanisms for enforcement of intellectual property rights may be inadequate. In addition, the legal standards, both in the United States and in foreign countries, relating to the validity, enforceability and scope of protection of intellectual property rights are uncertain and still evolving. Accordingly, despite our efforts, we may be unable to prevent third parties from infringing upon or misappropriating our intellectual property.

We might be required to spend significant resources to monitor and protect our intellectual property rights. We may initiate claims or litigation against third parties for infringement of our proprietary rights or to establish the validity of our proprietary rights. Litigation also puts our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing. Additionally, we may provoke third parties to assert counterclaims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially viable. Any litigation, whether or not resolved in our favor, could result in significant expense to us and divert the efforts of our technical and management personnel, which may adversely affect our business, results of operations, financial condition and cash flows.

Exposure related to any future litigation could adversely affect our results of operations, profitability and cash flows.

From time to time, we have been and may be involved in various legal proceedings and claims arising in our ordinary course of business. Other than the litigation relating to the Cyber Incident, neither we nor any of our subsidiaries is a party to, and none of our respective property is the subject of, any material legal proceeding. However, the outcomes of legal proceedings and claims brought against us are subject to significant uncertainty. Future litigation may result in a diversion of management's attention and resources, significant costs, including monetary damages and legal fees, and injunctive relief, and may contribute to current and future stock price volatility. No assurance can be made that future litigation will not result in material financial exposure or reputational harm, which could have a material adverse effect upon our results of operations, profitability or cash flows.

In particular, the software and technology industries are characterized by the existence of a large number of patents, copyrights, trademarks and trade secrets and by frequent litigation based on allegations of infringement or other violations of intellectual property rights. We have received, and from time to time may receive, letters claiming that our products infringe or may infringe the patents or other intellectual property rights of others. As we face increasing competition and as our brand awareness increases, the possibility of additional intellectual property rights claims against us grows. Our technologies may not be able to withstand any third-party claims or rights against their use. Additionally, we have licensed from other parties proprietary technology covered by patents and other intellectual property rights, and these patents or other intellectual property rights may be challenged, invalidated or circumvented. These types of claims could harm our relationships with our customers, might deter future customers from acquiring our products or could expose us to litigation with respect to these claims. Even if we are not a party to any litigation between a customer and a third party, an adverse outcome in that litigation could make it more difficult for us to defend our intellectual property in any subsequent litigation in which we are named as a party. Any of these results would have a negative effect on our business and operating results.

Any intellectual property rights claim against us or our customers, with or without merit, could be time-consuming and expensive to litigate or settle and could divert management resources and attention. As a result of any successful intellectual property rights claim against us or our customers, we might have to pay damages or stop using technology found to be in violation of a third party's rights, which could prevent us from offering our products to our customers. We could also have to seek a license for the technology, which might not be available on reasonable terms, might significantly increase our cost of revenue or might require us to restrict our business activities in one or more respects. The technology also might not be available for license to us at all. As a result, we could also be required to develop alternative non-infringing technology or cease to offer a particular product, which could require significant effort and expense and/or hurt our revenue and financial results of operations.

Our exposure to risks associated with the use of intellectual property may be increased as a result of our past and any future acquisitions as we have a lower level of visibility into the development process with respect to acquired technology or the care taken to safeguard against infringement risks. Third parties may make infringement and similar or related claims after we have acquired technology that had not been asserted prior to our acquisition.

Our use of open source software could negatively affect our ability to sell our products and subject us to possible litigation.

Some of our products incorporate open source software, and we intend to continue to use open source software in the future. Some terms of certain open source licenses to which we are subject have not been interpreted by U.S. or foreign courts, and there is a risk that open source software licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to monetize our products. Additionally, we may from time to time face claims from third parties claiming ownership of, or demanding release of, the open source software or derivative works that we developed using such software, which could include our proprietary source code, or otherwise seeking to enforce the terms of the applicable open source software license. These claims could result in litigation and could require us to make our software source code freely available, purchase a costly license to continue offering the software or cease offering the implicated services unless and until we can re-engineer them to avoid infringement or violation. This re-engineering process could require significant additional research and development resources, and we may not be willing to entertain the cost associated with updating the software or be able to complete it successfully. In addition to risks related to license requirements, use of certain 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 software and, thus, may contain security vulnerabilities or infringing or broken code. Additionally, if we utilize open source licenses that require us to contribute to open source projects, this software code is publicly available; and our ability to protect our intellectual property rights with respect to such software source code may be limited or lost entirely. We may be unable to prevent our competitors or others from using such contributed software source code. Any of these risks could be difficult to eliminate or manage, and if not addressed, could have a negative effect on our business, operating results and financial condition.

Our products use third-party software that may be difficult to replace or cause errors or failures of our products that could lead to a loss of customers or harm to our reputation and our operating results.

We license third-party software from various third parties for use in our products. In the future, this software may not be available to us on commercially reasonable terms, or at all. Any loss of the right to use any of the software could result in decreased functionality of our products until equivalent technology is either developed by us or, if available from another provider, is identified, obtained and integrated, which could harm our business. In addition, any vulnerabilities, errors or defects in or failures of the third-party software could result in cyberattacks on or errors or defects in our products or cause our products to fail, which could harm our business and be costly to correct. Many of these providers attempt to impose limitations on their liability for such errors, defects or failures, and if enforceable, we may have additional liability to our customers or third-party providers that could harm our reputation and increase our operating costs.

Risks Related to Our Indebtedness

We have substantial indebtedness, which could adversely affect our financial health and our ability to obtain financing in the future, react to changes in our business and meet our obligations with respect to our indebtedness.

We entered into credit agreements in 2016 and 2018. Although we used a portion of the proceeds from our initial public offering to repay $315.0 million in borrowings outstanding, plus accrued interest, under our second lien term loan, as of December 31, 2020, our total indebtedness was $1.9 billion and we had $125.0 million available for additional borrowing under our credit facilities. Our net interest expense during the years ended December 31, 2020, 2019 and 2018 was approximately $75.9 million, $108.1 million and $142.0 million, respectively.

Our substantial indebtedness incurred under the credit agreements could have important consequences, including:

- requiring us to dedicate a substantial portion of our cash flows from operations to payments on our indebtedness, thereby reducing the funds available for operations;
- increasing our vulnerability to adverse economic and industry conditions, which could place us at a competitive disadvantage compared to our competitors that have relatively less indebtedness;
- limiting our flexibility in planning for, or reacting to, changes in our business and the industries in which we operate;
- restricting us from making strategic acquisitions or causing us to make non-strategic divestitures;
- requiring us under certain circumstances to repatriate earnings from our international operations in order to make payments on our indebtedness, which could subject us to local country income and withholding taxes and/or state income taxes that are not currently accrued in our financial statements;
- requiring us to liquidate short-term or long-term investments in order to make payments on our indebtedness, which could generate losses;
- exposing us to the risk of increased interest rates as borrowings under the credit agreements are subject to variable rates of interest; and
- limiting our ability to borrow additional funds, or to dispose of assets to raise funds, if needed, for working capital, capital expenditures, acquisitions, product development and other corporate purposes.

Despite our current indebtedness level, we and our restricted subsidiaries may be able to incur substantially more indebtedness, which could further exacerbate the risks associated with our substantial indebtedness.

Although the terms of the agreements governing our outstanding indebtedness contain restrictions on the incurrence of additional indebtedness, such restrictions are subject to a number of important exceptions and indebtedness incurred in compliance with such restrictions could be substantial. If we and our restricted subsidiaries incur significant additional indebtedness, the related risks that we face could increase. If new debt is added to our or our subsidiaries' current debt levels, the related risks that we now face would increase, and we may not be able to meet all our debt obligations. See "*Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources*."

The agreements governing our indebtedness contain restrictions and limitations that may restrict our business and financing activities and expose us to risks that could adversely affect our liquidity and financial condition.

The credit agreements governing our credit facilities contain various covenants that are operative so long as our credit facilities remain outstanding. The covenants, among other things, limit our and certain of our subsidiaries' abilities to:

- incur additional indebtedness;
- incur liens;
- engage in mergers, consolidations, liquidations or dissolutions;
- pay dividends and distributions on, or redeem, repurchase or retire our capital stock;
- make investments, acquisitions, loans or advances;
- create negative pledges or restrictions on the payment of dividends or payment of other amounts owed from subsidiaries;
- sell, transfer or otherwise dispose of assets, including capital stock of subsidiaries;
- make prepayments of material debt that is subordinated with respect to right of payment;
- engage in certain transactions with affiliates;

- modify certain documents governing material debt that is subordinated with respect to right of payment;
- change our fiscal year; and
- change our lines of business.

Our credit agreements also contain numerous affirmative covenants, including a financial covenant which requires that, at the end of each fiscal quarter, for so long as the aggregate principal amount of borrowings under our revolving credit facility exceeds 35% of the aggregate commitments under the revolving credit facility, our first lien net leverage ratio cannot exceed 7.40 to 1.00. A breach of this financial covenant will not result in a default or event of default under the term loan facility under our first lien credit agreement unless and until the lenders under our revolving credit facility have terminated the commitments under the revolving credit facility and declared the borrowings under the revolving credit facility due and payable.

Our ability to comply with the covenants and restrictions contained in the credit agreements governing our credit facilities may be affected by economic, financial and industry conditions beyond our control. The restrictions in the credit agreements governing our credit facilities may prevent us from taking actions that we believe would be in the best interests of our business and may make it difficult for us to execute our business strategy successfully or effectively compete with companies that are not similarly restricted. Even if any of our credit agreements are terminated, any additional debt that we incur in the future could subject us to similar or additional covenants.

The credit agreements include customary events of default, including, among others, failure to pay principal, interest or other amounts; material inaccuracy of representations and warranties; violation of covenants; specified cross-default and cross-acceleration to other material indebtedness; certain bankruptcy and insolvency events; certain ERISA events; certain undischarged judgments; material invalidity of guarantees or grant of security interest; and change of control. Any default that is not cured or waived could result in the termination of our credit agreements or an acceleration of the obligations under the credit agreements. Any such default would permit the applicable lenders to declare all amounts outstanding thereunder to be due and payable, together with accrued and unpaid interest. In addition, such a default or acceleration may result in the acceleration of any other debt to which a cross-acceleration or cross-default provision applies. If we are unable to repay our indebtedness, lenders having secured obligations, such as the lenders under our credit facilities, could proceed against the collateral securing the indebtedness. In any such case, we may be unable to borrow under our credit facilities and may not be able to repay the amounts due under our credit facilities. This could have serious consequences to our financial condition and results of operations and could cause us to become bankrupt or insolvent.

Certain of our indebtedness may be denominated in foreign currencies, which subjects us to foreign exchange risk, which could cause our debt service obligations to increase significantly.

Our credit facilities include a senior secured revolving credit facility, which permits borrowings denominated in Euros and other alternative currencies that may be approved by the applicable lenders. See "*Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources*." Such non-U.S. dollar-denominated debt may not necessarily correspond to the cash flow we generate in such currencies. Sharp changes in the exchange rates between the currencies in which we borrow and the currencies in which we generate cash flow could adversely affect us. In the future, we may enter into contractual arrangements designed to hedge a portion of the foreign currency exchange risk associated with any non-U.S. dollar-denominated debt. If these hedging arrangements are unsuccessful, we may experience an adverse effect on our business and results of operations.

Risks Related to Accounting and Taxation

We are subject to fluctuations in interest rates.

Borrowings under our credit facilities are subject to variable rates of interest and expose us to interest rate risk. Borrowings outstanding under our credit agreement currently bears interest at variable rates equal to applicable margins plus specified base rates or London Interbank Offered Rate, or LIBOR, with a 0% floor. In July 2017, the Chief Executive of the U.K. Financial Conduct Authority (the "FCA"), which regulates LIBOR, announced that the FCA will no longer persuade or compel banks to submit rates for the calculation of US Dollar LIBOR after 2021. On November 30, 2020, the ICE Benchmark Administration (IBA) which compiles and oversees LIBOR, announced that it intended to extend most US Dollar LIBOR (USD LIBOR) tenors until June 30, 2023. The Alternative Reference Rates Committee (ARCC), which was convened by the Federal Reserve Board and the New York Fed, has identified the Secured Oversight Financing Rate (SOFR) as the recommended risk-free alternative rate for USD LIBOR. While the timing of the transition from USD LIBOR is still under discussion, our credit agreement allows for our LIBOR tenor elections to be replaced at that time by the accepted market rate. The Company may also elect to convert our borrowings at a specified base rate.

At present, we do not have any existing interest rate swap agreements, which involve the exchange of floating for fixed rate interest payments to reduce interest rate volatility. However, we may decide to enter into such swaps in the future. If we do, we may not maintain interest rate swaps with respect to all of our variable rate indebtedness and any swaps we enter into may not fully mitigate our interest rate risk, may prove disadvantageous or may create additional risks.

See *Quantitative and Qualitative Disclosures About Market Risk* in Item 7A of Part II of this Annual Report on Form 10-K for additional information regarding our interest rate risk.

Failure to maintain proper and effective internal controls could have a material adverse effect on our business, operating results and stock price.

As a public company, we are required to maintain internal control over financial reporting and to report any material weaknesses in such internal controls. Section 404 of the Sarbanes-Oxley Act requires that we evaluate and determine the effectiveness of our internal control over financial reporting and, beginning with our second annual report following our initial public offering, provide a management report on internal control over financial reporting. Having transitioned out of emerging growth company in 2019, we also are required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm.

Any failure to develop or maintain effective controls, or any difficulties encountered in their implementation or improvement, could harm our operating results, cause us to fail to meet our reporting obligations, result in a restatement of our financial statements for prior periods or adversely affect the results of management evaluations and independent registered public accounting firm audits of our internal control over financial reporting that we will eventually be required to include in our periodic reports that will be filed with the SEC. Ineffective disclosure controls and procedures and internal control over financial reporting could also cause investors to lose confidence in our reported financial and other information, which would likely have a negative effect on the trading price of our common stock.

If we are unable to assert that our internal control over financial reporting is effective, or when required in the future, if our independent registered public accounting firm is unable to express an 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 investigations by the stock exchange on which our securities are listed, the SEC or other regulatory authorities, which could require additional financial and management resources.

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

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

Our business and financial performance could be negatively impacted by other changes in tax laws or regulations.

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to us. Any changes to these existing tax laws could adversely affect our domestic and international business operations, and our business and financial performance. Additionally, these events could require us or our customers to pay additional tax amounts on a prospective or retroactive basis, as well as require us or our customers to pay fines and/or penalties and interest for past amounts deemed to be due. If we raise our product and maintenance prices to offset the costs of these changes, existing customers may elect not to renew their maintenance arrangements and potential customers may elect not to purchase our products. Additionally, new, changed, modified or newly interpreted or applied tax laws could increase our customers' and our compliance, operating and other costs, as well as the costs of our products. Further, these events could decrease the capital we have available to operate our business. Any or all of these events could adversely impact our business and financial performance.

Additionally, the U.S. Tax Cuts and Jobs Act of 2017 (the "U.S. Tax Act") which was enacted on December 22, 2017, requires complex computations to be performed, significant judgments to be made in the interpretation of the provisions of the U.S. Tax Act, significant estimates in calculations, and the preparation and analysis of information not previously relevant or regularly produced. The U.S. Treasury Department continues to interpret or issue guidance on how provisions of the U.S. Tax Act will be applied or otherwise administered. As additional guidance is issued, we may make adjustments to amounts that we have previously recorded that may materially impact our financial statements in the period in which the adjustments are made.

The results of the U.S. presidential election could lead to changes in tax laws that could negatively impact our effective tax rate. President Biden has provided some informal guidance on what tax law changes he would support. Among other things, his proposals would raise the rate on both domestic income (from 21% to 28%) and foreign income and impose a new alternative minimum tax on book income. If these proposals are ultimately enacted into legislation, they could materially impact our tax provision, cash tax liability and effective tax rate. If any or all of these (or similar) proposals are ultimately enacted into law, in whole or in part, they could have a negative impact to our cash tax liability and effective tax rate.

Additional liabilities related to taxes or potential tax adjustments could adversely impact our business and financial performance.

We are subject to tax and related obligations in various federal, state, local and foreign jurisdictions in which we operate or do business. The taxing rules of the various jurisdictions in which we operate or do business are often complex and subject to differing interpretations. Tax authorities could challenge our tax positions we historically have taken, or intend to take in the future, or may audit the tax filings we have made and assess additional taxes. Tax authorities may also assess taxes in jurisdictions where we have not made tax filings. Any assessments incurred could be material, and may also involve the imposition of substantial penalties and interest. Significant judgment is required in evaluating our tax positions and in establishing appropriate reserves, and the resolutions of our tax positions are unpredictable. The payment of additional taxes, penalties or interest resulting from any assessments could adversely impact our business and financial performance.

Our corporate structure and intercompany arrangements are subject to the tax laws of various jurisdictions, and we could be obligated to pay additional taxes, which would harm our operating results.

Based on our current corporate structure, we may be subject to taxation in several jurisdictions around the world with increasingly complex tax laws, the application of which can be uncertain. The amount of taxes we pay in these jurisdictions could increase substantially as a result of changes in the applicable tax rules, including increased tax rates, new tax laws or revised interpretations of existing tax laws and precedents. In addition, the authorities in these jurisdictions could challenge our methodologies for valuing developed technology or intercompany arrangements, including our transfer pricing. The relevant taxing authorities may determine that the manner in which we operate our business does not achieve the intended tax consequences. If such a disagreement were to occur, and our position were not sustained, we could be required to pay additional taxes, interest and penalties. Such authorities could claim that various withholding requirements apply to us or our subsidiaries or assert that benefits of tax treaties are not available to us or our subsidiaries. Any increase in the amount of taxes we pay or that are imposed on us could increase our worldwide effective tax rate and adversely affect our business and operating results.

Risks Related to Ownership of Our Common Stock

The trading price of our common stock could be volatile, which could cause the value of your investment to decline.

Technology stocks have historically experienced high levels of volatility. The trading price of our common stock has and may continue to fluctuate significantly. Factors that have and could cause fluctuations in the trading price of our common stock include the following:

- adverse developments with respect to the Cyber Incident;
- announcements of new products or technologies, commercial relationships, acquisitions or other events by us or our competitors;
- changes in how customers perceive the benefits of our products;
- shifts in the mix of revenue attributable to perpetual licenses and to subscriptions from quarter to quarter;
- departures of key personnel;
- price and volume fluctuations in the overall stock market from time to time;
- fluctuations in the trading volume of our shares or the size of our public float;
- sales of large blocks of our common stock, including sales by our Sponsors;
- actual or anticipated changes or fluctuations in our operating results;
- whether our operating results meet the expectations of securities analysts or investors;
- changes in actual or future expectations of investors or securities analysts;
- litigation involving us, our industry or both;
- regulatory developments in the United States, foreign countries or both;
- general economic conditions and trends, including market impacts related to the COVID-19 pandemic;
- major catastrophic events in our domestic and foreign markets; and
- "flash crashes," "freeze flashes" or other glitches that disrupt trading on the securities exchange on which we are listed.

In addition, if the market for technology stocks or the stock market in general experiences a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, operating results or financial condition.

The trading price of our common stock might also decline in reaction to events that affect other companies in our industry even if these events do not directly affect us. In the past, following periods of volatility in the trading price of a company's securities, securities class-action litigation has often been brought against that company. If our stock price is volatile, we may become the target of securities litigation. Securities litigation could result in substantial costs and divert our management's attention and resources from our business, which could have an adverse effect on our business, operating results and financial condition.

The requirements of being a public company, including compliance with the reporting requirements of the Exchange Act, the requirements of the Sarbanes-Oxley Act and the requirements of the NYSE, may strain our resources, increase our costs and distract management, and we may be unable to comply with these requirements in a timely or cost-effective manner.

As a public company, we are subject to laws, regulations and requirements, certain corporate governance provisions of the Sarbanes-Oxley Act, related regulations of the SEC and the requirements of the NYSE, with which we were not required to comply as a private company. As a newly public company, complying with these statutes, regulations and requirements occupies a significant amount of time of our board of directors and management and significantly increases our costs and expenses as compared to when we were a private company. For example, as a newly public company, we have had to institute a more comprehensive compliance function, comply with rules promulgated by the NYSE, prepare and distribute periodic public reports in compliance with our obligations under the federal securities laws, establish new internal policies, such as those relating to insider trading, and involve and retain to a greater degree outside counsel and accountants in the above activities. In addition, being a public company subject to these rules and regulations has made it more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified individuals to serve on our board of directors or as executive officers as compared to when we were a private company.

Furthermore, because we have ceased to be an emerging growth company as of December 31, 2019, we are now required to have our independent registered public accounting firm attest to the effectiveness of our internal controls. Ensuring that we have adequate internal financial and accounting controls and procedures in place so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently, including if we acquire additional businesses and integrate their operations. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and preparation of financial statements in accordance with GAAP. We continue to evaluate opportunities to further strengthen the effectiveness and efficiency of our internal controls and procedures for compliance with Section 404 of the Sarbanes-Oxley Act. If we make additional acquisitions, we will need to similarly assess and ensure the adequacy of the internal financial and accounting controls and procedures of such acquisitions. If we fail to maintain proper and effective internal controls, including with respect to acquired businesses, our ability to produce accurate and timely financial statements could be impaired, which could harm our operating results, harm our ability to operate our business and reduce the trading price of our common stock.

If securities analysts or industry analysts were to downgrade our stock, publish negative research or reports or fail to publish reports about our business, our competitive position could suffer, and our stock price and trading volume could decline.

The trading market for our common stock, to some extent, depends on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If our results fail to meet the expectations of one or more of the analysts who cover our stock, or if one or more of such analysts should downgrade our stock or publish negative research or reports, cease coverage of our company or fail to regularly publish reports about our business, our competitive position could suffer, and our stock price and trading volume could decline.

Sales of substantial amounts of our common stock in the public markets, or the perception that such sales could occur, could reduce the market price of our common stock.

Sales of a substantial number of shares of our common stock in the public market, or the perception that such sales could occur, could adversely affect the market price of our common stock. As of December 31, 2020, we had 314,307,447 shares of common stock outstanding.

In addition, as of December 31, 2020, there were 1,259,835 shares of common stock subject to outstanding options, 9,786,550 shares of common stock to be issued upon the vesting of outstanding restricted stock units and 306,023 shares of common stock to be issued upon the vesting of outstanding performance stock units. We have registered all of the shares of common stock issuable upon the exercise of outstanding options, upon the vesting of outstanding restricted stock units and performance stock units and upon exercise of settlement of any options or other equity incentives we may grant in the future, for public resale under the Securities Act. Accordingly, these shares may be freely sold in the public market upon issuance as permitted by any applicable vesting requirements, subject to compliance with applicable securities laws.

Furthermore, holders of approximately 260 million shares of our common stock have certain rights with respect to the registration of such shares (and any additional shares acquired by such holders in the future) under the Securities Act.

Our issuance of additional capital stock in connection with financings, acquisitions, investments, our stock incentive plans or otherwise will dilute all other stockholders.

We may issue additional capital stock in the future that will result in dilution to all other stockholders. We may also raise capital through equity financings in the future. As part of our business strategy, we may acquire or make investments in complementary companies, products or technologies and issue equity securities to pay for any such acquisition or investment. Any such issuances of additional capital stock may cause stockholders to experience significant dilution of their ownership interests and the per-share value of our common stock to decline.

We do not intend to pay dividends on our common stock.

We do not intend to pay dividends on our common stock other than potentially to the extent that we proceed with the spin-off of our MSP business. We intend to retain any earnings to finance the operation and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future.

Risks Related to Our Organizational Structure

Our restated charter and restated bylaws contain anti-takeover provisions that could delay or discourage takeover attempts that stockholders may consider favorable.

Our restated charter and restated bylaws contain provisions that could delay or prevent a change in control of our company. These provisions could also make it difficult for stockholders to elect directors who are not nominated by the current members of our board of directors or take other corporate actions, including effecting changes in our management. These provisions include:

- a classified board of directors with three-year staggered terms, which could delay the ability of stockholders to change the membership of a majority of our board of directors;
- after the Lead Sponsors cease to beneficially own, in the aggregate, at least 30% of the outstanding shares of our common stock, removal of directors only for cause;
- the ability of our board of directors to issue shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquirer;
- subject to the rights of the Sponsors under the stockholders' agreement, allowing only our board of directors to fill vacancies on our board of directors, which prevents stockholders from being able to fill vacancies on our board of directors;
- after the Lead Sponsors cease to beneficially own, in the aggregate, at least 40% of the outstanding shares of our common stock, a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- after the Lead Sponsors cease to beneficially own, in the aggregate, at least 40% of the outstanding shares of our common stock, our stockholders may not take action by written consent but may take action only at annual or special meetings of our stockholders. As a result, a holder controlling a majority of our capital stock would not be able to amend our bylaws or remove directors without holding a meeting of our stockholders called in accordance with our bylaws;
- after the Lead Sponsors cease to beneficially own, in the aggregate, at least 40% of the outstanding shares of our common stock, the requirement for the affirmative vote of holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of the voting stock, voting together as a single class, to amend the provisions of our restated charter relating to the management of our business (including our classified board structure) or certain provisions of our bylaws, which may inhibit the ability of an acquirer to effect such amendments to facilitate an unsolicited takeover attempt;
- the ability of our board of directors to amend the bylaws, which may allow our board of directors to take additional actions to prevent an unsolicited takeover and inhibit the ability of an acquirer to amend the bylaws to facilitate an unsolicited takeover attempt;
- advance notice procedures with which stockholders must comply to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us; and
- a prohibition of cumulative voting in the election of our board of directors, which would otherwise allow less than a majority of stockholders to elect director candidates.

Our restated charter also contains a provision that provides us with protections similar to Section 203 of the Delaware General Corporation Law, or the DGCL, and prevents us from engaging in a business combination, such as a merger, with an interested stockholder (i.e., a person or group that acquires at least 15% of our voting stock) for a period of three years from the date such person became an interested stockholder, unless (with certain exceptions) the business combination or the transaction in which the person became an interested stockholder is approved in a prescribed manner. However, our restated charter also provides that the Sponsors, including the Silver Lake Funds and the Thoma Bravo Funds and any persons to whom any Silver Lake Fund or Thoma Bravo Fund or any of their respective affiliates sells its common stock, will not constitute “interested stockholders” for purposes of this provision.

The Lead Sponsors have a controlling influence over matters requiring stockholder approval, which could delay or prevent a change of control.

The Sponsors beneficially owned in the aggregate 78.3% of our common stock as of December 31, 2020. The Sponsors have entered into a stockholders’ agreement whereby they each agreed, among other things, to vote the shares each beneficially owns in favor of the director nominees designated by Silver Lake and Thoma Bravo, respectively. As a result, Silver Lake and Thoma Bravo could exert significant influence over our operations and business strategy and would together have sufficient voting power to effectively control the outcome of matters requiring stockholder approval. These matters may include:

- the composition of our board of directors, which has the authority to direct our business and to appoint and remove our officers;
- approving or rejecting a merger, consolidation or other business combination;
- raising future capital; and
- amending our restated charter and restated bylaws, which govern the rights attached to our common stock.

Additionally, for so long as the Sponsors beneficially own, in the aggregate, 40% or more of our outstanding shares of common stock, the Sponsors will have the right to designate a majority of our board of directors. For so long as the Sponsors have the right to designate a majority of our board of directors, the directors designated by the Sponsors are expected to constitute a majority of each committee of our board of directors, other than the audit committee, and the chairman of each of the committees, other than the audit committee, is expected to be a director serving on such committee who is designated by the Sponsors. However, as soon as we are no longer a “controlled company” under the NYSE corporate governance standards, our committee membership will comply with all applicable requirements of those standards and a majority of our board of directors will be “independent directors,” as defined under the rules of the NYSE, subject to any phase-in provisions.

This concentration of ownership of our common stock could delay or prevent proxy contests, mergers, tender offers, open-market purchase programs or other purchases of our common stock that might otherwise give you the opportunity to realize a premium over the then-prevailing market price of our common stock. This concentration of ownership may also adversely affect our share price.

Certain of our directors have relationships with the Lead Sponsors, which may cause conflicts of interest with respect to our business.

Three of our ten directors are affiliated with Silver Lake and three are affiliated with Thoma Bravo. These directors have fiduciary duties to us and, in addition, have duties to the respective Sponsor and their affiliated funds, respectively. As a result, these directors may face real or apparent conflicts of interest with respect to matters affecting both us and the Sponsors, whose interests may be adverse to ours in some circumstances.

The Sponsors and their affiliated funds may pursue corporate opportunities independent of us that could present conflicts with our and our stockholders’ interests.

The Sponsors and their affiliated funds are in the business of making or advising on investments in companies and hold (and may from time to time in the future acquire) interests in or provide advice to businesses that directly or indirectly compete with certain portions of our business or are suppliers or customers of ours. The Sponsors and their affiliated funds may also pursue acquisitions that may be complementary to our business and, as a result, those acquisition opportunities may not be available to us.

Our restated charter provides that no officer or director of the Company who is also an officer, director, employee, partner, managing director, principal, independent contractor or other affiliate of either of the Sponsors will be liable to us or our stockholders for breach of any fiduciary duty by reason of the fact that any such individual pursues or acquires a corporate opportunity for its own account or the account of an affiliate, as applicable, instead of us, directs a corporate opportunity to any other person instead of us or does not communicate information regarding a corporate opportunity to us.

We may issue preferred stock whose terms could adversely affect the voting power or value of our common stock.

Our restated charter authorizes us to issue, without the approval of our stockholders, one or more classes or series of preferred stock having such designations, preferences, limitations and relative rights, including preferences over our common stock respecting dividends and distributions, as our board of directors may determine. The terms of one or more classes or series of preferred stock could adversely impact the voting power or value of our common stock. For example, we might grant holders of preferred stock the right to elect some number of our directors in all events or on the happening of specified events or the right to veto specified transactions. Similarly, the repurchase or redemption rights or liquidation preferences we might assign to holders of preferred stock could affect the residual value of our common stock.

Our restated charter designates the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or agents.

Our restated charter provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will, to the fullest extent permitted by applicable law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, employees or agents to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL, our charter or bylaws, or (iv) any action asserting a claim against us that is governed by the internal affairs doctrine, in each such case subject to such Court of Chancery of the State of Delaware having personal jurisdiction over the indispensable parties named as defendants therein. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of, and consented to, the provisions of our restated charter described in the preceding sentence. This exclusive forum provision does not apply to establish the Delaware Court of Chancery as the forum for actions or proceedings brought to enforce a duty or liability created by the Securities Act or the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. This choice-of-forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, employees or agents, which may discourage such lawsuits against us and such persons. Alternatively, if a court were to find these provisions of our restated charter inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business, financial condition or operating results.

We are a controlled company within the meaning of the NYSE rules and, as a result, qualify for and intend to rely on exemptions from certain corporate governance requirements.

The Sponsors beneficially own a majority of the combined voting power of all classes of our outstanding voting stock. As a result, we are a controlled company within the meaning of the NYSE corporate governance standards. Under the NYSE rules, a company of which more than 50% of the voting power is held by another person or group of persons acting together is a controlled company and may elect not to comply with certain NYSE 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 NYSE;
- the nominating and governance committee be composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities; and
- the compensation committee be composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities.

These requirements will not apply to us as long as we remain a controlled company. We have elected to take advantage of these exemptions. 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 NYSE.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We lease our offices and do not own any real estate. Our corporate headquarters is located in Austin, Texas and currently consists of approximately 348,000 square feet. We also lease office space domestically and internationally in various locations for our operations, including facilities located in Cork, Ireland; Manila, Philippines; Brno, Czech Republic; Morrisville, North Carolina; Ottawa, Canada; Krakow, Poland; Lehi, Utah and Singapore.

We believe our current facilities will be adequate for the foreseeable future. If we require additional or substitute space, we believe that we will be able to obtain such space on acceptable, commercially reasonable terms.

ITEM 3. LEGAL PROCEEDINGS

For a description of the lawsuits and government investigations or inquiries related to the Cyber Incident, see Item 7, *"Management's Discussion and Analysis of Financial Condition and Results of Operations"* and *Note 16. Commitments and Contingencies* in the *Notes to Consolidated Financial Statements* in Item 8 of Part II of this Annual Report on Form 10-K, which description is incorporated herein by reference.

In addition, from time to time, we have been and may be involved in other legal proceedings and claims arising in our ordinary course of business. Other than with respect to the Cyber Incident, neither we nor any of our subsidiaries is a party to, and none of our respective property is the subject of, any material legal proceeding. However, the outcome of any other legal proceedings and claims brought against us are subject to significant uncertainty. Therefore, if one or more of these legal matters were resolved against us in the same reporting period for amounts in excess of management’s expectations, our consolidated financial statements for a particular period could be materially adversely affected.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDERS MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our common stock has been listed on the New York Stock Exchange, or NYSE, under the symbol "SWI" since October 19, 2018. Prior to that date, there was no public trading market for our common stock. Our initial public offering, or IPO, was priced at $15.00 per share on October 18, 2018.

On February 24, 2021, the last reported sales price of our common stock on the NYSE was $15.72 per share and, as of February 24, 2021 there were 79 holders of record of our common stock. Because many of our shares of common stock are held by brokers and other institutions on behalf of our stockholders, this number is not representative of the total number of stockholders represented by these stockholders of record.

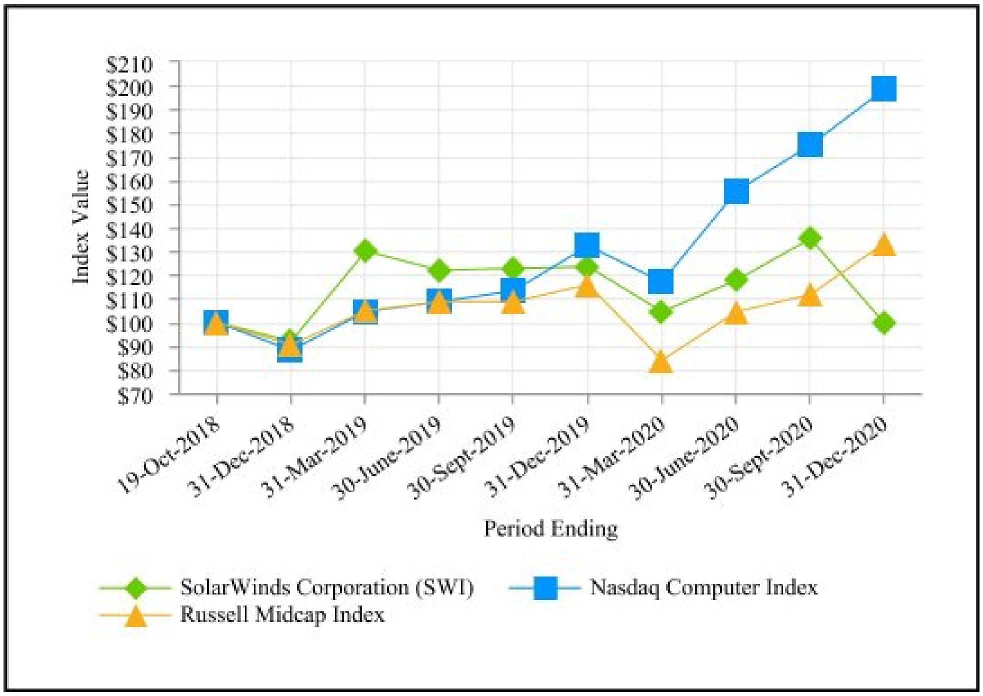
Dividend Policy

We have never declared or paid any cash dividends on our common stock. Neither Delaware law nor our restated charter requires our board of directors to declare dividends on our common stock. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not expect to pay any dividends on our common stock in the foreseeable future other than potentially to the extent that we proceed with the spin-off of our MSP business. Any future determination to declare cash dividends on our common stock will be made at the discretion of our board of directors and will depend on a number of factors, including our financial condition, results of operations, capital requirements, contractual restrictions, general business conditions and other factors that our board of directors may deem relevant. In addition, our credit facilities place restrictions on our ability to pay cash dividends.

Performance Graph

The graph set forth below compares the cumulative total stockholder return on our common stock for the period between October 19, 2018 (the date of our IPO) and December 31, 2020, with the cumulative total return of (i) the Russell Midcap Index and (ii) the Nasdaq Computer Index, or the Industry Index. This graph assumes the investment of $100 at market close on October 19, 2018 in our common stock, the Russell Midcap Index and the Industry Index, and assumes the reinvestment of dividends, if any. The Industry Index consists of NASDAQ-listed computer hardware and software companies that provide products or services. Note that historic stock price performance is not necessarily indicative of future stock price performance.

The information contained in the Stock Performance Graph shall not be deemed to be soliciting material or to be filed with the SEC nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or the Exchange Act, except to the extent we specifically incorporate it by reference into such filing.



Issuer Purchases of Securities

During the fourth quarter of the fiscal year covered by this report, the Company repurchased shares of its common stock as follows.

Period	Number of Shares Purchased (1)	Average Price Paid Per Share	Total Number of Shares Purchased as Part of a Publicly Announced Plan or Program	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plan or Program (in thousands)
October 1-31, 2020	—	$ —	—	$ —
November 1-30, 2020	57,700	0.27	—	—
December 1-31, 2020	7,000	0.27	—	—
Total	64,700		—	

(1) All repurchases relate to employee held restricted stock that is subject to vesting. Unvested shares are subject to a right of repurchase by us in the event the employee stockholder ceases to be employed or engaged (as applicable) by us prior to vesting. All shares in the above table were shares repurchased as a result of us exercising this right and not pursuant to a publicly announced plan or program.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes thereto included elsewhere in this report. In addition to historical consolidated financial information, the following discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially and adversely from those anticipated in the forward-looking statements. Please see the sections entitled "Special Note Regarding Forward-Looking Statements" and "Risk Factors" above for a discussion of the uncertainties, risks and assumptions associated with these statements.

Overview

SolarWinds is a leading provider of information technology, or IT, infrastructure management software. Our products give organizations worldwide, regardless of type, size or IT infrastructure complexity, the power to monitor and manage the performance of their IT environments, whether on-premises in the cloud, or in hybrid models. We combine powerful, scalable, affordable, easy to use products with a high-velocity, low-touch sales model to grow our business while also generating significant cash flow.

We offer a broad portfolio of infrastructure location-agnostic products to monitor and manage network, systems, desktop, application, storage, database, website infrastructures and IT service desks. We intend to continue to innovate and invest in areas of product development that bring new products to market and enhance the functionality, ease of use and integration of our current products. We believe this will strengthen the overall value proposition of our products in any IT environment.

Cyber Incident

On December 14, 2020, we announced that we had been the victim of a cyberattack on our Orion Software Platform and internal systems, or the "Cyber Incident." Together with outside security professionals and other third parties, we are conducting investigations into the Cyber Incident which are on-going.

Our investigations to date revealed that as part of this attack, malicious code, or Sunburst, was injected into builds of our Orion Software Platform that we released between March 2020 and June 2020. If present and activated in a customer's IT environment, Sunburst could potentially allow an attacker to compromise the server on which the Orion Software Platform was installed. We have not located Sunburst in any of our more than seventy non-Orion products and tools.

We released remediations for the versions of our Orion Software Platform known to be affected by Sunburst and have taken and continue to take extensive efforts to support and protect our customers. In addition, we shared our proprietary code with industry researchers to enable them to validate a "kill-switch" that is believed to have rendered Sunburst inert.

The Orion Software Platform is installed "on-premises" within customers' IT environments, so we are unable to determine with specificity the number of customers that installed an affected version or that were compromised as a result of Sunburst. We believe the actual number of customers that could have installed an affected version of the Orion Software Platform to be fewer than 18,000. Based on our discussions with customers and our investigations into the nature and function of Sunburst and the tradecraft of the threat actor, we believe the number of organizations which were exploited by the threat actors through Sunburst to be substantially fewer than the number of customers that may have installed an affected version of the Orion Platform.

It has been widely reported that, due to its nature, sophistication and operational security, this "supply-chain" cyberattack was part of a broader nation-state level cyber operation designed to target public and private sector organizations. As of the date hereof, we have not independently attributed the Cyber Incident to any specific threat actor.

Through our investigations into the Cyber Incident, we hope to understand it better, apply our findings to further adapt and enhance our security measures across our systems and our software development and build environments and share our findings and adaptations with our customers, government officials and the technology industry more broadly to help them better understand and protect against these types of attacks in the future. We refer to these adaptations and enhancements as "Secure by Design."

As described below, we have incurred and expect to incur significant costs related to the Cyber Incident. We are also party to lawsuits and the subject of governmental investigations related to the Cyber Incident. See *Part I, Item 1A. Risk Factors – Risks Related to the Cyber Incident* and *Note 16. Commitments and Contingencies* in the *Notes to Consolidated Financial Statements* included in Item 8 of Part II of this Annual Report on Form 10-K for more information regarding these lawsuits and investigations.

Expenses

Through December 31, 2020, we recorded $3.5 million of pretax expenses related to the Cyber Incident. We have included $0.1 million of these expenses in cost of recurring revenue, $0.3 million in sales and marketing expense and $3.2 million in general and administrative expense in our consolidated statements of operations for the year ended December 31, 2020. Expenses include costs to investigate and remediate the Cyber Incident, and legal and other professional services related thereto, and consulting services being provided to customers at no charge, all of which were expensed as incurred.

Litigation, Claims and Government Investigations

As a result of the Cyber Incident, we are subject to numerous lawsuits and investigations or inquiries as described in *Note 16. Commitments and Contingencies* in the *Notes to Consolidated Financial Statements* included in Item 8 of Part II of this Annual Report on Form 10-K. While we will incur costs and other expenses associated with these proceedings and investigations, it is not possible to estimate the amount of any loss or range of possible loss that might result from adverse judgments, settlements, penalties or other resolutions of such proceedings and investigations based on the early stage thereof, the fact that alleged damages have not been specified, the uncertainty as to the certification of a class or classes and the size of any certified class, as applicable, and the lack of resolution on significant factual and legal issues. We will continue to evaluate information as it becomes known and will record an estimate for losses at the time or times when it is both probable that a loss has been incurred and the amount of the loss is reasonably estimable.

Future Costs

We expect to incur significant legal and other professional services costs and expenses associated with the Cyber Incident in future periods. We expect to recognize these expenses as services are received. Costs related to the Cyber Incident that will be incurred in future periods will include increased expenses associated with ongoing and any new claims, investigations and inquiries, as well as increased expenses and capital investments related to our “Secure By Design” initiatives, increased customer support activities and other related matters. We expect to incur increased expenses for insurance, finance, compliance activities, and to meet increased legal and regulatory requirements. We are also providing, at our cost, free third-party support services to customers related to the Cyber Incident. Although the ultimate magnitude and timing of expenses or other impacts to our business or reputation related to the Cyber Incident are uncertain, they could be significant.

Insurance Coverage

We maintain $15 million of cybersecurity insurance coverage to limit our exposure to losses such as those related to the Cyber Incident. Although our policy contains standard exclusions, we expect that a significant portion of the incremental expenses related to the remediation of and response to the Cyber Incident will be covered by insurance. Insurance reimbursements will also be treated as adjusting items, and the timing of recognizing insurance reimbursements may differ from the timing of recognizing the associated expenses.

Impacts of COVID-19

The impact from the rapidly changing market and economic conditions due to the COVID-19 pandemic on our business is uncertain. We initially responded to the COVID-19 pandemic by executing our business continuity plan and transitioning nearly all of our workforce to a remote working environment to prioritize the safety of our personnel. Substantially all of our workforce is currently working remotely. Due to the nature of our business, at this time, we have seen an impact on our financial results, including a decline in license revenue and increase in loss provision for accounts receivable, but do not expect to experience a significant impact on our financial results due to the COVID-19 pandemic. However, we are unable to predict with a level of precision the longer term impact it may have on our business, results of operations and financial condition due to numerous uncertainties, including the duration of the pandemic, actions that may be taken by governmental authorities in response to the pandemic, its impact to the business of our customers and their end-customers and other factors identified in *“Risk Factors”* included in this Annual Report on Form 10-K. We will continue to evaluate the nature and extent of the impact of the COVID-19 pandemic to our business, consolidated results of operations and financial condition.

Potential Spin-Off of MSP Business

On August 6, 2020, we announced that our board of directors has authorized management to explore a potential spin-off of our MSP business into a newly created and separately traded public company, and on December 9, 2020, we announced that we confidentially submitted with the SEC a Form 10 registration statement with respect to the potential spin-off. If completed, the standalone entity would provide cloud-based software solutions for MSPs, enabling them to support digital transformation and growth within SMEs. SolarWinds would retain our Core IT Management business focused primarily on selling software and cloud-based services to corporate IT organizations. We believe that, if completed, the potential spin-off would allow each company to more effectively pursue its distinct operating priorities, strategies and capital allocation policies, while also allowing stockholders to separately evaluate and value the companies based on their distinct markets, strategies and performance. If we proceed with the spin-off, it would be intended to be structured as a tax-free, pro-rata distribution to all SolarWinds stockholders as of a record date to be determined by the board of directors of SolarWinds. If completed, upon effectiveness of the transaction, SolarWinds stockholders would own shares of both companies. Completion of any spin-off would be subject to various conditions, including final approval of our board of directors, and there can be no assurance that the potential spin-off will be completed in the manner described above, or at all. If we proceed with the spin-off, we currently are targeting to complete the transaction in the second quarter of 2021.

We have incurred and expect to incur significant costs in connection with exploring the potential spin-off transaction of our MSP business into a newly created and separately traded public company. Spin-off exploration costs include legal, accounting and advisory fees, implementation and integration costs, duplicative costs for subscriptions and information technology systems, employee and contractor costs and other incremental separation costs related to the potential spin-off of the MSP business. The potential MSP spin-off transaction results in operating expenses that would not otherwise have been incurred by us in the normal course of our organic business operations. Spin-off exploration costs incurred were $12.2 million during the year ended December 31, 2020. We expect to incur additional spin-off exploration costs in future periods.

Financial Highlights

Our approach, which we call the “SolarWinds Model,” is based on our commitment to building a business that is focused on growth and profitability. Below are our key financial highlights for the year ended December 31, 2020 as compared to the year ended December 31, 2019.

Revenue

Our total revenue was $1.02 billion and $932.5 million for the years ended December 31, 2020 and 2019, respectively. Our non-GAAP total revenue, which excludes the impact of purchase accounting, was $1.02 billion and $938.5 million for the years ended December 31, 2020 and 2019, respectively. Recurring revenue, which consists of subscription and maintenance revenue, represented approximately 86% of our total revenue for the year ended December 31, 2020 compared to 82% for the year ended December 31, 2019. We have increased our recurring revenue as a result of the growth in our subscription sales and the continued growth of our maintenance revenue.

Our Core IT Management products are targeted for ITOps, DevOps, and IT security Professionals and provide hybrid IT performance management with a deep visibility into applications, databases, IT infrastructures, and the full IT stack, while remaining infrastructure-location agnostic. Core IT Management product revenue was $716.8 million and $669.1 million for the years ended December 31, 2020 and 2019, respectively.

Our MSP products enable MSPs to deploy, manage, and secure technologies for their SME end customers, as well as and more efficiently manage their own businesses. MSP product revenue was $302.5 million and $263.4 million for the years ended December 31, 2020 and 2019, respectively.

We use Subscription Annual Recurring Revenue, or Subscription ARR, and Total Annual Recurring Revenue, or Total ARR, to evaluate the results of our recurring revenue model. Subscription ARR represents the annualized recurring value of all active subscription contracts at the end of a reporting period. As of December 31, 2020, Subscription ARR was $435.1 million, up from $371.6 million as of December 31, 2019. Total ARR represents the sum of Subscription ARR and the annualized value of all maintenance contracts related to perpetual licenses active at the end of a reporting period. As of December 31, 2020, Total ARR was $959.7 million, up from $845.1 million as of December 31, 2019, reflecting an increase of 13.6%.

As of December 31, 2020, we had over 320,000 customers. We have a broad and diverse customer base that is not concentrated in any segment or vertical industry. We define customers as individuals or entities that have purchased one or more of our products under a unique customer identification number since our inception for our perpetual license products and individuals or entities that have an active subscription for at least one of our subscription products. Each unique customer identification number constitutes a separate customer regardless of the amount purchased. We may have multiple purchasers of our products within a single organization, each of which may be assigned a unique customer identification number and deemed a separate customer.

The SolarWinds Model allows us to both sell to a broad group of potential customers and close large transactions with significant customers. We increased our customer base by over 20,000 new customers in 2020 organically and through acquisitions. While some customers may spend as little as $100 with us over a twelve-month period, we had 1,057 customers who had spent more than $100,000 with us for the year ended December 31, 2020 as compared to 897 for the year ended December 31, 2019.

We expect that the continued growth in the use of public and private clouds, increased outsourcing of IT management services to MSPs and cross-selling of subscription products into our existing customer base could result in an increase in our subscription revenue. We believe this increase, coupled with continued growth in maintenance revenue, could cause our recurring revenue to increase as a percentage of total revenue over time.

Our license revenue has declined as a percentage of total revenue primarily due to the higher growth of our recurring revenue and represented approximately 14% of our total revenue in 2020. We believe we have the potential to grow license revenue over time as we continue to invest in international sales growth, new product development and enhancements and increased productivity and efficiency of our sales and marketing operations.

Profitability

We have grown while maintaining high levels of operating efficiency. Our net income for the year ended December 31, 2020 was $158.5 million compared to $18.6 million for the year ended December 31, 2019. The increase in net income for the period includes the impact of a discrete tax benefit of $138.2 million recorded during the year ended December 31, 2020 related to an intra-group transfer of certain of our intellectual property rights. For additional discussion about our income taxes, see *Note 15. Income Taxes* in the *Notes to Consolidated Financial Statements* included in Item 8 of Part II of this Annual Report on Form 10-K. Our Adjusted EBITDA was $489.7 million and $453.6 million for the years ended December 31, 2020 and 2019, respectively.

Cash Flow

We have built our business to generate strong cash flow over the long term. For the years ended December 31, 2020 and 2019, cash flows from operations were $389.1 million and $299.9 million, respectively. During those periods, our cash flows from operations were reduced by cash payments for interest on our long-term debt of $67.2 million and $100.5 million, respectively and cash payments for income taxes of $54.6 million and $48.0 million, respectively.

Cyber Incident

The Cyber Incident is expected to negatively impact revenue, profitability and cash flows in 2021 and beyond. Certain of our customers have, and others may, defer renewals or cancel subscriptions which would have a negative impact on our revenue. In addition, we expect to incur significant expenses associated with the Cyber Incident in future periods, primarily related to legal proceedings and regulatory investigations, increased expenses and capital investments associated with our "Secure By Design" initiatives, increased customer support activities and other related matters, and increased costs and expenses for insurance, compliance activities, and to meet increased legal and regulatory requirements. See *Note 16. Commitments and Contingencies* in the *Notes to Consolidated Financial Statements* in Item 8 of Part II of this Annual Report on Form 10-K for information related to the legal proceedings and governmental investigations related to the Cyber Incident. While we will incur costs and other expenses associated with these proceedings and investigations, it is not possible to estimate the amount of any loss or range of possible loss that might result from adverse judgments, settlements, penalties or other resolutions of such proceedings and investigations based on the early stage thereof, the fact that alleged damages have not been specified, the uncertainty as to the certification of a class or classes and the size of any certified class, as applicable, and the lack of resolution on significant factual and legal issues.

Acquisitions

SentryOne

In October 2020, we acquired SQL Sentry Holdings, LLC, or SentryOne, a leading technology provider of database performance monitoring and DataOps solutions for approximately $145.1 million. We funded the transaction with cash on hand. The SentryOne offering complements our existing on-premises and cloud-native database management offerings to serve the full needs of the mid-market and better serve larger organizations. The addition of the SentryOne products to the SolarWinds portfolio also amplifies the depth and breadth of support SolarWinds can offer for Microsoft and Microsoft Azure environments.

See *Note 3. Acquisitions* in the *Notes to Consolidated Financial Statement*s included in Item 8 of Part II of this Annual Report on Form 10-K for additional discussion of our acquisition of SentryOne.

Components of Our Results of Operations

Revenue

Our revenue consists of recurring revenue and perpetual license revenue.

- *Recurring Revenue.* The significant majority of our revenue is recurring and consists of subscription and maintenance revenue.
  - *Subscription Revenue.* We primarily derive subscription revenue from fees received for subscriptions to our SaaS offerings, and to a lesser extent, our time-based license arrangements. Subscription revenue includes sales of our MSP products as well as our cloud infrastructure, application performance management and IT service management, or ITSM products. We generally recognize revenue ratably over the subscription term once the service is made available to the customer or when we have the right to invoice for services performed. We generally invoice subscription agreements monthly based on usage or in advance over the subscription period on either a monthly or annual basis. Our subscription revenue grows as customers add new subscription products, upgrade the capacity level of their existing subscription products or increase the usage of their subscription products. Our revenue from MSP products increases with the addition of end customers served by our MSP customers, the proliferation of devices managed by those MSPs and the expansion of products used by those MSPs to manage end customers' IT infrastructures.
  - *Maintenance Revenue.* We derive maintenance revenue from the sale of maintenance services associated with our perpetual license products. Perpetual license customers pay for maintenance services based on the products they have purchased. We recognize maintenance revenue ratably on a daily basis over the contract period. Our maintenance revenue grows when we renew existing maintenance contracts and add new perpetual license customers, and as existing customers add new products. In addition, we typically implement annual price increases for our maintenance services. Customers typically renew their maintenance contracts at our standard list maintenance renewal pricing for their applicable products. We generally invoice maintenance contracts annually in advance.
- *License Revenue.* We derive license revenue from sales of perpetual licenses of our on-premises network, systems, storage and database management products to new and existing customers. We include one year of maintenance services as part of our customers' initial license purchase. License revenue is recognized at a point in time upon delivery of the electronic license key. We allocate revenue to the license component based upon our estimated standalone selling prices, which is derived by evaluating our historical pricing and discounting practices in observable bundled transactions.

In April 2020, we launched subscription pricing options for certain of our network, systems and database management products that have historically been sold as perpetual licenses. The new on-premises subscription option gives customers additional flexibility when purchasing our products. The on-premises subscription offerings are time-based revenue arrangements recognized at a point in time upon delivery of the software and support is recognized ratably over the contract period. On-premises subscription offerings are recorded in subscription revenue in our consolidated statement of operations. We plan to continue to sell perpetual licenses for these products and not require customers to transition to a subscription pricing model. The subscription pricing option may impact the mix of license and recurring revenue, but this impact is difficult to predict at this time due to uncertainty regarding the level of customer adoption of the new subscription pricing options. We expect a gradual shift in the mix between license and recurring revenue in each quarter as new customers purchase these on-premises subscription offerings.

Cost of Revenue

- *Cost of Recurring Revenue.* Cost of recurring revenue consists of technical support personnel costs, royalty fees, public cloud infrastructure and hosting fees and an allocation of overhead costs for our subscription revenue and maintenance services. Allocated costs consist of certain facilities, depreciation, benefits and IT costs allocated based on headcount.
- *Amortization of Acquired Technologies.* Amortization of acquired technologies primarily consists of amortization related to capitalized costs of technologies acquired in connection with the take private transaction in 2016, or Take Private, and to a lesser extent, acquired technologies from our other acquisitions.

Operating Expenses

Operating expenses consists of sales and marketing, research and development and general and administrative expenses as well as amortization of acquired intangibles. Personnel costs are the most significant component of operating expenses and consist of salaries, benefits, bonuses, sales commissions, stock-based compensation and an allocation of overhead costs based on headcount. The total number of employees as of December 31, 2020 was 3,340, as compared to 3,251 as of December 31, 2019. Our stock-based compensation expense has increased due to equity awards granted to our employees and directors and we intend to continue to grant equity awards which will result in additional stock-based compensation expense in future periods. In addition, our stock-based compensation expense increased during 2020 due to modifications to certain stock awards to amend award terms and eliminate performance vesting conditions applicable to such awards. Our travel costs declined in 2020 due to COVID-19 and we expect this to continue for the duration of the pandemic.

- *Sales and Marketing.* Sales and marketing expenses primarily consist of related personnel costs, including our sales, marketing and maintenance renewal and subscription retention teams. Sales and marketing expenses also includes the cost of digital marketing programs such as paid search, search engine optimization and management, website maintenance and design. We expect to continue to hire personnel globally to drive new sales and maintenance renewals.
- *Research and Development.* Research and development expenses primarily consist of related personnel costs. We expect to continue to grow our research and development organization, particularly internationally.
- *General and Administrative.* General and administrative expenses primarily consist of personnel costs for our executive, finance, legal, human resources and other administrative personnel, general restructuring charges and other acquisition and spin-off exploration costs, professional fees and other general corporate expenses.
- *Amortization of Acquired Intangibles.* We amortize to operating expenses the capitalized costs of intangible assets acquired in connection with the Take Private and our other acquisitions.

Other Income (Expense)

Other income (expense) primarily consists of interest expense and gains (losses) resulting from changes in exchange rates on foreign currency denominated accounts. We expect interest expense to decrease as we repay indebtedness.

Foreign Currency

As a global company, we face exposure to adverse movements in foreign currency exchange rates. Fluctuations in foreign currencies impact the amount of total assets, liabilities, revenue, operating expenses and cash flows that we report for our foreign subsidiaries upon the translation of these amounts into U.S. dollars. See “Item 7A: *Quantitative and Qualitative Disclosures About Market Risk*” for additional information on how foreign currency impacts our financial results.

Income Tax Expense

Income tax expense consists of domestic and foreign corporate income taxes related to the sale of products. The tax rate on income earned by our North American entities is higher than the tax rate on income earned by our international entities. We expect the income earned by our international entities to grow over time as a percentage of total income, which may result in a decline in our effective income tax rate. However, our effective tax rate will be affected by many other factors including changes in tax laws, regulations or rates, new interpretations of existing laws or regulations, shifts in the allocation of income earned throughout the world and changes in overall levels of income before tax.

During the fourth quarter ended December 31, 2020, we completed an intra-group transfer of certain of our intellectual property to our Irish subsidiary, where our international business is headquartered, or the IP Transfer. The transaction will change our mix of international income from a lower non-U.S. tax jurisdiction to Ireland, which is subject to a statutory tax rate of 12.5%. We recognized a discrete tax benefit of $138.2 million as a result of the IP Transfer. For additional discussion about our income taxes, see *Note 15. Income Taxes* in the *Notes to Consolidated Financial Statements* included in Item 8 of Part II of this Annual Report on Form 10-K.

Comparison of the Years Ended December 31, 2020 and 2019

Revenue

	Year Ended December 31,				
	2020		2019		
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Change
	(in thousands, except percentages)				
Subscription	$ 396,496	38.9 %	$ 320,747	34.4 %	$ 75,749
Maintenance	478,284	46.9	446,450	47.9	31,834
Total recurring revenue	874,780	85.8	767,197	82.3	107,583
License	144,461	14.2	165,328	17.7	(20,867)
Total revenue	$ 1,019,241	100.0 %	$ 932,525	100.0 %	$ 86,716

Total revenue increased $86.7 million, or 9.3%, for the year ended December 31, 2020 compared to the year ended December 31, 2019. Revenue from North America was approximately 65% and 66% of total revenue for the years ended December 31, 2020 and 2019, respectively. Other than the United States, no single country accounted for 10% or more of our total revenue during these periods. We expect our international total revenue to increase slightly as a percentage of total revenue as we expand our international sales and marketing efforts across our product lines. Core IT Management product revenue was $716.8 million for the year ended December 31, 2020 compared to $669.1 million for the year ended December 31, 2019, representing an increase of 7.1%. MSP product revenue was $302.5 million for the year ended December 31, 2020 compared to $263.4 million for the year ended December 31, 2019, representing an increase of 14.8%.

Recurring Revenue

Subscription Revenue. Subscription revenue increased $75.7 million, or 23.6%, for the year ended December 31, 2020 compared to the year ended December 31, 2019, primarily due to sales of additional MSP products, with additional contribution from our acquired SolarWinds Service Desk and Database Performance Monitor products. Our subscription revenue increased as a percentage of our total revenue for the year ended December 31, 2020 compared to the year ended December 31, 2019.

Our net retention rate for our subscription products was approximately 105% for each of the trailing twelve-month periods ended December 31, 2020 and 2019 and was driven primarily by strong customer retention and expansion in our MSP products. We define our net retention rate for subscription products as the implied monthly subscription revenue at the end of a period for the base set of customers from which we generated subscription revenue in the year prior to the calculation, divided by the implied monthly subscription revenue one year prior to the date of calculation for that same customer base.

Maintenance Revenue. Maintenance revenue increased $31.8 million, or 7.1%, for the year ended December 31, 2020 compared to the year ended December 31, 2019 primarily due to a growing maintenance renewal customer base from sales of our perpetual license products, strong maintenance renewal rates and annual maintenance price increases.

Our maintenance renewal rate for our perpetual license products was approximately 91% and 94%, respectively, for the trailing twelve-month periods ended December 31, 2020 and 2019. The decrease in the maintenance renewal rate for the trailing twelve-month period ended December 31, 2020 was primarily due a planned downgrade on one large U.S. Federal maintenance renewal in the first quarter of 2020 and, to a lesser extent, a decline in renewals due to the Cyber Incident in December 2020. We expect our maintenance renewals rates may decline or fluctuate in future periods as a result of the Cyber Incident. We define our maintenance renewal rate as the sales of maintenance services for all existing maintenance contracts expiring in a period, divided by the sum previous sales of maintenance services corresponding to those services expiring in the current period. Sales of maintenance services includes sales of maintenance renewals for a previously purchased product and the amount allocated to maintenance revenue from a license purchase.

License Revenue

License revenue decreased $20.9 million, or 12.6%, primarily due to decreased sales of our licensed products resulting from the difficult economic environment during the year as a result of the global recession caused by COVID-19 and the Cyber Incident in December 2020 and, to a lesser extent, an increase in the subscription sales of our network, systems and database management products that have historically been sold only as perpetual licenses. We expect our license sales may decline or fluctuate in future periods as a result of the Cyber Incident.

Cost of Revenue

	Year Ended December 31,				
	2020		2019		
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Change
	(in thousands, except percentages)				
Cost of recurring revenue	$ 93,255	9.1 %	$ 79,571	8.5 %	$ 13,684
Amortization of acquired technologies	181,361	17.8	175,883	18.9	5,478
Total cost of revenue	$ 274,616	26.9 %	$ 255,454	27.4 %	$ 19,162

Total cost of revenue increased in the year ended December 31, 2020 compared to the year ended December 31, 2019 primarily due to increases in public cloud infrastructure and hosting fees related to our subscription products of $6.9 million, personnel costs to support new customers and additional product offerings of $4.1 million, which includes a $0.9 million increase in stock-based compensation expense and depreciation and other amortization of $3.3 million. The increase in amortization of acquired technologies is primarily related to intangibles acquired through our acquisitions in 2019.

Operating Expenses

	Year Ended December 31,				
	2020		2019		
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Change
	(in thousands, except percentages)				
Sales and marketing	$ 298,452	29.3 %	$ 264,199	28.3 %	$ 34,253
Research and development	126,216	12.4	110,362	11.8	15,854
General and administrative	137,541	13.5	97,525	10.5	40,016
Amortization of acquired intangibles	74,973	7.4	69,812	7.5	5,161
Total operating expenses	$ 637,182	62.5 %	$ 541,898	58.1 %	$ 95,284

Sales and Marketing. Sales and marketing expenses increased $34.3 million, or 13.0%, primarily due to increases in personnel costs of $30.6 million, which includes an increase of $11.2 million in stock-based compensation expense and increases in marketing program costs of $5.5 million. These increases were partially offset by reductions in travel and acquisition related costs of $4.6 million. We increased our sales and marketing employee headcount and marketing program costs to support the growth in the business and through the acquisitions.

Research and Development. Research and development expenses increased $15.9 million, or 14.4%, primarily due to an increase in personnel costs of $17.6 million, which includes an increase in stock-based compensation expense of $6.4 million, partially offset by a reduction in travel costs of $1.4 million. We increased our worldwide research and development employee headcount to expedite delivery of product enhancements and new product offerings to our customers and through acquisitions.

General and Administrative. General and administrative expenses increased $40.0 million, or 41.0%, primarily due to a $28.8 million increase in personnel costs, which includes a $22.4 million increase in stock-based compensation expense, a $11.3 million increase in costs related to the exploration of a potential spin-off of our MSP business, a $3.2 million increase in costs related to the Cyber Incident and a $1.1 million increase in our provision for losses on accounts receivables. These increases were partially offset by decreases in restructuring costs of $2.7 million and offering and travel costs of $1.9 million. The increase in stock-based compensation expense is primarily related to modifications of stock awards during the year. See *Note 11. Stockholders' Equity (Deficit) and Stock-Based Compensation* in the *Notes to Consolidated Financial Statements* in Item 8 of Part II of this Annual Report on Form 10-K for further discussion of the stock award modifications. The increase in our provision for losses on accounts receivables is primarily related to a settlement with a distributor, from customers acquired in recent acquisitions and customers potentially impacted by the current economic uncertainty resulting from the COVID-19 pandemic.

Amortization of Acquired Intangibles. Amortization of acquired intangibles increased $5.2 million, or 7.4%, for the year ended December 31, 2020 compared to the year ended December 31, 2019 primarily due to amortization related to our acquisitions completed in 2019 and 2020. See *Note 3. Acquisitions* in the *Notes to Consolidated Financial Statements* in Item 8 of Part II of this Annual Report on Form 10-K for further discussion of our acquisitions including the intangible assets acquired.

Interest Expense, Net

	Year Ended December 31,				
	2020		2019		
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Change
	(in thousands, except percentages)				
Interest expense, net	$ (75,884)	(7.4) %	$ (108,071)	(11.6) %	$ 32,187

Interest expense, net decreased by $32.2 million, or 29.8%, in the year ended December 31, 2020 compared to the year ended December 31, 2019. The decrease in interest expense is primarily due to decreases in interest rates on our debt. The weighted-average effective interest rate on our debt during the year ended December 31, 2020 was 3.4% compared to 5.0% for the year ended December 31, 2019. See *Note 9. Debt* in the *Notes to Consolidated Financial Statements* included in Item 8 of Part II of this Annual Report on Form 10-K for additional information regarding our debt.

Other Income (Expense), Net

	Year Ended December 31,				
	2020		2019		
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Change
	(in thousands, except percentages)				
Total other income (expense), net	$ (1,240)	(0.1) %	$ 402	— %	$ (1,642)

Other income (expense), net decreased by $1.6 million in the year ended December 31, 2020 compared to the year ended December 31, 2019 primarily due to the impact of changes in foreign currency exchange rates related to various accounts for the period.

Income Tax Expense (Benefit)

	Year Ended December 31,				
	2020		2019		
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Change
	(in thousands, except percentages)				
Income before income taxes	$ 30,319	3.0 %	$ 27,504	2.9 %	$ 2,815
Income tax expense (benefit)	(128,156)	(12.6)	8,862	1.0	(137,018)
Effective tax rate	(422.7)%		32.2 %		(454.9)%

Our income tax benefit for the year ended December 31, 2020 was $128.2 million as compared to income tax expense of $8.9 million for the year ended December 31, 2019. The change in the effective tax rate for the period was primarily due to a discrete tax benefit of $138.2 million that was recognized as a deferred tax asset related to the IP Transfer. For additional discussion about our income taxes, see *Note 15. Income Taxes* in the *Notes to Consolidated Financial Statements* included in Item 8 of Part II of this Annual Report on Form 10-K.

Comparison of the Years Ended December 31, 2019 and 2018

For a comparison of our results of operations for the years ended December 31, 2019 and 2018, see Part II, Item 7. "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" of our annual report on Form 10-K for the year ended December 31, 2019, filed with the SEC on February 24, 2020.

Non-GAAP Financial Measures

In addition to financial measures prepared in accordance with GAAP, we use certain non-GAAP financial measures to clarify and enhance our understanding, and aid in the period-to-period comparison, of our performance. We believe that these non-GAAP financial measures provide supplemental information that is meaningful when assessing our operating performance because they exclude the impact of certain amounts that our management and board of directors do not consider part of core operating results when assessing our operational performance, allocating resources, preparing annual budgets and determining compensation. Accordingly, these non-GAAP financial measures may provide insight to investors into the motivation and decision-making of management in operating the business. Investors are encouraged to review the reconciliation of each of these non-GAAP financial measures to its most comparable GAAP financial measure included below.

While we believe that these non-GAAP financial measures provide useful supplemental information, non-GAAP financial measures have limitations and should not be considered in isolation from, or as a substitute for, their most comparable GAAP measures. These non-GAAP financial measures are not prepared in accordance with GAAP, do not reflect a comprehensive system of accounting and may not be comparable to similarly titled measures of other companies due to potential differences in their financing and accounting methods, the book value of their assets, their capital structures, the method by which their assets were acquired and the manner in which they define non-GAAP measures. Items such as the amortization of intangible assets, stock-based compensation expense and related employer-paid payroll taxes, acquisition related adjustments, costs related to the exploration of a potential spin-off of our MSP business and the Cyber Incident and restructuring charges, as well as the related tax impacts of these items can have a material impact on our GAAP financial results.

Non-GAAP Revenue

We define non-GAAP subscription revenue, non-GAAP maintenance revenue, non-GAAP license revenue and non-GAAP total revenue, as subscription revenue, maintenance revenue, license revenue and total revenue, respectively, excluding the impact of purchase accounting from our Take Private transaction in early 2016 and acquisitions. We monitor these measures to assess our performance because we believe our revenue growth rates would be overstated without these adjustments. We believe presenting non-GAAP subscription revenue, non-GAAP maintenance revenue, non-GAAP license revenue and non-GAAP total revenue aids in the comparability between periods and in assessing our overall operating performance.

	Year Ended December 31,		
	2020	2019	2018
		(in thousands)	
Revenue:			
GAAP subscription revenue	$ 396,496	$ 320,747	$ 265,591
Impact of purchase accounting	2,540	5,930	1,166
Non-GAAP subscription revenue	399,036	326,677	266,757
GAAP maintenance revenue	478,284	446,450	402,938
Impact of purchase accounting	—	—	2,550
Non-GAAP maintenance revenue	478,284	446,450	405,488
GAAP total recurring revenue	874,780	767,197	668,529
Impact of purchase accounting	2,540	5,930	3,716
Non-GAAP total recurring revenue	877,320	773,127	672,245
GAAP license revenue	144,461	165,328	164,560
Impact of purchase accounting	—	—	—
Non-GAAP license revenue	144,461	165,328	164,560
Total GAAP revenue	$ 1,019,241	$ 932,525	$ 833,089
Impact of purchase accounting	$ 2,540	$ 5,930	$ 3,716
Total non-GAAP revenue	$ 1,021,781	$ 938,455	$ 836,805

Non-GAAP Operating Income and Non-GAAP Operating Margin

We provide non-GAAP operating income and related non-GAAP margin using non-GAAP revenue as discussed above and excluding such items as the write-down of deferred revenue related to purchase accounting, amortization of acquired intangible assets, stock-based compensation expense and related employer-paid payroll taxes, acquisition and other costs, spin-off exploration costs, restructuring costs and Cyber Incident costs. Management believes these measures are useful for the following reasons:

- *Amortization of Acquired Intangible Assets.* We provide non-GAAP information that excludes expenses related to purchased intangible assets associated with our acquisitions. We believe that eliminating this expense from our non-GAAP measures is useful to investors, because the amortization of acquired intangible assets can be inconsistent in amount and frequency and is significantly impacted by the timing and magnitude of our acquisition transactions, which also vary in frequency from period to period. Accordingly, we analyze the performance of our operations in each period without regard to such expenses.
- *Stock-Based Compensation Expense and Related Employer-Paid Payroll Taxes.* We provide non-GAAP information that excludes expenses related to stock-based compensation and related employer-paid payroll taxes. We believe that the exclusion of stock-based compensation expense provides for a better comparison of our operating results to prior periods and to our peer companies as the calculations of stock-based compensation vary from period to period and company to company due to different valuation methodologies, subjective assumptions and the variety of award types. Employer-paid payroll taxes on stock-based compensation is dependent on our stock price and the timing of the taxable events related to the equity awards, over which our management has little control, and does not correlate to the core operation of our business. Because of these unique characteristics of stock-based compensation and related employer-paid payroll taxes, management excludes these expenses when analyzing the organization’s business performance.
- *Acquisition and Other Costs.* We exclude certain expense items resulting from the Take Private and other acquisitions, such as legal, accounting and advisory fees, changes in fair value of contingent consideration, costs related to integrating the acquired businesses, deferred compensation, severance and retention expense. In addition, we exclude

certain other costs including expense related to our offerings. We consider these adjustments, to some extent, to be unpredictable and dependent on a significant number of factors that are outside of our control. Furthermore, acquisitions result in operating expenses that would not otherwise have been incurred by us in the normal course of our organic business operations. We believe that providing these non-GAAP measures that exclude acquisition and other costs, allows users of our financial statements to better review and understand the historical and current results of our continuing operations, and also facilitates comparisons to our historical results and results of less acquisitive peer companies, both with and without such adjustments.

- *Spin-off Exploration Costs.* We exclude certain expense items resulting from the exploration of a potential spin-off transaction of our MSP business into a newly created and separately traded public company. These costs include legal, accounting and advisory fees, implementation and integration costs, duplicative costs for subscriptions and information technology systems, employee and contractor costs and other incremental separation costs related to the potential spin-off of the MSP business. The potential MSP spin-off transaction results in operating expenses that would not otherwise have been incurred by us in the normal course of our organic business operations. We believe that providing non-GAAP measures that exclude these costs facilitates a more meaningful evaluation of our operating performance and comparisons to our past operating performance.
- *Restructuring Costs.* We provide non-GAAP information that excludes restructuring costs such as severance and the estimated costs of exiting and terminating facility lease commitments, as they relate to our corporate restructuring and exit activities and costs related to the separation of employment with executives of the Company. These costs are inconsistent in amount and are significantly impacted by the timing and nature of these events. Therefore, although we may incur these types of expenses in the future, we believe that eliminating these costs for purposes of calculating the non-GAAP financial measures facilitates a more meaningful evaluation of our operating performance and comparisons to our past operating performance.
- *Cyber Incident Costs.* We exclude certain expenses resulting from the Cyber Incident. Expenses include costs to investigate and remediate the Cyber Incident, and legal and other professional services related thereto, and consulting services being provided to customers at no charge. Cyber Incident costs are provided net of insurance reimbursements, although the timing of recognizing insurance reimbursements may differ from the timing of recognizing the associated expenses. We expect to incur significant legal and other professional services expenses associated with the Cyber Incident in future periods. The Cyber Incident results in operating expenses that would not have otherwise been incurred by us in the normal course of our organic business operations. We believe that providing non-GAAP measures that exclude these costs facilitates a more meaningful evaluation of our operating performance and comparisons to our past operating performance. We continue to invest significantly in cybersecurity and expect to make additional investments. These estimated investments are in addition to the Cyber Incident costs and not included in the net Cyber Incident costs reported.

	Year Ended December 31,		
	2020	2019	2018
	(in thousands, except margin data)		
GAAP operating income	$ 107,443	$ 135,173	$ 115,185
Impact of purchase accounting	2,540	5,930	3,716
Stock-based compensation expense and related employer-paid payroll taxes	76,174	35,270	5,833
Amortization of acquired technologies	181,361	175,883	175,991
Amortization of acquired intangibles	74,973	69,812	66,788
Acquisition and other costs	5,854	8,544	20,401
Spin-off exploration costs	12,227	—	—
Restructuring costs	2,368	5,598	2,999
Cyber Incident costs	3,485	—	—
Non-GAAP operating income	$ 466,425	$ 436,210	$ 390,913
GAAP operating margin	10.5 %	14.5 %	13.8 %
Non-GAAP operating margin	45.6 %	46.5 %	46.7 %

Adjusted EBITDA and Adjusted EBITDA Margin

We regularly monitor adjusted EBITDA and adjusted EBITDA margin, as it is a measure we use to assess our operating performance. We define adjusted EBITDA as net income or loss, excluding the impact of purchase accounting on total revenue, amortization of acquired intangible assets and developed technology, depreciation expense, stock-based compensation expense and related employer-paid payroll taxes, restructuring costs, acquisition and other costs, spin-off exploration costs, Cyber Incident costs, interest expense, net, debt related costs including fees related to our credit agreements, debt extinguishment and refinancing costs, unrealized foreign currency (gains) losses, and income tax expense (benefit). We define adjusted EBITDA margin as adjusted EBITDA divided by non-GAAP revenue. Adjusted EBITDA has limitations as an analytical tool, and you should not consider it in isolation or as a substitute for analysis of our results as reported under GAAP. Some of these limitations are: although depreciation and amortization are non-cash charges, the assets being depreciated and amortized may have to be replaced in the future, and adjusted EBITDA does not reflect cash capital expenditure requirements for such replacements or for new capital expenditure requirements; adjusted EBITDA excludes the impact of the write-down of deferred revenue due to purchase accounting in connection with our acquisition, and therefore includes revenue that will never be recognized under GAAP; adjusted EBITDA does not reflect changes in, or cash requirements for, our working capital needs; adjusted EBITDA does not reflect the significant interest expense, or the cash requirements necessary to service interest or principal payments, on our debt; adjusted EBITDA does not reflect tax payments that may represent a reduction in cash available to us; and other companies, including companies in our industry, may calculate adjusted EBITDA differently, which reduces its usefulness as a comparative measure.

Because of these limitations, you should consider adjusted EBITDA alongside other financial performance measures, including net income (loss) and our other GAAP results. In evaluating adjusted EBITDA, you should be aware that in the future we may incur expenses that are the same as or similar to some of the adjustments in this presentation. Our presentation of adjusted EBITDA should not be construed as an inference that our future results will be unaffected by the types of items excluded from the calculation of adjusted EBITDA. Adjusted EBITDA is not a presentation made in accordance with GAAP and the use of the term varies from others in our industry.

	Year Ended December 31,		
	2020	**2019**	**2018**
	(in thousands, except margin data)		
Net income (loss)	$ 158,475	$ 18,642	$ (102,066)
Amortization and depreciation	277,856	263,244	258,362
Income tax expense (benefit)	(128,156)	8,862	(19,644)
Interest expense, net	75,884	108,071	142,008
Impact of purchase accounting on total revenue	2,540	5,930	3,716
Unrealized foreign currency (gains) losses(1)	2,645	(913)	14,367
Acquisition and other costs	5,854	8,544	20,401
Spin-off exploration costs	12,227	—	—
Debt related costs(2)	364	385	81,535
Stock-based compensation expense and related employer-paid payroll taxes	76,174	35,270	5,833
Restructuring costs	2,368	5,598	2,999
Cyber Incident costs	3,485	—	—
Adjusted EBITDA	$ 489,716	$ 453,633	$ 407,511
Adjusted EBITDA margin	47.9 %	48.3 %	48.7 %

(1) Unrealized foreign currency (gains) losses primarily relate to the remeasurement of our intercompany loans and unrealized foreign currency (gains) losses on selected assets and liabilities. We established a foreign currency denominated intercompany loan as part of the Take Private to provide a conduit to utilize foreign earnings effectively. The gains (losses) associated with the changes in exchange rates on amounts borrowed were unrealized non-cash events. As of July 1, 2018, this foreign currency denominated intercompany loan was designated as long-term due to a change in our investment strategy and the enactment of the U.S. Tax Cuts and Jobs Act of 2017, or Tax Act. Therefore, beginning on July 1, 2018, the foreign currency transaction gains and losses resulting from remeasurement are recognized as a component of accumulated other comprehensive income (loss). As of December 31, 2019, we determined that the intercompany loan will not be repaid and it was reclassified as a capital contribution.

(2) Debt related costs include fees related to our credit agreements, debt refinancing costs and the related write-off of debt issuance costs. See *Note 9. Debt* in the *Notes to Consolidated Financial Statements* in Item 8 of Part II of this Annual Report on Form 10-K for additional information regarding our debt.

Liquidity and Capital Resources

Cash and cash equivalents were $370.5 million as of December 31, 2020. Our international subsidiaries held approximately $163.4 million of cash and cash equivalents, of which 39.6% were held in Euros. We intend either to invest our foreign earnings permanently in foreign operations or to remit these earnings to our U.S. entities in a tax-free manner with the exception for immaterial state income taxes. The Tax Act imposed a mandatory transition tax on accumulated foreign earnings and eliminates U.S. federal income taxes on foreign subsidiary distribution.

Our primary source of cash for funding operations and growth has been through cash provided by operating activities. Given the uncertainty in the rapidly changing market and economic conditions related to the COVID-19 pandemic, we continue to evaluate the nature and extent of the impact to our business and financial position. In addition, currently it is not possible to estimate the amount of loss or range of possible loss that might result from adverse judgments, settlements, penalties, or other resolution of the proceedings and investigations resulting from the Cyber Incident. Such potential payments, if great enough, could have an adverse effect on our liquidity. However, despite these uncertainties, we believe that our existing cash and cash equivalents, our cash flows from operating activities and our borrowing capacity under our credit facilities will be sufficient to fund our operations, fund required debt repayments and meet our commitments for capital expenditures for at least the next 12 months.

Although we are not currently a party to any material definitive agreement regarding potential investments in, or acquisitions of, complementary businesses, applications or technologies, we may enter into these types of arrangements, which could reduce our cash and cash equivalents, require us to seek additional equity or debt financing or repatriate cash generated by our international operations that could cause us to incur withholding taxes on any distributions. Additional funds from financing arrangements may not be available on terms favorable to us or at all.

Indebtedness

As of December 31, 2020, our total indebtedness was $1.9 billion, with up to $125.0 million of available borrowings under our revolving credit facility. See *Note 9. Debt* in the *Notes to Consolidated Financial Statements* included in Item 8 of Part II of this Annual Report on Form 10-K for additional information regarding our debt.

First Lien Credit Agreement

The First Lien Credit Agreement, as amended, provides for a senior secured revolving credit facility in an aggregate principal amount of $125.0 million, or the Revolving Credit Facility, consisting of a $25.0 million U.S. dollar revolving credit facility, or the U.S. Dollar Revolver, and a $100.0 million multicurrency revolving credit facility, or the Multicurrency Revolver. The Revolving Credit Facility includes a $35.0 million sublimit for the issuance of letters of credit. The First Lien Credit Agreement also contains a term loan facility (which we refer to as the First Lien Term Loan, and together with the Revolving Credit Facility, as the First Lien Credit Facilities) in an original aggregate principal amount of $1,990.0 million.

The First Lien Credit Agreement provides us the right to request additional commitments for new incremental term loans and revolving loans, in an aggregate principal amount not to exceed (a) the greater of (i) $400.0 million and (ii) 100% of our consolidated EBITDA, as defined in the First Lien Credit Agreement (calculated on a pro forma basis), for the most recent four fiscal quarter period, or the First Lien Fixed Basket, *plus* (b) the amount of certain voluntary prepayments of the First Lien Credit Facilities, *plus* (c) an unlimited amount subject to pro forma compliance with a first lien net leverage ratio not to exceed 4.75 to 1.00.

Under the U.S. Dollar Revolver, $7.5 million of commitments will mature on February 5, 2021, and $17.5 million along with all commitments under the Multicurrency Revolver will mature on February 5, 2022. The First Lien Term Loan will mature on February 5, 2024.

The First Lien Term Loan requires equal quarterly repayments equal to 0.25% of the original principal amount.

Summary of Cash Flows

Summarized cash flow information is as follows:

	Year Ended December 31,	
	2020	2019
	(in thousands)	
Net cash provided by operating activities	$ 389,094	$ 299,907
Net cash used in investing activities	(180,127)	(482,453)
Net cash used in financing activities	(25,556)	(25,624)
Effect of exchange rate changes on cash and cash equivalents	13,715	(1,078)
Net increase (decrease) in cash and cash equivalents	197,126	(209,248)

Operating Activities

Our primary source of cash from operating activities is cash collections from our customers. We expect cash inflows from operating activities to be affected by the timing of our sales. Our primary uses of cash from operating activities are for personnel-related expenditures, and other general operating expenses, as well as payments related to taxes, interest and facilities.

For 2020 compared to 2019, the increase in cash provided by operating activities was primarily due to an increase in net income adjusted for the net effect of non-cash items including deferred taxes, depreciation and amortization and stock-based compensation expense. The change in deferred taxes is primarily related the deferred tax asset recognized as a result of the IP Transfer during the year ended December 31, 2020. The net cash inflow resulting from the changes in our operating assets and liabilities was $41.4 million for 2020 as compared to $12.9 million in 2019 and was primarily due to the timing of sales and cash payments and receipts. Cash flow from operations for the year ended December 31, 2020 was reduced by $54.6 million of cash paid for taxes which includes an $8.1 million cash payment related to the transition tax as a result of the Tax Act.

Investing Activities

Investing cash flows consist primarily of cash used for acquisitions, capital expenditures and intangible assets. Our capital expenditures primarily relate to purchases of leasehold improvements, computers, servers and equipment to support our domestic and international office locations. Purchases of intangible assets consist primarily of capitalized research and development costs.

Net cash used in investing activities decreased in 2020 compared to 2019 due to a decrease in cash used for acquisitions. See *Note 3. Acquisitions* in the *Notes to Consolidated Financial Statements* included in Item 8 of Part II of this Annual Report on Form 10-K for additional information regarding our acquisitions. Purchases of property and equipment increased in 2020 as compared to 2019 primarily due to purchases of leasehold improvements to expand certain office locations and servers and equipment.

Financing Activities

Financing cash flows consist primarily of issuance and repayments associated with our long-term debt, the proceeds from the issuance of shares of common stock through equity incentive plans and the repurchase of unvested incentive restricted stock and common stock to satisfy withholding tax requirements related to the settlement of restricted stock units.

Net cash used in financing activities decreased slightly in 2020 compared to 2019 primarily due to an increase in proceeds from issuance of common stock under our employee stock purchase plan and option exercises, partially offset by an increase in repurchases of common stock. In 2020 we withheld and retired shares of common stock to satisfy $12.1 million of statutory withholding tax requirements that we pay in cash to the appropriate taxing authorities on behalf of our employees related to the settlement of restricted stock units during the period. These shares are treated as common stock repurchases in our consolidated financial statements. Net cash used in financing activities for 2019 includes the proceeds and repayment of $35.0 million in borrowings under our Revolving Credit Facility. For each period, we made quarterly principal payments of $19.9 million due under our First Lien Credit Agreement.

Contractual Obligations and Commitments

The following table summarizes our outstanding contractual obligations as of December 31, 2020 that require us to make future cash payments:

	Payments Due by Period				
	Total	**Less than 1 year**	**1-3 years**	**3-5 years**	**More than 5 years**
			(in thousands)		
Long-term debt obligations[1]	$ 1,930,300	$ 19,900	$ 39,800	$ 1,870,600	$ —
Cash interest expense[1]	172,781	56,472	111,191	5,118	—
Operating leases[2]	157,368	23,497	46,014	40,556	47,301
Purchase obligations[3]	143,636	108,248	35,388	—	—
Transition tax payable[4]	87,034	8,914	23,574	47,208	7,338
Total[5]	$ 2,491,119	$ 217,031	$ 255,967	$ 1,963,482	$ 54,639

(1) Represents principal maturities of our Senior Secured First Lien Credit Facility in effect at December 31, 2020. The estimated cash interest expense is based upon an interest rate of 2.90%.

(2) Represents maturities of operating lease liabilities, see *Note 7. Leases* in the *Notes to Consolidated Financial Statements* included in Item 8 of Part II of this Annual Report on Form 10-K for additional details. As of December 31, 2020, we had a lease agreement in which the lease did not commence prior to year-end and therefore the lease liabilities had not been recorded in our consolidated balance sheet. The future minimum lease payments under this lease are approximately $29.0 million over a lease term of eleven years.

(3) Purchase obligations primarily represent outstanding purchase orders for purchases of software license and support fees, public cloud infrastructure and hosting fees, corporate health insurance costs, marketing activities, accounting, legal and contractor fees and computer hardware and software costs.

(4) Represents the provisional one–time transition tax as a result of the Tax Act which we have elected to pay over eight years. See *Note 15. Income Taxes* in the *Notes to Consolidated Financial Statements* included in Item 8 of Part II of this Annual Report on Form 10-K for additional details.

(5) Other long-term obligations on our balance sheet at December 31, 2020 included non-current income tax liabilities of $32.7 million, which are primarily related to unrecognized tax benefits. We have not included this amount in the table above because we cannot reasonably estimate the period during which this obligation may be incurred, if at all.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in conformity with GAAP and require our management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and expenses and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. The impact from the rapidly changing market and economic conditions due to the COVID-19 pandemic on our business, results of operations and financial condition is uncertain. We have made estimates of the impact of COVID-19 within our financial statements as of and for the year ended December 31, 2020 which did not result in material adjustments. The estimates assessed included, but were not limited to, allowances for credit losses, the carrying values of goodwill and intangible assets and other long-lived assets, valuation allowances for tax assets and revenue recognition. Actual results may differ from these estimates, and such estimates may change if the underlying conditions or assumptions change. To the extent that there are differences between our estimates and actual results, our future financial statement presentation, financial condition, results of operations and cash flows will be affected, perhaps materially.

In many cases, the accounting treatment of a particular transaction is specifically dictated by GAAP and does not require management's judgment in its application, while in other cases, management's judgment is required in selecting among available alternative accounting standards that allow different accounting treatment for similar transactions. We believe that these accounting policies requiring significant management judgment and estimates are critical to understanding our historical and future performance, as these policies relate to the more significant areas of our financial results. These critical accounting policies are:

- the valuation of goodwill, intangibles, long-lived assets and contingent consideration;
- revenue recognition;
- stock-based compensation;
- income taxes; and
- loss contingencies.

Acquisitions

The purchase price of our acquired businesses is allocated to the assets acquired and the liabilities assumed based on their estimated fair values, with the excess recorded as goodwill. The fair value of identifiable intangible assets is based on significant judgments made by management. We typically engage third-party valuation appraisal firms to assist us in determining the fair values and useful lives of the assets acquired. The valuation estimates and assumptions are based on historical experience and information obtained from management, and also include, but are not limited to, future expected cash flows earned from the intangible asset and discount rates applied in determining the present value of those cash flows. Unanticipated events and circumstances may occur that could affect the accuracy or validity of such assumptions, estimates or actual results.

Goodwill

Our goodwill was derived from the Take Private transaction and acquisitions where the purchase price exceeded the fair value of the net identifiable assets acquired. Goodwill is assigned to our reporting units and tested for impairment at least annually during the fourth quarter or sooner when circumstances indicate an impairment may exist. An impairment of goodwill is recognized when the carrying amount of a reporting unit exceeds its fair value. For purposes of the annual impairment test, we assess qualitative factors to determine if it is more likely than not that goodwill might be impaired and whether it is necessary to perform the quantitative impairment test which considers the fair value of the reporting unit compared with the carrying value on the date of the test. Qualitative factors include industry and market considerations, overall financial performance, changes in management or key personnel, changes in strategy, changes in customers and other relevant events and circumstances affecting the reporting unit.

In the fourth quarter, we performed a qualitative assessment for our reporting units. As of October 1, 2020 our Core IT, Application Management, ITSM and MSP reporting units had allocated goodwill of $2.9 billion, $65.1 million, $286.2 million and $853.7 million, respectively. For the annual impairment analysis, we assessed several events and circumstances that could affect the significant inputs used to determine the fair value of our reporting units, including the significance of the amount of excess fair value over carrying value, consistency of operating margins and cash flows, budgeted-to-actual performance from prior year, overall change in economic climate, changes in the industry and competitive environment, key management turnover, and earnings quality and sustainability. As of October 1, 2020, there were no unanticipated changes or negative indicators in the above qualitative factors that would impact the fair value of our reporting units as of the annual impairment analysis date. As such, we determined there were no indicators of impairment and that it was more likely than not that the fair value of our reporting units was greater than their carrying values and therefore performing the next step of impairment test was unnecessary.

In December 2020, subsequent to our annual goodwill impairment analysis, we became aware that we were the target of a cybersecurity attack that involved the insertion of a vulnerability within our Orion Software Platform, which, if present and activated, could potentially allow an attacker to compromise the server on which the Orion products run. The Orion Software Platform is part of our portfolio of products in our Core IT reporting unit. We considered the impact of the Cyber Incident on our evaluation of goodwill impairment indicators made during our October 1, 2020 annual test. As part of the analysis, we considered the decline in the stock price subsequent to the Cyber Incident and estimated impacts to new license sales, maintenance renewals and incremental costs as a result of the Cyber Incident and determined it appropriate to perform a quantitative assessment of our reporting units as of December 31, 2020. As of December 31, 2020 our Core IT, Application Management, ITSM and MSP reporting units had allocated goodwill of $3.0 billion, $61.6 million, $286.2 million and $874.1 million, respectively. We also engaged a third-party valuation specialist to assist in the performance of the impairment analysis of our reporting units.

For the quantitative goodwill impairment analysis, we utilized a combination of both an income and market approach to evaluate each of our reporting units. The income approach is based on the present value of projected cash flows and a terminal value. The discounted cash flow models reflect our assumptions regarding revenue growth rates, estimated implications of the Cyber Incident to our cost structure, economic and market trends and other expectations about the anticipated operating results of our reporting units. We discounted the estimated cash flows for each of the reporting units using rates that represent a market participant’s weighted average cost of capital commensurate with the reporting unit’s underlying business operations and utilized discount rates of 9%, 11%, 12% and 10% for our Core IT, Application Management, ITSM and MSP reporting units, respectively. The market approach develops an indication of fair value by calculating average market pricing multiples of revenues and EBITDA for selected peer publicly-traded companies. The developed multiples were applied to applicable financial measures of the respective reporting unit to determine an estimated fair value. We applied a 66.7% weighting to the income approach and a 33.3% weighting to the market approach to arrive at the total fair value used for impairment testing. We applied a greater weighting to the income approach as we believe the income approach is a better indicator of fair value by using projected cash flows of the reporting units being valued. After determining the fair value of each of our reporting units, we reconciled the aggregate fair values of the reporting units to the Company's market capitalization as of December 31, 2020. As a result of the impairment analysis, our Core IT and ITSM reporting units were determined to have fair values that exceeded their carrying values by approximately 15.6% and 17.4%, respectively, and therefore no impairment was recognized. The other reporting units' fair values significantly exceed their carrying values.

Fair value determinations of our reporting units require considerable judgment and are sensitive to changes in underlying assumptions and factors. As a result, there can be no assurance that the estimates and assumptions made for purposes of the quantitative goodwill impairment tests will prove to be an accurate prediction of future results. Examples of events or circumstances that could reasonably be expected to negatively affect the underlying key assumptions and ultimately impact the estimated fair value of our Core IT and ITSM reporting units may include such items as: (i) a decrease in future cash flows due to lower than expected license sales or maintenance renewals and higher than estimated costs to respond to the cybersecurity attack, (ii) higher than expected customer attrition resulting from customer concerns related to the cyber matter, (iii) adverse loss exposure from claims, fines or penalties from the Cyber Incident; and (iv) volatility in the equity and debt markets or other macroeconomic factors which could result in a higher weighted-average cost of capital. Accordingly, if our current cash flow assumptions are not realized, it is possible that an impairment charge may be recorded in the future.

Identifiable Intangible Assets

We evaluate long-lived assets, including finite-lived intangible assets and other assets, for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. Events or changes in circumstances that could result in an impairment review include, but are not limited to, significant underperformance relative to historical or projected future operating results, significant changes in the manner of use of the acquired assets or the strategy for our overall business, and significant negative industry or economic trends. If an event occurs that would cause us to revise our estimates and assumptions used in analyzing the value of our property and equipment or our finite-lived intangibles and other assets, that revision could result in a non-cash impairment charge that could have a material impact on our financial results.

Revenue Recognition

We generate revenue from fees received for subscriptions, the sale of maintenance services associated with our perpetual license products and the sale of perpetual license products. We recognize revenue related to contracts from customers when we transfer promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This is determined by following a five-step process which includes (1) identifying the contract with a customer, (2) identifying the performance obligations in the contract, (3) determining the transaction price, (4) allocating the transaction price and (5) recognizing revenue when or as we satisfy a performance obligation.

We identify performance obligations in a contract based on the goods and services that will be transferred to the customer that are identifiable from other promises in the contract, or distinct. If not considered distinct, the promised goods or services are combined with other goods or services and accounted for as a combined performance obligation. Determining the distinct performance obligations in a contract requires judgment. Our performance obligations primarily include perpetual and time-based licenses, maintenance support including unspecified upgrades or enhancements to new versions of our software products and SaaS offerings.

We allocate the transaction price of the contract to each distinct performance obligation based on a relative standalone selling price basis. Determining standalone selling prices for our performance obligations requires judgment and are based on multiple factors including, but not limited to historical selling prices and discounting practices for products and services, internal pricing policies and pricing practices in different regions and through different sales channels. For our subscription products and maintenance services, our standalone selling prices are generally observable using standalone sales or renewals. For our perpetual and time-based license products, given there are no observable standalone sales, we estimate our standalone selling prices by evaluating our historical pricing and discounting practices in observable bundled transactions. We review the standalone selling price for our performance obligations periodically and update, if needed, to ensure that the methodology utilized reflects our current pricing practices.

Stock-Based Compensation

We have granted our employees, directors and certain contractors stock-based incentive awards. Our stock awards vest on service-based or performance-based vesting conditions. These awards are in the form of stock options, restricted stock and restricted stock units. We measure stock-based compensation expense for all share-based awards granted based on the estimated fair value of those awards on the date of grant. The fair values of stock option awards are estimated using a Black-Scholes valuation model. The fair value of restricted stock unit awards and restricted stock is determined using the fair market value of our common stock on the date of grant less any amount paid at the time of the grant, or intrinsic value.

We use various assumptions that can be subjective in estimating the fair value of options at the date of grant using the Black-Scholes option model including expected dividend yield, volatility, risk-free rate of return and expected life. In addition, we estimate the probability of the performance-based awards vesting upon the achievement of the specified performance targets at each reporting period. Based on the extent to which the performance targets are achieved, shares vest at a specified percent of the target award amount. Changes in the probability estimates associated with performance-based awards are accounted for in the period of change using a cumulative expense adjustment to apply the new probability estimate. In any period in which we determine the achievement of the performance targets is not probable, we cease recording compensation expense and all previously recognized compensation expense for the performance-based award is reversed. Because the actual number of shares to be awarded is not known until the end of the performance period, the actual compensation expense related to these awards could differ from our current expectations.

Income Taxes

We use the liability method of accounting for income taxes as set forth in the authoritative guidance for accounting for income taxes. Under this method, we recognize deferred tax liabilities and assets for the expected future tax consequences of temporary differences between the respective carrying amounts and tax basis of our assets and liabilities.

In calculating our effective tax rate, we make judgments regarding certain tax positions, including the timing and amount of deductions and allocations of income among various tax jurisdictions.

The guidance requires us to identify, evaluate and measure all uncertain tax positions taken or to be taken on tax returns and to record liabilities for the amount of these positions that may not be sustained, or may only partially be sustained, upon examination by the relevant taxing authorities. Although we believe that our estimates and judgments are reasonable, actual results may differ from these estimates. Some or all of these judgments are subject to review by the taxing authorities. To the extent that the actual results of these matters is different than the amounts recorded, such differences will affect our effective tax rate.

We establish valuation allowances when necessary to reduce deferred tax assets to the amounts expected to be realized. On a quarterly basis, we evaluate the need for, and the adequacy of, valuation allowances based on the expected realization of our deferred tax assets. The factors used to assess the likelihood of realization include our latest forecast of future taxable income, available tax planning strategies that could be implemented, reversal of taxable temporary differences and carryback potential to realize the net deferred tax assets. As of December 31, 2020, we had a valuation allowance of $14.5 million.

During the year ended December 31, 2020, we completed an intra-group transfer of certain of our intellectual property rights to our Irish subsidiary which resulted in the recognition of a deferred tax asset and related tax benefit of $138.2 million based on the current fair value of the intellectual property transferred. We applied significant judgment when determining the fair value of the intellectual property, which serves as the tax basis of the deferred tax asset, and in evaluating the associated tax laws in the applicable jurisdictions. The fair value of the intellectual property is based on the present value of projected cash flows related to the intellectual property, which reflects management’s assumptions regarding projected revenues, operating expenses and discount rate. The deferred tax asset and the tax benefit were measured based on the Irish tax rate expected to apply in the years the asset will be recovered. We expect to realize the deferred tax asset resulting from the transfer of the intellectual property rights and will assess the realizability of the deferred tax asset quarterly. Unanticipated events and circumstances may occur that could affect either the accuracy or validity of such assumptions, estimates or actual results. The sustainability of our future tax benefits is dependent upon the acceptance of the valuation estimates and assumptions by the taxing authorities.

Loss Contingencies

We account for claims and contingencies in accordance with authoritative guidance that requires we record an estimated loss from a claim or loss contingency when information available prior to issuance of our consolidated financial statements indicates a liability has been incurred at the date of our consolidated financial statements and the amount of the loss can be reasonably estimated. If we determine that it is reasonably possible but not probable that an asset has been impaired or a liability has been incurred, we disclose the amount or range of estimated loss if material or that the loss cannot be reasonably estimated. Accounting for claims and contingencies requires us to use our judgment. We consult with legal counsel on those issues related to litigation and seek input from other experts and advisors with respect to matters in the ordinary course of business.

We are involved in various lawsuits, claims, investigations and proceedings related to the Cyber Incident. Litigation is inherently unpredictable. However, we believe we have valid defenses with respect to legal matters pending against us. Nevertheless, cash flows or results of operations could be materially affected in any particular period by the resolution of one or more of these contingencies. See *Note 16. Commitments and Contingencies* in the *Notes to Consolidated Financial Statements* included in Item 8 of Part II of this Annual Report on Form 10-K for a discussion of contingencies.

Off-Balance Sheet Arrangements

During the year ended December 31, 2020, we did not have any relationships with unconsolidated organizations or financial partnerships, such as structured finance or special purpose entities that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Recent Accounting Pronouncements

See *Note 2. Summary of Significant Accounting Policies* in the *Notes to Consolidated Financial Statements* in Item 8 of Part II of this Annual Report on Form 10-K, for a full description of recent accounting pronouncements, which is incorporated herein by reference.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

We had cash and cash equivalents of $370.5 million and $173.4 million at December 31, 2020 and 2019, respectively. Our cash and cash equivalents consist primarily of bank demand deposits and money market funds. We hold cash and cash equivalents and short-term investments for working capital purposes. Our investments are made for capital preservation purposes, and we do not enter into investments for trading or speculative purposes.

We do not have material exposure to market risk with respect to our cash and cash equivalents, as these consist primarily of highly liquid investments purchased with original maturities of three months or less at December 31, 2020.

We had total indebtedness with an outstanding principal balance of $1.9 billion at December 31, 2020 and $2.0 billion at December 31, 2019. Borrowings outstanding under our various credit agreements bear interest at variable rates equal to applicable margins plus specified base rates or LIBOR-based rates with a 0% floor. As of December 31, 2020 and 2019, the annual weighted-average rate on borrowings was 2.90% and 4.55%, respectively. If there was a hypothetical 100 basis point increase in interest rates, the annual impact to interest expense would be approximately $19.3 million. This hypothetical change in interest expense has been calculated based on the borrowings outstanding at December 31, 2020 and a 100 basis point per annum change in interest rate applied over a one-year period.

We do not have material exposure to fair value market risk with respect to our total long-term outstanding indebtedness which consists of $1.9 billion U.S. dollar term loans as of December 31, 2020, not subject to market pricing.

See *Note 9. Debt* in the *Notes to Consolidated Financial Statements* in Item 8 of Part II of this Annual Report on Form 10-K for additional information regarding our debt.

Foreign Currency Exchange Risk

As a global company, we face exposure to adverse movements in foreign currency exchange rates. We primarily conduct business in the following locations: the United States, Europe, Canada, South America and Australia. This exposure is the result of selling in multiple currencies, growth in our international investments, additional headcount in foreign countries and operating in countries where the functional currency is the local currency. Specifically, our results of operations and cash flows are subject to fluctuations in the following currencies: the Euro, British Pound Sterling and Australian Dollar against the United States Dollar, or USD. These exposures may change over time as business practices evolve and economic conditions change, including as a result of the impact of the COVID-19 pandemic on the global economy or governmental actions taken in response to the COVID-19 pandemic. Changes in foreign currency exchange rates could have an adverse impact on our financial results and cash flows.

Our consolidated statements of operations are translated into USD at the average exchange rates in each applicable period. Our international revenue, operating expenses and significant balance sheet accounts denominated in currencies other than the USD primarily flow through our United Kingdom and European subsidiaries, which have British Pound Sterling and Euro functional currencies, respectively. This results in a two-step currency exchange process wherein the currencies other than the British Pound Sterling and Euro are first converted into those functional currencies and then translated into USD for our consolidated financial statements. As an example, revenue for sales in Australia is translated from the Australian Dollar to the Euro and then into the USD.

Our statement of operations and balance sheet accounts are also impacted by the re-measurement of non-functional currency transactions such as intercompany loans, cash accounts held by our overseas subsidiaries, accounts receivable denominated in foreign currencies, deferred revenue and accounts payable denominated in foreign currencies.

Foreign Currency Transaction Risk

Our foreign currency exposures typically arise from selling annual and multi-year maintenance contracts and subscriptions in multiple currencies, accounts receivable, intercompany transfer pricing arrangements and other intercompany transactions. Our foreign currency management objective is to minimize the effect of fluctuations in foreign exchange rates on selected assets or liabilities without exposing us to additional risk associated with transactions that could be regarded as speculative.

We utilize purchased foreign currency forward contracts to minimize our foreign exchange exposure on certain foreign balance sheet positions denominated in currencies other than the Euro. We do not enter into any derivative financial instruments for trading or speculative purposes. Our objective in managing our exposure to foreign currency exchange rate fluctuations is to reduce the impact of adverse fluctuations in such exchange rates on our earnings and cash flow. The notional amounts and currencies underlying our foreign currency forward contracts will fluctuate period to period as they are principally dependent on the balances of the balance sheet positions that are denominated in currencies other than the Euro held by our global entities. There can be no assurance that our foreign currency hedging activities will substantially offset the impact of fluctuation in currency exchange rates on our results of operations and functional positions. As of December 31, 2020 and 2019, we did not have any forward contracts outstanding and while we do not have a formal policy to settle all derivatives prior to the end of each quarter, our current practice is to do so. The effect of derivative instruments on our consolidated statements of operations was insignificant for the years ended December 31, 2020 and 2019.

We are exposed to credit-related losses in the event of non-performance by counterparties to derivative financial instruments, but we do not expect any counterparties to fail to meet their obligations given their high credit ratings. In addition, we diversify this risk across several counterparties and actively monitor their ratings.

Foreign Currency Translation Risk

Fluctuations in foreign currencies impact the amount of total assets, liabilities, revenue, operating expenses and cash flows that we report for our foreign subsidiaries upon the translation of these amounts into U.S. dollars. If there is a change in foreign currency exchange rates, the amounts of assets, liabilities, revenue, operating expenses and cash flows that we report in U.S. dollars for foreign subsidiaries that transact in international currencies may be higher or lower to what we would have reported using a constant currency rate. To the extent the U.S. dollar strengthens against foreign currencies, the translation of these foreign currency denominated transactions results in reduced assets, liabilities, revenue, operating expenses and cash flows for our international operations. Similarly, our assets, liabilities, revenue, operating expenses and cash flows will increase for our international operations if the U.S. dollar weakens against foreign currencies. The conversion of the foreign subsidiaries' financial statements into U.S. dollars will also lead to remeasurement gains and losses recorded in income, or translation gains or losses that are recorded as a component of accumulated other comprehensive income (loss).

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this item is incorporated by reference to the Consolidated Financial Statements set forth on pages F-1 through F-46 hereof.

ITEM 9. CHANGES IN DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

There were no changes in or disagreements with our accountants on accounting and financial disclosure matters.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2020. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits 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, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Based on the evaluation of our disclosure controls and procedures as of December 31, 2020, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at a reasonable assurance level.

Management's Annual Report on Internal Control over Financial Reporting

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. Internal control over financial reporting includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- 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
- 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 our degree of compliance with the policies or procedures may deteriorate.

Our management conducted an evaluation of the effectiveness of our internal control over financial reporting as of the end of the period covered by this report based on the framework in *Internal Control— Integrated Framework* issued in 2013 by the Committee of Sponsoring Organization of the Treadway Commission. Based on this evaluation, management concluded that the Company's internal control over financial reporting was effective as of the end of the period covered by this report.

SQL Sentry Holdings, LLC, which was acquired during the year, has been excluded from management's assessment of internal control over financial reporting as of December 31, 2020. The total assets and total revenue of the acquired business represents approximately 0.4% and 0.5%, respectively, of the related consolidated financial statement amounts of the Company as of and for the year ended December 31, 2020.

Our independent registered public accounting firm, which has audited our consolidated financial statements included in this Form 10-K, has also audited the effectiveness of the Company's internal control over financial reporting as of December 31, 2020, and issued an audit report on our internal controls over financial reporting, which is included in Part II, Item 8 of this report.

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, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

Certain information required by Part III is omitted from this report. We intend to include such information in our definitive proxy statement ("Proxy Statement") related to our 2021 annual meeting of stockholders pursuant to Regulation 14A under the Exchange Act, which we intend to file with the Securities and Exchange Commission not later than 120 days after the end of the fiscal year covered by this report.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Except as set forth below, the information required by this Item will be included in our Proxy Statement and is incorporated herein by reference.

Code of Business Ethics and Conduct

Our board of directors has adopted a code of business conduct and ethics for all employees, including our Chief Executive Officer and President, Chief Financial Officer, and other executive and senior financial officers. The code of business ethics and conduct is available on the investor relations portion of our website at www.solarwinds.com. To the extent and in the manner required by applicable rules of the SEC and NYSE, we intend to disclose any amendments to our code of business conduct and ethics, or waivers of its requirements, on our website or in filings under the Exchange Act. Our website and the contents therein or connected thereto are not intended to be incorporated into this Annual Report on Form 10-K.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item will be included in our Proxy Statement and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item will be included in our Proxy Statement and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item will be included in our Proxy Statement and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item will be included in our Proxy Statement and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

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

1. *Financial Statements.*

2. *Financial Statement Schedules.*

The following financial statement schedule should be read in conjunction with the consolidated financial statements of SolarWinds Corporation filed as part of this Report:

- Schedule II—Valuation and Qualifying Accounts

Schedules other than that listed above have been omitted since they are either not required or not applicable or because the information required is included in the consolidated financial statements included elsewhere herein or the notes thereto.

3. *Exhibits.*

EXHIBIT INDEX

		Incorporated by Reference			
Exhibit Number	**Exhibit Description**	**Form**	**File No.**	**Exhibit**	**Filing Date**
2.1	Share Purchase Agreement, dated as of May 8, 2016, among Project Lake Holdings, Ltd., SolarWinds Holdings, Inc., LOGICnow Holding S.à r.l., and LOGICnow Holdings Ltd.	S-1	181082032	2.1	9/21/2018
3.1	Third Amended and Restated Certificate of Incorporation as currently in effect	10-Q	181203681	3.1	11/27/2018
3.2	Amended and Restated Bylaws as currently in effect	10-Q	181203681	3.2	11/27/2018
4.1	Amended and Restated Stockholders' Agreement, dated October 18, 2018, by and among the Company and the stockholders' named therein	10-Q	181203681	4.1	11/27/2018
4.2	Registration Rights Agreement, dated as of February 5, 2016, by and among the registrant and certain stockholders named therein	S-1	181082032	4.3	9/21/2018
4.3*	Description of Registrant's Securities Registered under Section 12 of the Exchange Act				

Exhibit Number	Exhibit Description	Incorporated by Reference Form	File No.	Exhibit	Filing Date
10.1	First Lien Credit Agreement, dated as of February 5, 2016, by and among SolarWinds Holdings, Inc., as borrower, SolarWinds Intermediate Holdings I, Inc., the other guarantors party thereto, Credit Suisse AG, Cayman Islands Branch, as administrative agent and collateral agent, Goldman Sachs Lending Partners LLC, Credit Suisse Securities (USA) LLC, Macquarie Capital (USA) Inc. and Nomura Securities International, Inc., as joint lead arrangers and joint bookrunners, Goldman Sachs Lending Partners LLC, as syndication agent, and Goldman Sachs Lending Partners LLC, as documentation agent	S-1	181082032	10.1	9/21/2018
10.1.1	Amendment No. 1 to First Lien Credit Agreement, dated as of May 27, 2016, by and among SolarWinds Holdings, Inc., as borrower, SolarWinds Intermediate Holdings I, Inc., the other guarantors party thereto, Credit Suisse AG, Cayman Islands Branch, as administrative agent, and the lenders party thereto	S-1	181082032	10.1.1	9/21/2018
10.1.2	Amendment No. 2 to First Lien Credit Agreement, dated as of August 18, 2016, by and among SolarWinds Holdings, Inc., as borrower, SolarWinds Intermediate Holdings I, Inc., the other guarantors party thereto, Credit Suisse AG, Cayman Islands Branch, as administrative agent, and the lenders party thereto	S-1	181082032	10.1.2	9/21/2018
10.1.3	Amendment No. 3 to First Lien Credit Agreement, dated as of February 21, 2017, by and among SolarWinds Holdings, Inc., as borrower, SolarWinds Intermediate Holdings I, Inc., the other guarantors party thereto, Credit Suisse AG, Cayman Islands Branch, as administrative agent, and the lenders party thereto	S-1	181082032	10.1.3	9/21/2018
10.1.4	Amendment No. 4 to First Lien Credit Agreement, dated as of March 15, 2018, by and among SolarWinds Intermediate Holdings I, Inc., SolarWinds Holdings, Inc. and Credit Suisse AG, Cayman Islands Branch, as administrative agent, and the lenders party thereto	S-1	181082032	10.1.4	9/21/2018
10.3	Management Fee Agreement, dated as of February 5, 2016, among the registrant, SolarWinds Intermediate Holdings II, Inc., SolarWinds Intermediate Holdings I, Inc., SolarWinds Holdings, Inc., SolarWinds MSP Holdings Limited, SolarWinds International Holdings, Ltd., SolarWinds, Inc., Silver Lake Management Company IV, L.L.C., Thoma Bravo, LLC and Thoma Bravo Partners XI, L.P.	S-1	181082032	10.3	9/21/2018
10.4	Form of Indemnification Agreement between the registrant and each of its directors and executive officers	S-1	181082032	10.4	9/21/2018

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
10.5#	SolarWinds Corporation Equity Plan, dated as of June 24, 2016, and forms of agreement thereunder	S-1	181082032	10.5	9/21/2018
10.6#	SolarWinds Corporation 2018 Equity Incentive Plan and forms of agreements thereunder	10-Q	181203681	10.1	11/27/2018
10.7	SolarWinds Corporation 2018 Employee Stock Purchase Plan	10-K	19630606	10.7	2/25/2019
10.8#	Form of SolarWinds Corporation Bonus Plan	S-1	181082032	10.8	9/21/2018
10.9#	Second Amended and Restated Employment Agreement, dated as of September 30, 2016, between SolarWinds, Inc. and Kevin B. Thompson	S-1	181082032	10.9	9/21/2018
10.9.1#	Omnibus Amendment to Employee Documents, dated as of August 6, 2020, between SolarWinds Corporation and Kevin B. Thompson	10-Q	181082032	10.1	8/10/2020
10.9.2#	Second Omnibus Amendment to Employee Documents, dated as of December 7, 2020, between SolarWinds Corporation and Kevin B. Thompson	8-K	181082032	10.2	12/9/2020
10.10#	Amended and Restated Employment Agreement, dated as of April 27, 2016, between SolarWinds Worldwide, LLC and J. Barton Kalsu	S-1	181082032	10.10	9/21/2018
10.11#	Employment Agreement, dated as of October 15, 2015, between SolarWinds Worldwide, LLC and David Gardiner	S-1	181082032	10.11	9/21/2018
10.11.1#	Amendment to Employment Agreement, dated as of April 27, 2016, between SolarWinds Worldwide, LLC and David Gardiner	S-1	181082032	10.11.1	9/21/2018
10.11.2#	Letter of Assignment (2017–2018), dated as of July 1, 2017, between SolarWinds Worldwide, LLC and David Gardiner	S-1	181082032	10.11.2	9/21/2018
10.12#	Employment Agreement, dated as of September 15, 2015, between SolarWinds Worldwide, LLC and Jason Bliss	10-Q	181082032	10.1	5/8/2020
10.12.1#	Amendment to Employment Agreement, dated April 27, 2016, between SolarWinds Worldwide, LLC and Jason Bliss	10-Q	181082032	10.2	5/8/2020
10.13#	Employment Agreement, dated as of February 1, 2015, between SolarWinds Worldwide, LLC and Woong Joseph Kim	10-Q	181082032	10.3	5/8/2020
10.13.1#	Amendment to Employment Agreement, dated April 27, 2016, between SolarWinds Worldwide, LLC and Woong Joseph Kim	10-Q	181082032	10.4	5/8/2020
10.14.1#	Employment Agreement, dated as of December 7, 2020, between SolarWinds Corporation and Sudhakar Ramakrishna.	8-K	181082032	10.1	12/9/2020
10.14.2#	Amendment to Employment Agreement, dated as of January 4, 2021, between SolarWinds Corporation and Sudhakar Ramakrishna	8-K	181082032	10.1	1/6/2021

Exhibit Number	Exhibit Description	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
10.15#	Transition Agreement, dated as of January 1, 2021, between SolarWinds Corporation and Kevin B. Thompson	8-K	181082032	10.2	1/6/2021
21.1*	List of subsidiaries of the registrant				
23.1*	Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm				
31.1*	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				
31.2*	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				
32.1**	Certifications of Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer pursuant to Exchange Act Rule 13a-14(b) and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002				
101.INS	XBRL Instance Document (formatted as Inline XBRL)				
101.SCH	XBRL Taxonomy Extension Schema Document				
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document				
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document				
101.LAB	XBRL Taxonomy Extension Label Linkbase Document				
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document				
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				

# Indicates management contract or compensatory plan or arrangement.

* Filed herewith

** The certifications attached as Exhibit 32.1 accompanying this Annual Report on Form 10-K, are deemed furnished and not filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of the Registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K, irrespective of any general incorporation language contained in such filing

ITEM 16. FORM 10–K SUMMARY

None.

SOLARWINDS CORPORATION

SIGNATURES

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

SOLARWINDS CORPORATION

Dated:	March 1, 2021	By:	/s/ J. Barton Kalsu
			J. Barton Kalsu **Chief Financial Officer** **(Principal Financial and Accounting Officer)**

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 and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Sudhakar Ramakrishna **Sudhakar Ramakrishna**	President and Chief Executive Officer and Director (Principal Executive Officer)	March 1, 2021
/s/ J. Barton Kalsu **J. Barton Kalsu**	Chief Financial Officer (Principal Financial and Accounting Officer)	March 1, 2021
/s/ Michael Bingle **Michael Bingle**	Director	March 1, 2021
/s/ William Bock **William Bock**	Director	March 1, 2021
/s/ Seth Boro **Seth Boro**	Director	March 1, 2021
/s/ Kenneth Y. Hao **Kenneth Y. Hao**	Director	March 1, 2021
/s/ Dennis Howard **Dennis Howard**	Director	March 1, 2021
/s/ Michael Hoffmann **Michael Hoffmann**	Director	March 1, 2021
/s/ Catherine Kinney **Catherine Kinney**	Director	March 1, 2021
/s/ James Lines **James Lines**	Director	March 1, 2021
/s/ Easwaran Sundaram **Easwaran Sundaram**	Director	March 1, 2021
/s/ Michael Widmann **Michael Widmann**	Director	March 1, 2021

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of SolarWinds Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of SolarWinds Corporation and its subsidiaries (the “Company”) as of December 31, 2020 and 2019, and the related consolidated statements of operations, of comprehensive income (loss), of redeemable convertible Class A common stock and stockholders' equity (deficit) and of cash flows for each of the three years in the period ended December 31, 2020, including the related notes and financial statement schedule listed in the accompanying index (collectively referred to as the “consolidated financial statements”). We also have audited the Company's internal control over financial reporting as of December 31, 2020, 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 consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Changes in Accounting Principles

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for revenue from contracts with customers and the manner in which it accounts for leases in 2019.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Annual Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements. 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. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As described in Management’s Annual Report on Internal Control over Financial Reporting, management has excluded SQL Sentry Holdings, LLC from its assessment of internal control over financial reporting as of December 31, 2020 because it was acquired by the Company in a purchase business combination during 2020. We have also excluded SQL Sentry Holdings, LLC from our audit of internal control over financial reporting. SQL Sentry Holdings, LLC is a wholly-owned subsidiary whose total assets and total revenue excluded from management’s assessment and our audit of internal control over financial reporting represent approximately 0.4% and 0.5%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2020.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

Critical Audit Matters

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

Revenue Recognition - Standalone Selling Price for Transactions with Multiple Performance Obligations

As described in Note 2 to the consolidated financial statements, the Company recognized $144.5 million and $478.3 million of license and maintenance revenue, respectively, during the year ended December 31, 2020. The Company's performance obligations include perpetual and time-based licenses and maintenance support including unspecified upgrades or enhancements to new versions of their software products. Management allocates the transaction price of the contract to each distinct performance obligation in the contract based on a relative standalone selling price. Determining standalone selling prices for the Company's performance obligations requires judgment and is based on multiple factors including, but not limited to, historical selling prices and discounting practices for products and services, internal pricing policies and pricing practices in different regions and through different sales channels.

The principal considerations for our determination that performing procedures relating to revenue recognition – standalone selling price for transactions with multiple performance obligations is a critical audit matter are the significant auditor judgment, subjectivity and effort in performing procedures and evaluating audit evidence relating to standalone selling prices used to allocate the transaction price of the contract to each distinct performance obligation in the contract.

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 testing the effectiveness of controls relating to the determination of standalone selling prices, including controls over the completeness and accuracy of the underlying data. These procedures also included, among others, testing management's process for determining the standalone selling prices. Testing management's process for determining the standalone selling prices involved (i) evaluating the appropriateness of the overall methodology used by management; (ii) evaluating the reasonableness of the segmentation considerations by product, sales channels and geography; and (iii) testing the completeness and accuracy of the historical selling prices and discounts.

Intra-group Transfer of Intellectual Property Rights ("IP")

As described in Note 15 to the consolidated financial statements, the Company completed an intra-group transfer of certain of its IP rights to its Irish subsidiary during 2020. As a result of the IP transfer, the Company recorded a deferred tax asset and related tax benefit of $138.2 million for the year ended December 31, 2020. The deferred tax asset was recognized as a result of the book and tax basis difference of the IP rights and was based on the current fair value of the IP. Management applied significant judgment when determining the fair value of the IP, which serves as the tax basis of the deferred tax asset, and in evaluating the associated tax laws in the applicable jurisdictions. The fair value of the IP is based on the present value of projected cash flows related to the IP, which reflects management's assumptions regarding projected revenues, operating expenses and discount rate.

The principal considerations for our determination that performing procedures relating to the intra-group transfer of the IP is a critical audit matter are the significant judgment by management in determining the fair value of the IP; this in turn led to significant auditor judgment, subjectivity and effort in (i) performing procedures relating to the valuation of the IP; (ii) evaluating management's significant assumptions related to projected revenues, operating expenses and discount rate; and (iii) evaluating the associated tax laws. In addition, the audit effort also involved the use of professionals with specialized skill and knowledge.

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 testing the effectiveness of controls relating to the intra-group transfer of the IP, including controls over the review of the underlying agreements, the assessment of the associated tax laws, and the valuation of the IP. These procedures also included, among others, (i) evaluating the underlying agreements and the associated tax laws, (ii) testing the valuation of the IP, and (iii) testing the calculation of the related deferred tax asset. Testing management's process for determining the fair value of IP included (i) evaluating the appropriateness of the valuation method, (ii) testing the completeness, accuracy and relevance of underlying data used in the model and (iii) evaluating the reasonableness of significant assumptions related to projected revenues, operating expenses and discount rate. Evaluating the assumptions related to the projected revenue and operating expenses involved evaluating whether the assumptions were reasonable considering (i) the current and past performance of the IP; (ii) the consistency with external market and industry data; and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in evaluating the reasonableness of the valuation methodology, the reasonableness of the discount rate, and the associated tax laws.

Acquisition of SQL Sentry Holdings, LLC – Valuation of Identifiable Intangible Assets

As described in Notes 2 and 3 to the consolidated financial statements, the Company acquired SQL Sentry Holdings, LLC in 2020 for net consideration of $145.1 million, which resulted in $64.8 million of identifiable intangible assets being recorded. The fair value of identifiable intangible assets is based on significant judgments made by management. Management typically engages third party valuation appraisal firms to assist in determining the fair values and useful lives of the assets acquired. The valuation estimates and assumptions are based on historical experience and information obtained by management, and include, but are not limited to, future expected revenues earned from customer relationships and the developed product technologies and discount rates applied in determining the present value of those cash flows.

The principal considerations for our determination that performing procedures relating to valuation of identifiable intangible assets related to the acquisition of SQL Sentry Holdings, LLC is a critical audit matter are the significant judgment by management when determining the estimated fair value of identifiable intangible assets; this in turn led to significant auditor judgment, subjectivity and effort in performing procedures relating to the valuation of identifiable intangible assets and evaluating the future expected revenues assumption. In addition, the audit effort involved the use of professionals with specialized skill and knowledge.

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 testing the effectiveness of controls relating to acquisition accounting, including controls over estimating the fair value of identifiable intangible assets. These procedures also included, among others, testing management’s process for estimating the fair value of identifiable intangible assets. Testing management's process included evaluating the appropriateness of the valuation methods and the reasonableness of the significant assumption related to future expected revenues. Evaluating the reasonableness of the future expected revenues involved considering the (i) past performance of the acquired businesses; (ii) historical growth rates of the Company; and (iii) historical results of peer companies. Professionals with specialized skill and knowledge were used to assist in evaluating the appropriateness of the valuation methods.

Goodwill Impairment - Core IT and ITSM Reporting Units

As described in Note 4 to the consolidated financial statements, the Company’s consolidated goodwill balance was $4,249.4 million as of December 31, 2020. As disclosed by management, the amount of goodwill associated with the Core IT and ITSM reporting units as of December 31, 2020 was $3.0 billion and $286.2 million, respectively. As described in Note 2 to the consolidated financial statements, management tests goodwill for impairment at least annually during the fourth quarter or sooner when circumstances indicate an impairment may exist. As a result of the Cyber Incident (as defined in management’s disclosures), management determined it appropriate to perform a quantitative impairment assessment of the Company’s reporting units as of December 31, 2020. As a result of the assessment, management determined that the Core IT and ITSM reporting units had fair values that exceeded their carrying values by approximately 15.6% and 17.4%, respectively. Management estimated the fair value of the reporting units by utilizing a combination of both an income and market approach. The income approach is based on the present value of projected cash flows, which reflects management’s assumptions regarding revenue growth rates.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of the Core IT and ITSM reporting units is a critical audit matter are the significant judgment by management when developing the estimated fair value of the reporting unit, which led to a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions related to the revenue growth rates and discount rates. In addition, the audit effort involved the use of professionals with specialized skill and knowledge.

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 testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the Company's reporting units. These procedures also included, among others, testing management's process for developing the fair value of the Core IT and ITSM reporting units. Testing management's process included (i) evaluating the appropriateness of the discounted cash flow model and the reasonableness of management's projected financial information, (ii) testing the completeness, accuracy and relevance of underlying data used in the model and (iii) evaluating the reasonableness of significant assumptions related to the revenue growth rates and discount rates. Evaluating the reasonableness of the revenue growth rates involved considering (i) the current and past performance of the reporting unit; (ii) the consistency with third-party industry data; and (iii) whether the assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the discounted cash flow model and the reasonableness of the discount rates.

/s/ PricewaterhouseCoopers LLP
Austin, Texas
March 1, 2021

We have served as the Company's auditor since 2004.

SolarWinds Corporation
Consolidated Balance Sheets
(In thousands, except share and per share information)

	December 31, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 370,498	$ 173,372
Accounts receivable, net of allowances of $2,736 and $3,171 as of December 31, 2020 and 2019, respectively	114,298	121,930
Income tax receivable	2,273	1,117
Prepaid and other current assets	25,664	23,480
Total current assets	512,733	319,899
Property and equipment, net	58,649	38,945
Operating lease assets	110,961	89,825
Deferred taxes	149,455	4,533
Goodwill	4,249,402	4,058,198
Intangible assets, net	592,985	771,513
Other assets, net	36,298	27,829
Total assets	$ 5,710,483	$ 5,310,742
Liabilities and stockholders’ equity		
Current liabilities:		
Accounts payable	$ 17,932	$ 13,796
Accrued liabilities and other	72,971	47,035
Current operating lease liabilities	17,811	14,093
Accrued interest payable	157	248
Income taxes payable	16,358	15,714
Current portion of deferred revenue	346,075	312,227
Current debt obligation	19,900	19,900
Total current liabilities	491,204	423,013
Long-term liabilities:		
Deferred revenue, net of current portion	36,679	31,173
Non-current deferred taxes	59,149	97,884
Non-current operating lease liabilities	115,071	93,084
Other long-term liabilities	115,021	122,660
Long-term debt, net of current portion	1,882,672	1,893,406
Total liabilities	2,699,796	2,661,220
Commitments and contingencies (*Note 16*)		
Stockholders’ equity:		
Common stock, $0.001 par value: 1,000,000,000 shares authorized and 313,039,222 and 308,290,310 shares issued and outstanding as of December 31, 2020 and 2019, respectively	313	308
Preferred stock, $0.001 par value: 50,000,000 shares authorized and no shares issued and outstanding as of December 31, 2020 and 2019, respectively	—	—
Additional paid-in capital	3,112,106	3,041,880
Accumulated other comprehensive income (loss)	127,212	(5,247)
Accumulated deficit	(228,944)	(387,419)
Total stockholders’ equity	3,010,687	2,649,522
Total liabilities and stockholders’ equity	$ 5,710,483	$ 5,310,742

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

SolarWinds Corporation

Consolidated Statements of Operations
(In thousands, except per share information)

	Year Ended December 31, 2020	2019	2018
Revenue:			
Subscription	$ 396,496	$ 320,747	$ 265,591
Maintenance	478,284	446,450	402,938
Total recurring revenue	874,780	767,197	668,529
License	144,461	165,328	164,560
Total revenue	1,019,241	932,525	833,089
Cost of revenue:			
Cost of recurring revenue	93,255	79,571	70,744
Amortization of acquired technologies	181,361	175,883	175,991
Total cost of revenue	274,616	255,454	246,735
Gross profit	744,625	677,071	586,354
Operating expenses:			
Sales and marketing	298,452	264,199	227,468
Research and development	126,216	110,362	96,272
General and administrative	137,541	97,525	80,641
Amortization of acquired intangibles	74,973	69,812	66,788
Total operating expenses	637,182	541,898	471,169
Operating income	107,443	135,173	115,185
Other income (expense):			
Interest expense, net	(75,884)	(108,071)	(142,008)
Other income (expense), net	(1,240)	402	(94,887)
Total other expense	(77,124)	(107,669)	(236,895)
Income (loss) before income taxes	30,319	27,504	(121,710)
Income tax expense (benefit)	(128,156)	8,862	(19,644)
Net income (loss)	$ 158,475	$ 18,642	$ (102,066)
Net income available to common stockholders	$ 157,508	$ 18,441	$ 364,635
Net income available to common stockholders per share:			
Basic earnings per share	$ 0.51	$ 0.06	$ 2.60
Diluted earnings per share	$ 0.50	$ 0.06	$ 2.56
Weighted-average shares used to compute net income available to common stockholders per share:			
Shares used in computation of basic earnings per share	310,554	306,768	140,301
Shares used in computation of diluted earnings per share	315,563	311,168	142,541

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

SolarWinds Corporation

Consolidated Statements of Comprehensive Income (Loss)
(In thousands)

	Year Ended December 31, 2020	2019	2018
Net income (loss)	$ 158,475	$ 18,642	$ (102,066)
Other comprehensive income (loss):			
Foreign currency translation adjustment	132,459	(22,290)	(58,251)
Other comprehensive income (loss)	132,459	(22,290)	(58,251)
Comprehensive income (loss)	$ 290,934	$ (3,648)	$ (160,317)

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

SolarWinds Corporation

Consolidated Statements of Redeemable Convertible Class A Common Stock and Stockholders' Equity (Deficit)
(In thousands)

	Redeemable Convertible Class A Common Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount				
Balance at December 31, 2017	2,661	$ 3,146,887	100,734	$ 101	$ —	$ 75,294	$ (805,156)	$ (729,761)
Foreign currency translation adjustment	—	—	—	—	—	(58,251)	—	(58,251)
Net loss	—	—	—	—	—	—	(102,066)	(102,066)
Comprehensive loss								(160,317)
Issuance of stock upon initial public offering, net of offering costs	—	—	25,000	25	353,501	—	—	353,526
Exercise of stock options	—	—	46	—	16	—	—	16
Issuance of stock	—	—	1,408	1	405	—	—	406
Repurchase of stock	—	(17)	(57)	—	(473)	—	—	(473)
Accumulating dividends	—	231,549	—	—	(15,196)	—	(216,353)	(231,549)
Conversion of Class A shares and accumulated dividends to common stock upon initial public offering	(2,661)	(3,378,419)	177,811	178	2,666,994	—	711,247	3,378,419
Stock-based compensation	—	—	—	—	5,833	—	—	5,833
Balance at December 31, 2018	—	—	304,942	305	3,011,080	17,043	(412,328)	2,616,100
Cumulative effect adjustment of adoption of revenue recognition accounting standard	—	—	—	—	—	—	6,267	6,267
Foreign currency translation adjustment	—	—	—	—	—	(22,290)	—	(22,290)
Net income	—	—	—	—	—	—	18,642	18,642
Comprehensive loss								(3,648)
Exercise of stock options	—	—	572	—	623	—	—	623
Restricted stock units issued, net of shares withheld for taxes	—	—	1,139	1	(7,261)	—	—	(7,260)
Issuance of stock	—	—	1,562	2	820	—	—	822
Issuance of stock under employee stock purchase plan	—	—	75	—	1,080	—	—	1,080
Equity awards assumed in acquisitions	—	—	—	—	778	—	—	778
Stock-based compensation	—	—	—	—	34,760	—	—	34,760
Balance at December 31, 2019	—	—	308,290	308	3,041,880	(5,247)	(387,419)	2,649,522
Foreign currency translation adjustment	—	—	—	—	—	132,459	—	132,459
Net income	—	—	—	—	—	—	158,475	158,475
Comprehensive income								290,934
Exercise of stock options	—	—	716	1	1,062	—	—	1,063
Restricted stock units issued, net of shares withheld for taxes	—	—	2,036	2	(12,082)	—	—	(12,080)
Issuance of stock	—	—	1,643	2	847	—	—	849
Issuance of stock under employee stock purchase plan	—	—	354	—	5,404	—	—	5,404
Stock-based compensation	—	—	—	—	74,995	—	—	74,995
Balance at December 31, 2020	—	$ —	313,039	$ 313	$ 3,112,106	$ 127,212	$ (228,944)	$ 3,010,687

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

SolarWinds Corporation

Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31,		
	2020	2019	2018
Cash flows from operating activities			
Net income (loss)	$ 158,475	$ 18,642	$ (102,066)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	277,856	263,244	258,362
Provision for doubtful accounts	2,670	1,524	2,498
Stock-based compensation expense	74,240	34,395	5,833
Amortization of debt issuance costs	9,166	9,234	11,675
Loss on extinguishment of debt	—	—	80,137
Deferred taxes	(178,288)	(39,635)	(22,101)
(Gain) loss on foreign currency exchange rates	2,645	(913)	13,410
Other non-cash expenses	915	535	3,443
Changes in operating assets and liabilities, net of assets acquired and liabilities assumed in business combinations:			
Accounts receivable	9,039	(18,963)	(18,010)
Income taxes receivable	(988)	(225)	707
Prepaid and other current assets	(5,422)	(11,094)	(4,497)
Accounts payable	3,059	3,734	(28)
Accrued liabilities and other	24,055	337	9,776
Accrued interest payable	(91)	(42)	(11,342)
Income taxes payable	(6,781)	(3,019)	(10,673)
Deferred revenue	18,230	41,248	35,507
Other long-term liabilities	314	905	1,511
Net cash provided by operating activities	389,094	299,907	254,142
Cash flows from investing activities			
Purchases of property and equipment	(28,801)	(17,190)	(15,945)
Purchases of intangible assets	(9,419)	(5,851)	(2,687)
Acquisitions, net of cash acquired	(141,907)	(462,447)	(60,578)
Proceeds from sale of cost method investment and other	—	3,035	11,217
Net cash used in investing activities	(180,127)	(482,453)	(67,993)
Cash flows from financing activities			
Proceeds from our initial public offering, net of underwriting discounts	—	—	357,188
Proceeds from issuance of common stock under employee stock purchase plan and incentive restricted stock	5,404	1,080	1,723
Repurchase of common stock and incentive restricted stock	(12,123)	(7,427)	(578)
Exercise of stock options	1,063	623	16
Premium paid on debt extinguishment	—	—	(36,900)
Proceeds from credit agreement	—	35,000	626,950
Repayments of borrowings from credit agreement	(19,900)	(54,900)	(1,014,900)
Payment of debt issuance costs	—	—	(5,561)
Payment for deferred offering costs	—	—	(3,662)
Net cash used in financing activities	(25,556)	(25,624)	(75,724)
Effect of exchange rate changes on cash and cash equivalents	13,715	(1,078)	(5,521)
Net increase (decrease) in cash and cash equivalents	197,126	(209,248)	104,904
Cash and cash equivalents			
Beginning of period	173,372	382,620	277,716
End of period	$ 370,498	$ 173,372	$ 382,620

SolarWinds Corporation

Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31,		
	2020	**2019**	**2018**
Supplemental disclosure of cash flow information			
Cash paid for interest	$ 67,169	$ 100,549	$ 142,944
Cash paid for income taxes	$ 54,583	$ 47,988	$ 8,950
Non-cash investing and financing transactions			
Conversion of redeemable convertible Class A common stock and accumulated dividends to common stock	$ —	$ —	$ 3,378,419

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

SolarWinds Corporation
Notes to Consolidated Financial Statements

1. Organization and Nature of Operations

SolarWinds Corporation, a Delaware corporation, and its subsidiaries ("Company", "we," "us" and "our") is a leading provider of information technology, or IT, infrastructure management software. Our products give organizations worldwide, regardless of type, size or IT infrastructure complexity, the power to monitor and manage the performance of their IT environments, whether on-premises, in the cloud, or in hybrid infrastructure models. Our approach, which we refer to as the SolarWinds Model, combines powerful, scalable, affordable, easy to use products with high-velocity, low-touch sales. We've built our business to enable the technology professionals who use our products to manage "all things IT." Our range of customers has expanded over time to include network and systems engineers, database administrators, storage administrators, DevOps and service desk professionals, as well as managed service providers, or MSPs. Our SolarWinds Model enables us to sell our products for use in organizations ranging in size from very small businesses to large enterprises.

SolarWinds Corporation was incorporated in the State of Delaware in 2015.

Take Private

In February 2016, we were acquired by affiliates of investment firms Silver Lake and Thoma Bravo, or the Sponsors, to complete a take private transaction, or the Take Private, of SolarWinds, Inc. We applied purchase accounting on the date of the Take Private which required all assets acquired and liabilities assumed, including deferred revenue, be recorded at the date of acquisition at their respective fair values.

Initial Public Offering and Follow-On Offering by Selling Stockholders

In October 2018, we completed our initial public offering, or IPO, in which we sold and issued 25,000,000 shares of our common stock at an issue price of $15.00 per share. We raised a total of $375.0 million in gross proceeds from the offering, or approximately $353.0 million in net proceeds after deducting underwriting discounts and commissions.

Upon the closing of our IPO, all shares of Class A Common Stock that were outstanding immediately prior to the closing of the offering and the related accrued and unpaid dividends converted into shares of common stock. See *Note 10. Redeemable Convertible Class A Common Stock* and *Note 11. Stockholders' Equity (Deficit) and Stock-Based Compensation* for additional details.

In May 2019, we completed a follow-on offering for 15,000,000 shares of our common stock sold by certain selling stockholders at an offering price of $18.00 per share. The selling stockholders received all of the proceeds from the offering.

Potential Spin-Off of MSP Business

On August 6, 2020, we announced that our board of directors has authorized management to explore a potential spin-off of our MSP business into a newly created and separately traded public company, and on December 9, 2020, we announced that we confidentially submitted with the U.S. Securities and Exchange Commission a Form 10 registration statement with respect to the potential spin-off. If completed, the standalone entity would provide cloud-based software solutions for MSPs, enabling them to support digital transformation and growth within SMEs. SolarWinds would retain our Core IT Management business focused primarily on selling software and cloud-based services to corporate IT organizations. We believe that, if completed, the potential spin-off would allow each company to more effectively pursue its distinct operating priorities, strategies and capital allocation policies, while also allowing stockholders to separately evaluate and value the companies based on their distinct markets, strategies and performance. If we proceed with the spin-off, it would be intended to be structured as a tax-free, pro-rata distribution to all SolarWinds stockholders as of a record date to be determined by the board of directors of SolarWinds. If completed, upon effectiveness of the transaction, SolarWinds stockholders would own shares of both companies. Completion of any spin-off would be subject to various conditions, including final approval of our board of directors, and there can be no assurance that the potential spin-off will be completed in the manner described above, or at all.

Spin-off costs incurred were $12.2 million during the year ended December 31, 2020 which are primarily included in general and administrative expense in the consolidated statements of operations. Spin-off costs include legal, accounting and advisory fees, implementation and integration costs, duplicative costs for subscriptions and information technology systems, employee and contractor costs and other incremental separation costs related to the potential spin-off of the MSP business.

2. Summary of Significant Accounting Policies

Basis of Consolidation

The accompanying consolidated financial statements include the accounts of SolarWinds Corporation and the accounts of its wholly owned subsidiaries. We have eliminated all intercompany balances and transactions.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires our management to make estimates and assumptions that affect the reported amounts and the disclosure of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting periods. The impact from the rapidly changing market and economic conditions due to the coronavirus disease 2019, or COVID-19, pandemic on our business, results of operations and financial condition is uncertain. We have made estimates of the impact of the COVID-19 pandemic within our financial statements as of and for the year ended December 31, 2020 which did not result in material adjustments. The estimates assessed included, but were not limited to, allowances for credit losses, the carrying values of goodwill and intangible assets and other long-lived assets, valuation allowances for tax assets and revenue recognition and may change in future periods. The actual results that we experience may differ materially from our estimates. The accounting estimates that require our most significant, difficult and subjective judgments include:

- the valuation of goodwill, intangibles, long-lived assets and contingent consideration;
- revenue recognition;
- stock-based compensation;
- income taxes; and
- loss contingencies.

Foreign Currency Translation

The functional currency of our foreign subsidiaries is determined in accordance with authoritative guidance issued by the Financial Accounting Standards Board, or FASB. We translate assets and liabilities for these subsidiaries at exchange rates in effect at the balance sheet date. We translate income and expense accounts for these subsidiaries at the average monthly exchange rates for the periods. We record resulting translation adjustments as a component of accumulated other comprehensive income (loss) within stockholders' equity (deficit). We record gains and losses from currency transactions denominated in currencies other than the functional currency as other income (expense) in our consolidated statements of operations. There were no equity transactions denominated in foreign currencies for the years ended December 31, 2020 and 2019. Local currency transactions of international subsidiaries that have the U.S. dollar as the functional currency are remeasured into U.S. dollars using current rates of exchange for monetary assets and liabilities and historical rates of exchange for non-monetary assets and liabilities.

We recorded a net transaction loss related to the remeasurement of monetary assets and liabilities of $1.7 million within our consolidated statements of operations for the year ended December 31, 2020, a net transaction gain of $0.3 million for the year ended December 31, 2019 and a net transaction loss of $14.9 million for the year ended December 31, 2018, primarily related to various intercompany loans.

We established a foreign currency denominated intercompany loan as part of the Take Private to provide a conduit to utilize foreign earnings effectively. As of July 1, 2018, this foreign currency denominated intercompany loan was designated as long-term due to a change in our investment strategy and the enactment of the U.S. Tax Cuts and Jobs Act of 2017, or the Tax Act. Therefore, beginning on July 1, 2018, the foreign currency transaction gains and losses resulting from remeasurement of this foreign currency denominated intercompany loan were recognized as a component of accumulated other comprehensive income (loss). In September 2019, we determined that the intercompany loan will not be repaid and it was reclassified as a capital contribution.

Recently Adopted Accounting Pronouncements

On January 1, 2020 we adopted the Financial Accounting Standards Board, or FASB, Accounting Standards Codification ("ASC") No. 2017-04 *"Intangibles-Goodwill and Other,"* or ASC 350, which simplifies the accounting for goodwill impairment. The new guidance removes step two of the two-step quantitative goodwill impairment test, which requires a hypothetical purchase price allocation. The standard did not have a material impact on our consolidated financial statements for the year ended December 31, 2020.

On January 1, 2019 we adopted the FASB Accounting Standards Update No. 2014-09 "Revenue from Contracts with Customers," or ASC 606, which replaced all existing revenue guidance under ASC 605 "Revenue Recognition," including prescriptive industry-specific guidance, or ASC 605. This standard's core principle is that an entity will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. We adopted ASC 606 using the modified-retrospective method. Results for reporting periods beginning after January 1, 2019 are presented in compliance with the new revenue recognition standard ASC 606. Historical financial results for reporting periods prior to 2019 are presented in conformity with amounts previously disclosed under the prior revenue recognition standard, ASC 605.

On December 31, 2019, as we no longer qualified as an emerging growth company, we retroactively adopted the FASB Accounting Standard Update No. 2016-02 "Leases," or ASC 842, as of January 1, 2019 using the optional transition method in which an entity can apply the new standard at the adoption date without adjusting comparative prior periods. Historical financial results for reporting periods prior to 2019 are presented in conformity with amounts previously disclosed under the prior lease accounting standard. The new lease accounting standard replaced existing lease accounting standards and expanded disclosure requirements. The adoption of the new standard resulted in leases currently designated as operating leases being reported on our consolidated balance sheet at their net present value.

Acquisitions

The purchase price of our acquired businesses is allocated to the assets acquired and the liabilities assumed based on their estimated fair values, with the excess recorded as goodwill. If applicable, we estimate the fair value of contingent consideration payments in determining the purchase price. Goodwill is allocated to our reporting units expected to benefit from the business combination based on the relative fair value at the acquisition date. During the measurement period, which may be up to one year from the acquisition date, we may record adjustments to the fair value of the tangible and intangible assets acquired and liabilities assumed, including the deferred tax asset valuation allowances and acquired income tax uncertainties, with the corresponding offset to goodwill. We include the operating results of acquisitions in our consolidated financial statements from the effective date of the acquisitions. Acquisition related costs are expensed separately from the acquisition as incurred and are primarily included in general and administrative expenses in our consolidated statements of operations.

The fair value of identifiable intangible assets is based on significant judgments made by management. We typically engage third party valuation appraisal firms to assist us in determining the fair values and useful lives of the assets acquired. The valuation estimates and assumptions are based on historical experience and information obtained by management, and include, but are not limited to, future expected revenues earned from customer relationships and the developed product technologies and discount rates applied in determining the present value of those cash flows. Unanticipated events and circumstances may occur that could affect the accuracy or validity of such assumptions, estimates or actual results. Acquired identifiable intangible assets are amortized on the straight-line method over their estimated economic lives, which are generally two to ten years for trademarks, customer relationships, customer backlog, non-competition covenants and acquired developed product technologies and ten years for intellectual property. We include amortization of acquired developed product technologies in cost of revenue and amortization of other acquired intangible assets in operating expenses in our consolidated statements of operations.

Impairment of Goodwill, Intangible Assets and Long-lived Assets

Goodwill

Our goodwill was derived from the Take Private transaction and acquisitions where the purchase price exceeded the fair value of the net identifiable assets acquired. Goodwill is assigned to our reporting units and tested for impairment at least annually during the fourth quarter or sooner when circumstances indicate an impairment may exist. An impairment of goodwill is recognized when the carrying amount of a reporting unit exceeds its fair value. For purposes of the annual impairment test, we first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value, a "Step 0" analysis. If, based on a review of qualitative factors, it is more likely than not that the fair value of a reporting unit is less than its carrying value we perform "Step 1" of the goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. If the carrying value exceeds the fair value, an impairment loss is recognized for the amount by which the reporting unit's carrying value exceeds its fair value, not to exceed the carrying value of goodwill in that reporting unit.

In October 2020, we performed a qualitative, "Step 0," assessment for our reporting units. For "Step 0," we assessed several events and circumstances that could affect the significant inputs used to determine the fair value of our reporting units, including the significance of the amount of excess fair value over carrying value, consistency of operating margins and cash flows, budgeted-to-actual performance from prior year, overall change in economic climate, changes in the industry and competitive environment, key management turnover, and earnings quality and sustainability. As of October 1, 2020, there were no unanticipated changes or negative indicators in the above qualitative factors that would impact the fair value of our reporting units as of the annual impairment analysis date. As such, we determined there were no indicators of impairment and that it was more likely than not that the fair value of our reporting units was greater than their carrying values and therefore performing the next step of impairment test was unnecessary.

In December 2020, subsequent to our annual goodwill impairment analysis, we became aware that we were the target of a cybersecurity attack that involved the insertion of a vulnerability within our Orion Software Platform, which, if present and activated, could potentially allow an attacker to compromise the server on which the Orion products run, or the Cyber Incident. The Orion Software Platform is a product family within our Core IT reporting unit. We considered the impact of the Cyber Incident on our evaluation of goodwill impairment indicators made during our October 1, 2020 annual test. As part of the analysis we considered the decline in the stock price subsequent to the Cyber Incident and estimated impacts to new license sales and maintenance renewals and incremental costs as a result of the Cyber Incident and determined it appropriate to perform a quantitative, "Step 1," assessment of our reporting units as of December 31, 2020. We also engaged a third-party valuation specialist to assist in the performance of the impairment analysis of our reporting units.

For the Step 1 goodwill impairment analysis, we utilized a combination of both an income and market approach to evaluate each of our reporting units. The income approach is based on the present value of projected cash flows and a terminal value. The discounted cash flow models reflect our assumptions regarding revenue growth rates, estimated implications of the Cyber Incident to our cost structure, economic and market trends and other expectations about the anticipated operating results of our reporting units. The market approach develops an indication of fair value by calculating average market pricing multiples of revenues and EBITDA for selected peer publicly-traded companies. As a result of the impairment analysis, our Core IT and ITSM reporting units were determined to have fair values that exceeded their carrying value by approximately 15.6% and 17.4%, respectively, and therefore, no impairment was recognized. The other reporting units' fair values significantly exceeded their carrying values.

Fair value determinations of our reporting units require considerable judgment and are sensitive to changes in underlying assumptions and factors. As a result, there can be no assurance that the estimates and assumptions made for purposes of the quantitative goodwill impairment tests will prove to be an accurate prediction of future results. Examples of events or circumstances that could reasonably be expected to negatively affect the underlying key assumptions and ultimately impact the estimated fair value of our Core IT and ITSM reporting units may include such items as: (i) a decrease in future cash flows due to lower than expected license sales or maintenance renewals and higher than estimated costs to respond to the cybersecurity attack, (ii) higher than expected customer attrition resulting from customer concerns related to the cyber matter, (iii) adverse loss exposure from claims, fines or penalties from the cybersecurity matter; and (iv) volatility in the equity and debt markets or other macroeconomic factors which could result in a higher weighted-average cost of capital. Accordingly, if our current cash flow assumptions are not realized, it is possible that an impairment charge may be recorded in the future.

Indefinite-lived Intangible Assets

We review our indefinite-lived intangible assets for impairment annually, in the fourth quarter, or more frequently if a triggering event occurs. We first assess qualitative factors to determine whether it is more likely than not that an indefinite-lived intangible asset is impaired as a basis for determining whether it is necessary to perform the quantitative test. If necessary, the quantitative test is performed by comparing the fair value of indefinite lived intangible assets to the carrying value. In the event the carrying value exceeds the fair value of the assets, the assets are written down to their fair value. As of December 31, 2020 and 2019, we performed a qualitative, “Step 0,” assessment and determined there were no indicators that our indefinite-lived intangible assets were impaired.

Long-lived Assets

We evaluate the recoverability of our long-lived assets, including finite-lived intangible assets and other assets, for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. Events or changes in circumstances that could result in an impairment review include, but are not limited to, significant underperformance relative to historical or projected future operating results, significant changes in the manner of use of the acquired assets or the strategy for our overall business, and significant negative industry or economic trends. In the event that the net book value of our long-lived assets exceeds the future undiscounted net cash flows attributable to such assets, an impairment charge would be required. Impairment, if any, is recognized in the period of identification to the extent the carrying amount of an asset or asset group exceeds the fair value of such asset or asset group. As of December 31, 2020 and 2019, we assessed the qualitative factors above, including the impacts of the Cyber Incident, and determined it was more likely than not the carrying value of our long-lived assets, including finite-lived intangible assets, were recoverable.

Fair Value Measurements

We apply the authoritative guidance on fair value measurements for financial assets and liabilities that are measured at fair value on a recurring basis and non-financial assets and liabilities, such as goodwill, intangible assets and property, plant and equipment that are measured at fair value on a non-recurring basis.

The guidance establishes a three-tiered fair value hierarchy that prioritizes inputs to valuation techniques used in fair value calculations. The three levels of inputs are defined as follows:

Level 1: Unadjusted quoted prices for identical assets or liabilities in active markets accessible by us.

Level 2: Inputs that are observable in the marketplace other than those inputs classified as Level 1.

Level 3: Inputs that are unobservable in the marketplace and significant to the valuation.

See *Note 5. Fair Value Measurements* for a summary of our financial instruments accounted for at fair value on a recurring basis. The carrying amounts reported in our consolidated balance sheets for cash, accounts receivable, accounts payable and other accrued expenses approximate fair value due to relatively short periods to maturity.

Accounts Receivable

Accounts receivable represent trade receivables from customers when we have sold subscriptions, perpetual licenses or related maintenance services and have not yet received payment. We present accounts receivable net of an allowance for doubtful accounts. We maintain an allowance for doubtful accounts for estimated losses resulting from the inability of customers to make required payments. In doing so, we consider the current financial condition of the customer, the specific details of the customer account, the age of the outstanding balance and the current economic environment. Any change in the assumptions used in analyzing a specific account receivable might result in an additional allowance for doubtful accounts being recognized in the period in which the change occurs. We have historically had insignificant write-offs related to bad debts.

Property and Equipment

We record property and equipment at cost and depreciate them using the straight-line method over their estimated useful lives as follows:

	Useful Life (in years)
Equipment, servers and computers	3 - 5
Furniture and fixtures	5 - 7
Software	3 - 5
Leasehold improvements	Lesser of lease term or useful life

Upon retirement or sale of property and equipment, we remove the cost of assets disposed of and any related accumulated depreciation from our accounts and credit or charge any resulting gain or loss to operating expense. We expense repairs and maintenance as they are incurred.

Research and Development Costs

Research and development expenses primarily consist of personnel costs and contractor fees related to the development of new software products and enhancements to existing software products. Personnel costs include salaries, bonuses and stock-based compensation and related employer-paid payroll taxes, as well as an allocation of our facilities, depreciation, benefits and IT costs. Research and development costs are charged to operations as incurred with the exception of those software development costs that may qualify for capitalization. Software development costs incurred subsequent to establishing technological feasibility through the general release of the software products are capitalized. Our new software products and significant enhancements to our existing products are available for general release soon after technological feasibility has been established. Due to the short time period between technological feasibility and general release, capitalized software development costs were insignificant for the years ended December 31, 2020, 2019 and 2018.

Internal-Use Software and Website Development Costs

We capitalize costs related to developing new functionality for our suite of products that are hosted and accessed by our customers on a subscription basis. We also capitalize costs related to specific upgrades and enhancements when it is probable the expenditures will result in additional functionality. Costs incurred in the preliminary stages of development are expensed as incurred. Once an application has reached the development stage, internal and external costs, if direct and incremental, are capitalized until the software is substantially complete and ready for its intended use. Capitalized costs are recorded as part of other assets, net in our consolidated balance sheets. Maintenance and training costs are expensed as incurred. Internal-use software is amortized on a straight-line basis over its estimated useful life, generally three years, and included in cost of recurring revenue in the consolidated statements of operations. There were no impairments to internal-use software and we did not incur any significant website development costs during the periods presented.

We had $12.7 million and $7.9 million of internal-use software, net capitalized as of December 31, 2020 and 2019, respectively. Amortization expense of internal-use software and website development costs was $5.3 million, $3.5 million and $2.5 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Debt Issuance Costs

Debt issuance costs for our credit facilities outstanding are presented as a deduction from the corresponding debt liability on our consolidated balance sheets and amortized on an effective interest rate method over the term of the associated debt as interest expense in our consolidated statements of operations. Amortization of debt issuance costs included in interest expense was $9.2 million, $9.2 million and $11.7 million for the years ended December 31, 2020, 2019 and 2018, respectively. See *Note 9. Debt* for discussion of our credit facilities.

Contingencies

We account for claims and contingencies in accordance with authoritative guidance that requires we record an estimated loss from a claim or loss contingency when information available prior to issuance of our consolidated financial statements indicates a liability has been incurred at the date of our consolidated financial statements and the amount of the loss can be reasonably estimated. If we determine that it is reasonably possible but not probable that an asset has been impaired or a liability has been incurred, we disclose the amount or range of estimated loss if material or that the loss cannot be reasonably estimated. Accounting for claims and contingencies requires us to use our judgment. We consult with legal counsel on those issues related to litigation and seek input from other experts and advisors with respect to matters in the ordinary course of business. See *Note 16. Commitments and Contingencies* for a discussion of contingencies.

Accumulated Other Comprehensive Income (Loss)

Changes in accumulated other comprehensive income (loss) by component are summarized below:

	Foreign Currency Translation Adjustments	Accumulated Other Comprehensive Income (Loss)
	(in thousands)	
Balance at December 31, 2018	$ 17,043	$ 17,043
Other comprehensive gain (loss) before reclassification	(22,290)	(22,290)
Amount reclassified from accumulated other comprehensive income (loss)	—	—
Net current period other comprehensive income (loss)	(22,290)	(22,290)
Balance at December 31, 2019	(5,247)	(5,247)
Other comprehensive gain (loss) before reclassification	132,459	132,459
Amount reclassified from accumulated other comprehensive income (loss)	—	—
Net current period other comprehensive income (loss)	132,459	132,459
Balance at December 31, 2020	$ 127,212	$ 127,212

Revenue Recognition

We generate recurring revenue from fees received for subscriptions and from the sale of maintenance services associated with our perpetual license products and license revenue from the sale of our perpetual license products. We recognize revenue related to contracts from customers when we transfer promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This is determined by following a five-step process which includes (1) identifying the contract with a customer, (2) identifying the performance obligations in the contract, (3) determining the transaction price, (4) allocating the transaction price, and (5) recognizing revenue when or as we satisfy a performance obligation, as described below.

- *Identify the contract with a customer.* We generally use a purchase order, an authorized credit card, an electronic or manually signed license agreement, or the receipt of a cash payment as evidence of a contract with a customer provided that collection is considered probable. We sell our products through our direct inside sales force and through our distributors and resellers. Our distributors and resellers do not carry inventory of our software and we generally require them to specify the end user of the software at the time of the order. If the distributor or reseller does not provide end-user information, then we will generally not fulfill the order. Our distributors and resellers have no rights of return or exchange for software that they purchase from us and payment for these purchases is due to us without regard to whether the distributors or resellers collect payment from their customers. Sales through resellers and distributors are typically evidenced by a reseller or distributor agreement, together with purchase orders or authorized credit cards on a transaction-by-transaction basis.
- *Identify the performance obligations in the contract.* Performance obligations promised in a contract are identified based on the goods or services that will be transferred to the customer that are separately identifiable from other promises in the contract, or distinct. If not considered distinct, the promised goods or services are combined with other goods or services and accounted for as a combined performance obligation. Determining the distinct performance obligations in a contract requires judgment. Our performance obligations primarily include perpetual and time-based licenses, maintenance support including unspecified upgrades or enhancements to new versions of our software products and software-as-a-service, or SaaS, offerings. See additional discussion of our performance obligations below.
- *Determine the transaction price.* We determine the transaction price based on the contractual consideration and the amount of consideration we expect to receive in exchange for transferring the promised goods or services to the customer. We account for sales incentives to customers, resellers or distributors as a reduction of revenue at the time we recognize the revenue from the related product sale. We report revenue net of any sales tax collected. Our return policy generally does not allow our customers to return software products.
- *Allocate the transaction price.* We allocate the transaction price of the contract to each distinct performance obligation based on a relative standalone selling price basis. Determining standalone selling prices for our performance obligations requires judgment and are based on multiple factors including, but not limited to historical selling prices and discounting practices for products and services, internal pricing policies and pricing practices in different regions and through different sales channels. For our subscription products and maintenance services, our standalone selling prices are generally observable using standalone sales or renewals. For our perpetual and time-based license products, given there are no observable standalone sales, we estimate our standalone selling prices by evaluating our historical pricing and discounting practices in observable bundled transactions. We review the standalone selling price for our performance obligations periodically and update, if needed, to ensure that the methodology utilized reflects our current pricing practices.
- *Recognize revenue when or as we satisfy a performance obligation.* Revenue is recognized when or as performance obligations are satisfied either over time or at a point in time by transferring a promised good or service. We consider this transfer to have occurred when risk of loss transfers to the customer, reseller or distributor or the customer has access to their subscription which is generally upon electronic transfer of the license key or password that provides immediate availability of the product to the purchaser. See further discussion below regarding the timing of revenue recognition for each of our performance obligations.

The following summarizes our performance obligations from which we generate revenue:

Performance obligation	When performance obligation is typically satisfied
Subscription revenue	
SaaS offerings	Over the subscription term, once the service is made available to the customer (over time)
Time-based licenses	Upon the delivery of the license key or password that provides immediate availability of the product (point in time)
Time-based technical support and unspecified software upgrades	Ratably over the contract period (over time)
Maintenance revenue	
Technical support and unspecified software upgrades	Ratably over the contract period (over time)
License revenue	
Perpetual licenses	Upon the delivery of the license key or password that provides immediate availability of the product (point in time)

Recurring Revenue. Recurring revenue consists of subscription and maintenance revenue.

- *Subscription Revenue*. We primarily derive subscription revenue from fees received for subscriptions to our SaaS offerings and our time-based license arrangements. We generally invoice subscription agreements monthly based on usage or in advance over the subscription period on either a monthly or annual basis. Subscription revenue for our SaaS offerings is generally recognized ratably over the subscription term once the service is made available to the customer or when we have the right to invoice for services performed. Revenue for the license performance obligation of our time-based license arrangements is recognized at a point in time upon delivery of the license key and the revenue for the technical support performance obligation of our time-based license arrangements is recognized ratably over the contract period. The amount of revenue related to the license performance obligations of our time-based license arrangements included in subscription revenue is less than 10% of our total consolidated revenue. Our subscription revenue includes our MSP, application performance management and IT service management, or ITSM, products.
- *Maintenance Revenue*. We derive maintenance revenue from the sale of maintenance services associated with our perpetual license products. We typically include one year of maintenance service as part of the initial purchase price of each perpetual software offering and then sell renewals of this maintenance agreement. Customers with maintenance agreements are entitled to receive technical support and unspecified upgrades or enhancements to new versions of their software products on a when-and-if-available basis for the specified contract period. We believe that our technical support and unspecified upgrades or enhancements performance obligations each have the same pattern of transfer to the customer and are therefore accounted for as a single distinct performance obligation. We recognize maintenance revenue ratably on a daily basis over the contract period.

License Revenue. We derive license revenue from the sale of our perpetual licenses. Revenue for the license performance obligation of our perpetual license arrangements is recognized at a point in time upon delivery of the electronic license key. Perpetual license arrangements are invoiced upon delivery.

Deferred Revenue

Deferred revenue primarily consists of transaction prices allocated to remaining performance obligations from maintenance services associated with our perpetual license products which are delivered over time. We generally bill maintenance agreements annually in advance for services to be performed over a 12-month period. Customers have the option to purchase maintenance renewals for periods other than 12 months. We initially record the amounts allocated to maintenance performance obligations as deferred revenue and recognize these amounts ratably on a daily basis over the term of the maintenance agreement. We record deferred revenue that will be recognized during the succeeding 12-month period as current deferred revenue and the remaining portion is recorded as long-term deferred revenue.

Details of our total deferred revenue balance was as follows:

	Total Deferred Revenue
	(in thousands)
Balance at December 31, 2018	$ 296,132
Adoption of ASC 606	(2,772)
Deferred revenue recognized	(445,726)
Additional amounts deferred	485,512
Deferred revenue acquired in business combinations	10,254
Balance at December 31, 2019	343,400
Deferred revenue recognized	(507,144)
Additional amounts deferred	535,738
Deferred revenue acquired in business combinations	10,760
Balance at December 31, 2020	$ 382,754

We expect to recognize revenue related to these remaining performance obligations as of December 31, 2020 as follows:

	Revenue Recognition Expected by Period			
	Total	Less than 1 year	1-3 years	More than 3 years
	(in thousands)			
Expected recognition of deferred revenue	$ 382,754	$ 346,075	$ 36,193	$ 486

Deferred Commissions

Deferred commissions, which consist of direct and incremental sales commissions and related fringe benefits, are capitalized using the portfolio approach if we expect to benefit from those costs for more than one year. Deferred commissions are allocated to each performance obligation within the contract and amortized on a straight-line basis over the expected benefit period of the related performance obligations. We expense commissions as incurred when the expected amortization period is one year or less. Deferred commissions allocated to new maintenance arrangements and certain SaaS offerings are amortized over an average expected benefit period of approximately four to six years which was determined based on the expected life of our technology. Deferred commissions allocated to perpetual licenses, maintenance renewal arrangements and MSP offerings are expensed as incurred. Deferred commissions are classified as current or non-current assets based on the timing the expense will be recognized. The current and non-current portions of our deferred commissions are included in prepaid and other current assets and other assets, net respectively, in our consolidated balance sheets. The amortization of our deferred commissions is included in sales and marketing expense in our consolidated statement of operations.

Details of our deferred commissions balance was as follows:

	Deferred Commissions
	(in thousands)
Balance at December 31, 2018	$ —
Adoption of ASC 606	5,157
Commissions capitalized	7,888
Amortization recognized	(2,421)
Balance at December 31, 2019	10,624
Commissions capitalized	7,954
Amortization recognized	(3,777)
Balance at December 31, 2020	$ 14,801

	December 31,	
	2020	2019
	(in thousands)	
Classified as:		
Current	$ 3,824	$ 2,543
Non-current	10,977	8,081
Total deferred commissions	$ 14,801	$ 10,624

Cost of Revenue

Cost of recurring revenue. Cost of recurring revenue consists of technical support personnel costs which includes salaries, bonuses and stock-based compensation and related employer-paid payroll taxes for technical support personnel, as well as an allocation of overhead costs. Royalty fees, public cloud infrastructure and hosting fees related to our application performance management, MSP and ITSM products are also included in cost of recurring revenue. Cost of license revenue is immaterial to our financial statements and is included in cost of recurring revenue in our consolidated statements of operations.

Amortization of acquired technologies. Amortization of acquired technologies included in cost of revenue relate to our licensed products and subscription products as follows:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Amortization of acquired license technologies	$ 144,160	$ 142,828	$ 144,857
Amortization of acquired subscription technologies	37,201	33,055	31,134
Total amortization of acquired technologies	$ 181,361	$ 175,883	$ 175,991

Advertising

We expense advertising costs as incurred. Advertising expense is included in sales and marketing expenses in our consolidated statements of operations.

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Advertising expense	$ 51,924	$ 48,499	$ 38,477

Leases

We lease facilities worldwide and certain equipment under non-cancellable lease agreements. During 2019, we adopted the new lease accounting guidance ASC 842. Under ASC 842, we evaluate if a contract is or contains a lease at inception of the contract. If we determine that a contract is or contains a lease, we determine the appropriate lease classification and recognize a right-of-use asset and lease liability at the commencement date of the lease based on the present value of fixed lease payments over the lease term reduced by lease incentives. To determine the present value of lease payments, we use an estimated incremental borrowing rate based on the interest rate a similar borrowing on a collateralized basis would incur based on information available on the lease commencement date as none of our leases provide an implicit rate. We generally base this discount rate on the interest rate incurred by our senior secured debt, adjusted for considerations for the value, term and currency of the lease. Lease terms include options to extend or terminate the lease when it is reasonably certain that we will exercise those options.

We recognize right-of-use assets and lease liabilities for leasing arrangements with terms greater than one year. Certain lease contracts include obligations to pay for other services, such as operations and maintenance. We account for lease and non-lease components in a contract as a single lease component for all classes of underlying assets except certain classes of equipment. Right-of-use assets are tested for impairment in the same manner as long-lived assets.

The terms of some of our lease agreements provide for rental payments on a graduated basis. Operating lease costs are recognized on a straight-line basis over the lease term and recorded in the appropriate income statement line item based on the asset or a headcount allocation for office leases. Certain of our office leases require the payment of our proportionate share of common area maintenance or service charges. As we have elected to account for lease and non-lease components as a single lease component for our real estate leases, these costs are included in variable lease costs. In addition, certain of our leases may include variable payments based on measures that include changes in price indices or market interest rates which are included in variable lease costs and expensed as incurred. We had no finance leases as of and for the years ended December 31, 2020 and 2019. See *Note 7. Leases* for additional information regarding our lease arrangements.

For the year ended December 31, 2018, prior to the adoption of ASC 842, we accounted for leases under the previous lease accounting guidance and recognized rent expense on a straight-line basis over the lease period and accrued rent expense incurred but not paid. Cash or lease incentives, or tenant allowances, received pursuant to certain leases were recognized on a straight-line basis as a reduction to rent over the lease term.

Income Taxes

We use the liability method of accounting for income taxes as set forth in the authoritative guidance for accounting for income taxes. Under this method, we recognize deferred tax liabilities and assets for the expected future tax consequences of temporary differences between the respective carrying amounts and tax basis of our assets and liabilities.

The guidance on accounting for uncertainty in income taxes prescribes a recognition threshold and measurement attribute for financial statement disclosure of tax positions taken or expected to be taken on a tax return. We accrue interest and penalties related to unrecognized tax benefits as a component of income tax expense.

We establish valuation allowances when necessary to reduce deferred tax assets to the amounts expected to be realized. On a quarterly basis, we evaluate the need for, and the adequacy of, valuation allowances based on the expected realization of our deferred tax assets. The factors used to assess the likelihood of realization include our latest forecast of future taxable income, available tax planning strategies that could be implemented, reversal of taxable temporary differences and carryback potential to realize the net deferred tax assets. See *Note 15. Income Taxes* for additional information regarding our income taxes.

Stock-Based Compensation

We have granted our employees, directors and certain contractors stock-based incentive awards. These awards are in the form of stock options, restricted stock and restricted stock units. We measure stock-based compensation expense for all share-based awards granted to employees and directors based on the estimated fair value of those awards on the date of grant. The fair value of stock option awards is estimated using a Black-Scholes valuation model. The fair value of restricted stock unit awards and restricted stock is determined using the fair market value of the underlying common stock on the date of grant less any amount paid at the time of the grant, or intrinsic value. Our stock awards vest on service-based or performance-based vesting conditions. For our service-based awards, we recognize stock-based compensation expense on a straight-line basis over the service period of the award. For our performance-based awards, we recognize stock-based compensation expense on a graded-vesting basis over the service period of each separately vesting tranche of the award, if it is probable that the performance target will be achieved.

We estimated the fair value for stock options at the date of grant using the Black-Scholes option pricing model with the following weighted-average assumptions:

	Year Ended December 31,		
	2020(1)	2019(2)	2018
Expected dividend yield	— %	— %	— %
Volatility	35.5 %	— %	40.2 %
Risk-free rate of return	0.3 %	—	2.6 - 2.9%
Expected life	4.00	—	6.34

(1) There were no grants of stock options made during the year ended December 31, 2020; however due to modifications of performance-based grants, 75,821 stock options are reflected as new grants issued at the modification date fair value and the previous grants were forfeited. See *Note 11. Stockholders' Equity (Deficit) and Stock-Based Compensation* for additional information.

(2) There were no grants of stock options made in the year ended December 31, 2019.

We have not paid and do not anticipate paying cash dividends on our common stock; therefore, we assume the expected dividend yield to be zero. We estimate the expected volatility using the historical volatility of comparable public companies from a representative peer group. We based the risk-free rate of return on the average U.S. treasury yield curve for the most appropriate terms for the respective periods. As allowed under current guidance, we have elected to apply the "simplified method" in developing our estimate of expected life for "plain vanilla" stock options by using the midpoint between the vesting date and contractual termination date since we do not have sufficient historical exercise data to provide a reasonable basis upon which to estimate expected term. For all awards, we granted employees stock awards at exercise prices equal to the fair value of the underlying common stock on the date the award was approved. Performance-based awards are not considered granted under the applicable accounting guidance until the performance attainment targets for each applicable tranche have been defined. We recognize the impact of forfeitures in stock-based compensation expense when they occur. See *Note 11. Stockholders' Equity (Deficit) and Stock-Based Compensation* for additional information.

The impact to our income (loss) before income taxes due to stock-based compensation expense and the related income tax benefits were as follows:

	Year Ended December 31,		
	2020	2019	2018
		(in thousands)	
Impact to income (loss) before income taxes due to stock-based compensation	$ 74,240	$ 34,395	$ 5,833
Income tax benefit related to stock-based compensation	13,175	5,729	1,054

Net Income (Loss) Per Share

We calculate basic and diluted net income (loss) per share attributable to common stockholders in conformity with the two-class method required for companies with participating securities. Under the two-class method, basic and diluted net income (loss) per share is determined by calculating net income (loss) per share for common stock and participating securities based on participation rights in undistributed earnings. We computed basic net income (loss) per share available to common stockholders by dividing net income (loss) available to common stockholders by the weighted-average number of common shares outstanding during the reporting period. Redeemable convertible Class A Common Stock was not included in the basic or diluted net income (loss) per share calculations for the periods it was outstanding as it was contingently convertible upon a future event. Net income (loss) available to common stockholders is defined as net income (loss), less the accretion of dividends on our redeemable convertible Class A Common Stock and earnings allocated to unvested restricted stock plus the gain on conversion of our redeemable convertible Class A Common Stock at our IPO. Our unvested incentive restricted stock has the right to receive non-forfeitable dividends on an equal basis with common stock and therefore are considered participating securities that must be included in the calculation of net income per share using the two-class method. The holders of unvested incentive restricted stock do not have a contractual obligation to share in our losses. As such, in periods in which we had net losses available to common stockholders, our net losses were not allocated to these participating securities.

We computed diluted net income (loss) per share similarly to basic net income (loss) per share except that it reflects the potential dilution that could occur if dilutive securities or other obligations to issue common stock were exercised or converted into common stock using the treasury stock method. Refer to *Note 12. Net Income Per Share* for additional information regarding the computation of net income per share and *Note 10. Redeemable Convertible Class A Common Stock* and *Note 11. Stockholders' Equity (Deficit) and Stock-Based Compensation* for additional information regarding our common stock and the conversion of our Redeemable Class A Common Stock at the IPO in October 2018.

Concentrations of Risks

Financial instruments that potentially subject us to concentrations of credit risk consist principally of cash and cash equivalents and accounts receivable. We consider all highly liquid investments with original maturities of three months or less to be cash equivalents. Our cash and cash equivalents consisted of the following:

	December 31,	
	2020	2019
	(in thousands)	
Demand deposit accounts	$ 210,498	$ 168,813
Money market funds	160,000	4,559
Total cash and cash equivalents	$ 370,498	$ 173,372

Our cash deposited with banks in demand deposit accounts may exceed the amount of insurance provided on these deposits. Our cash equivalents invested in money market funds are not insured and we are therefore at risk of losing our full investment. Generally, we may withdraw our cash deposits and redeem our invested cash equivalents upon demand. We strive to maintain our cash deposits and invest in money market funds with multiple financial institutions of reputable credit and therefore bear minimal credit risk.

We provide credit to distributors, resellers and direct customers in the normal course of business. We generally extend credit to new customers based upon industry reputation and existing customers based upon prior payment history. For the year ended December 31, 2019 a certain distributor represented 12.5% of our revenue. For the years ended December 31, 2020 and 2018, no distributor, reseller or direct customer represented a significant concentration of our revenue.

At December 31, 2020 and 2019, no distributor, reseller or direct customer represented a significant concentration of our outstanding accounts receivable balance. We do not believe that our business is substantially dependent on any distributor or that the loss of a distributor relationship would have a material adverse effect on our business.

3. Acquisitions

2020 Acquisition

SentryOne

On October 29, 2020, we acquired SQL Sentry Holdings, LLC, or SentryOne, a leading technology provider of database performance monitoring and DataOps solutions for approximately $145.1 million. The SentryOne offering complements our existing on-premises and cloud-native database management offerings to serve the full needs of the mid-market and allows us to better serve larger organizations. We funded the transaction with cash on hand. We incurred $1.3 million in acquisition related costs, which are primarily included in general and administrative expense for the year ended December 31, 2020. Goodwill deductible for tax purposes for this acquisition is $81.8 million.

The initial determination of the fair value of the assets acquired and liabilities assumed is based on a preliminary valuation and the estimates and assumptions for these items are subject to change as we obtain additional information during the measurement period. Subsequent changes to the purchase price or other fair value adjustments determined during the measurement period will be recorded as an adjustment to goodwill.

The following table summarizes the consideration paid and the amounts recognized for the assets acquired and liabilities assumed:

	Total Fair Value
	(in thousands)
Current assets, including cash acquired of $3.2 million	$ 6,927
Property and equipment and other assets	12,477
Deferred tax asset	237
Identifiable intangible assets	64,800
Goodwill	81,862
Current liabilities	(4,329)
Other long-term liabilities	(6,086)
Deferred revenue	(10,760)
Total consideration	$ 145,128

The following table summarizes the fair value of the acquired identifiable intangible assets and weighted-average useful life:

	Fair Value	Weighted-average useful life
	(in thousands)	(in years)
Developed product technologies	$ 36,900	7
Customer relationships	26,200	5
Trademarks	1,700	2
Total identifiable intangible assets	$ 64,800	6.1

The amount of revenue and net loss related to the SentryOne acquisition included in our consolidated financial statements from the effective date of the acquisition is insignificant. Pro forma information for the acquisition has not been provided because the impact of the historical financials on our revenue, net income (loss) and net income (loss) per share is not material.

2019 Acquisitions

SAManage

On April 30, 2019, we acquired SAManage Ltd., or Samanage, an IT service desk solution company, for approximately $342.1 million, including $341.5 million paid in cash and $0.6 million in fair value of replacement equity awards attributable to pre-acquisition service. By acquiring Samanage, we entered the ITSM market and based on the acquired technology introduced the SaaS-based service desk solution, SolarWinds Service Desk, into our product portfolio. We funded the transaction with cash on hand and $35.0 million of borrowings under our Revolving Credit Facility. We incurred $2.1 million in acquisition related costs, which are primarily included in general and administrative expense for the year ended December 31, 2019. Goodwill for this acquisition is not deductible for tax purposes.

The following table summarizes the consideration paid and the amounts recognized for the assets acquired and liabilities assumed:

	Total Fair Value
	(in thousands)
Current assets, including cash acquired of $6.2 million	$ 18,957
Property and equipment and other assets	428
Identifiable intangible assets	49,700
Goodwill	286,208
Current liabilities	(2,230)
Other long-term liabilities	(2,288)
Deferred revenue	(8,713)
Total consideration	$ 342,062

The following table summarizes the fair value of the acquired identifiable intangible assets and weighted-average useful life:

	Fair Value	Weighted-average useful life
	(in thousands)	(in years)
Developed product technologies	$ 26,900	5
Customer relationships	22,800	4
Total identifiable intangible assets	$ 49,700	4.5

The amount of revenue related to the Samanage acquisition included in our consolidated financial statements from the effective date of the acquisition is insignificant. We estimate the amount of net loss related to the Samanage acquisition for the year ended December 31, 2019 included in our consolidated financial statements from the effective date of the acquisition is $25.0 million, which includes $7.4 million in amortization of acquired intangible assets and $5.2 million in stock-based compensation expense. Pro forma information for the acquisition has not been provided because the impact of the historical financials on our revenue, net income (loss) and net income (loss) per share is not material.

VividCortex

On December 10, 2019, we acquired VividCortex, Inc., or VividCortex, a SaaS-based database performance management solution company, for approximately $117.6 million. We funded the transaction with cash on hand. We incurred $0.1 million and $0.5 million in acquisition related costs for the years ended December 31, 2020 and 2019, respectively, which are primarily included in general and administrative expense. Goodwill for this acquisition is not deductible for tax purposes.

The following table summarizes the consideration paid and the amounts recognized for the assets acquired and liabilities assumed:

	Total Fair Value
	(in thousands)
Current assets, including cash acquired of $4.5 million	$ 5,392
Property and equipment and other assets	3,424
Identifiable intangible assets	11,700
Goodwill	99,623
Current liabilities	(545)
Other long-term liabilities	(491)
Deferred revenue	(1,507)
Total consideration	$ 117,596

The following table summarizes the fair value of the acquired identifiable intangible assets and weighted-average useful life:

	Fair Value	Weighted-average useful life
	(in thousands)	(in years)
Developed product technologies	$ 8,700	4
Customer relationships	3,000	2
Total identifiable intangible assets	$ 11,700	3.5

We estimate the amounts of revenue and net loss related to the VividCortex acquisition included in our consolidated financial statements from the effective date of the acquisition are insignificant for the year ended December 31, 2019. Pro forma information for the acquisition has not been provided because the impact of the historical financials on our revenue, net income (loss) and net income (loss) per share is not material.

2018 Acquisitions

In the year ended December 31, 2018, we completed acquisitions for a combined purchase price of approximately $62.9 million in cash, including $2.4 million of cash acquired. The acquisitions were funded with available cash on hand. We incurred $1.2 million in acquisition related costs, which are included in general and administrative expense for the year ended December 31, 2018. Goodwill for these acquisitions is not deductible for tax purposes.

The following table summarizes the consideration paid and the amounts recognized for the assets acquired and liabilities assumed for our acquisitions completed in the year ended December 31, 2018:

	Total Fair Value
	(in thousands)
Current assets, including cash acquired	$ 4,821
Deferred tax asset	1,550
Fixed assets	1,352
Identifiable intangible assets	18,412
Goodwill	43,746
Current liabilities	(3,331)
Deferred tax liabilities	(666)
Deferred revenue	(2,944)
Total consideration	$ 62,940

The following table summarizes the fair value of the acquired identifiable intangible assets and weighted-average useful life:

	Fair Value	Weighted-average useful life
	(in thousands)	(in years)
Developed product technologies	$ 13,317	5
Customer relationships	4,805	4
Trademarks	290	3
Total identifiable intangible assets	$ 18,412	4.8

The amounts of revenue and net loss related to these acquisitions included in our consolidated financial statements from the effective date of the respective acquisitions are insignificant for the year ended December 31, 2018. Pro forma information for these acquisitions has not been provided because the impact of the historical financials on our revenue, net loss and net income (loss) per share is not material.

We recognize revenue on acquired products in accordance with our revenue recognition policy as described above in *Note 2. Summary of Significant Accounting Policies.*

4. Goodwill and Intangible Assets

Goodwill

The following table reflects the changes in goodwill for the years ended December 31, 2020 and 2019:

	(in thousands)
Balance at December 31, 2018	$ 3,683,961
Acquisitions	396,945
Foreign currency translation and other adjustments	(22,708)
Balance at December 31, 2019	4,058,198
Acquisitions	81,862
Foreign currency translation and other adjustments	109,342
Balance at December 31, 2020	$ 4,249,402

The goodwill from acquisitions resulted primarily from our expectations that we will now be able to offer our customers additional products in new markets. Additionally, we expect the acquisitions will attract new customers for our entire line of products.

Intangible Assets

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

	December 31, 2020			December 31, 2019		
	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
	(in thousands)					
Developed product technologies	$ 1,098,530	$ (865,417)	$ 233,113	$ 1,038,143	$ (665,759)	$ 372,384
Customer relationships	608,072	(335,210)	272,862	567,430	(251,728)	315,702
Intellectual property	1,456	(354)	1,102	1,103	(226)	877
Trademarks	87,500	(1,592)	85,908	84,054	(1,504)	82,550
Total intangible assets	$ 1,795,558	$ (1,202,573)	$ 592,985	$ 1,690,730	$ (919,217)	$ 771,513

Intangible asset amortization expense was as follows:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Intangible asset amortization expense	$ 256,462	$ 245,792	$ 242,849

As of December 31, 2020, we estimate aggregate intangible asset amortization expense to be as follows:

	Estimated Amortization
	(in thousands)
2021	$ 236,272
2022	90,149
2023	63,059
2024	53,927
2025	51,260

The expected amortization expense is an estimate. Actual amounts of amortization expense may differ from estimated amounts due to additional intangible asset acquisitions, changes in foreign currency exchange rates, impairment of intangible assets, future changes to expected asset lives of intangible assets and other events. We had $84.3 million and $82.4 million of trademarks recorded with an indefinite life that are not amortized at December 31, 2020 and 2019, respectively. Our indefinite-lived trademarks primarily include the SolarWinds and THWACK trademarks.

5. Fair Value Measurements

The following table summarizes the fair value of our financial assets that were measured on a recurring basis as of December 31, 2020 and 2019. There have been no transfers between fair value measurement levels during the year ended December 31, 2020.

	Fair Value Measurements at December 31, 2020 Using			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
	(in thousands)			
Money market funds	$ 160,000	$ —	$ —	$ 160,000
Trading security	—	—	5,238	5,238
Total assets	$ 160,000	$ —	$ 5,238	$ 165,238

	Fair Value Measurements at December 31, 2019 Using			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
	(in thousands)			
Money market funds	$ 4,559	$ —	$ —	$ 4,559
Trading security	—	—	5,000	5,000
Total assets	$ 4,559	$ —	$ 5,000	$ 9,559

As of December 31, 2020 and 2019, the carrying value of our long-term debt approximates its estimated fair value as the interest rate on the debt agreements is adjusted for changes in the market rates. See *Note 9. Debt* for additional information regarding our debt.

6. Property and Equipment

Property and equipment, including software, consisted of the following:

	December 31,	
	2020	2019
	(in thousands)	
Equipment, servers and computers	$ 54,401	$ 42,583
Furniture and fixtures	12,075	8,226
Software	2,215	2,473
Leasehold improvements	38,706	23,440
	$ 107,397	$ 76,722
Less: Accumulated depreciation and amortization	(48,748)	(37,777)
Property and equipment, net	$ 58,649	$ 38,945

Depreciation and amortization expense on property and equipment was as follows:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Depreciation and amortization	$ 16,071	$ 13,947	$ 13,007

7. Leases

We lease our offices and do not own any real estate. Our corporate headquarters is located in Austin, Texas and currently consists of approximately 348,000 square feet. We also lease office space domestically and internationally in various locations for our operations, including facilities located in Cork, Ireland; Manila, Philippines; Brno, Czech Republic; Morrisville, North Carolina; Ottawa, Canada; Krakow, Poland; Lehi, Utah and Singapore. In addition, we lease certain information technology, office and other equipment. Our leases are all classified as operating and generally have remaining terms of less than one year to 12 years.

The components of operating lease costs for the years ended December 31, 2020 and 2019 were as follows:

	Year Ended December 31, 2020	Year Ended December 31, 2019
	(in thousands)	
Operating lease costs	$ 23,186	$ 19,990
Variable lease costs[1]	3,300	3,258
Short-term lease costs	586	737
Sublease income received	(2,402)	(1,909)
Total lease costs	$ 24,670	$ 22,076

(1) Primarily includes common area maintenance and other service charges for leases in which we pay a proportionate share of those costs as we have elected to not separate lease and non-lease components for our office leases.

Maturities of our operating lease liabilities as of December 31, 2020 were as follows:

	December 31, 2020
	(in thousands)
2021	$ 23,497
2022	23,379
2023	22,635
2024	22,047
2025	18,509
Thereafter	47,301
Total minimum lease payments	157,368
Less: imputed interest	(24,486)
Present value of operating lease liabilities	$ 132,882

As of December 31, 2020, the weighted-average remaining lease term of our operating leases was 7.03 years and the weighted-average discount rate used in the calculation of our lease liabilities was 4.9%.

As of December 31, 2020, we had a lease agreement in which the lease did not commence prior to year-end and therefore the lease liabilities and corresponding right-of-use asset had not been recorded in our consolidated balance sheet. We expect to take control of the leased asset in 2021 and our future minimum lease payments under this lease are approximately $29.0 million over a lease term of eleven years.

Supplemental cash flow information related to our leases was as follows:

	Year Ended December 31, 2020	Year Ended December 31, 2019
	(in thousands)	
Cash paid for amounts included in the measurement of operating lease liabilities	$ 22,250	$ 19,321
Right-of-use assets obtained in exchange for operating lease liabilities	37,300	11,042

Prior to our adoption of ASC 842, rent expense was as follows:

	Year Ended December 31, 2018
	(in thousands)
Rent expense	$ 18,249

8. Accrued Liabilities and Other

Accrued liabilities and other current liabilities were as follows:

	December 31, 2020	December 31, 2019
	(in thousands)	
Payroll-related accruals	$ 51,690	$ 31,614
Other accrued expenses and current liabilities	21,281	15,421
Total accrued liabilities and other	$ 72,971	$ 47,035

9. Debt

Debt Agreements

The following table summarizes information relating to our debt:

	December 31, 2020		December 31, 2019	
	Amount	Effective Rate	Amount	Effective Rate
	(in thousands, except interest rates)			
Revolving credit facility	$ —	— %	$ —	— %
First Lien Term Loan (as amended) due Feb 2024	1,930,300	2.90 %	1,950,200	4.55 %
Total principal amount	1,930,300		1,950,200	
Unamortized discount and debt issuance costs	(27,728)		(36,894)	
Total debt	1,902,572		1,913,306	
Less: Current portion of long-term debt	(19,900)		(19,900)	
Total long-term debt	$ 1,882,672		$ 1,893,406	

Senior Secured Debt

Senior Secured First Lien Credit Facilities

In connection with the Take Private in 2016, we entered into a first lien credit agreement with Credit Suisse AG, Cayman Islands Branch, or Credit Suisse, as administrative agent and collateral agent, and a syndicate of institutional lenders and financial institutions, or Initial First Lien Credit Agreement.

In March 2018, we entered into Amendment No. 4 to the Initial First Lien Credit Agreement, or Amendment No. 4, which replaced the outstanding borrowings with a new $1.99 billion U.S. dollar term loan, or First Lien Term Loan. The Initial First Lien Credit Agreement, as amended, is referred to here as the First Lien Credit Agreement. The proceeds of the First Lien Term Loan were used to repay all outstanding borrowings including accrued interest under the then outstanding First Lien Term Loan and a portion of the Second Lien Notes (as defined below), including accrued interest and related transaction costs. In connection with Amendment No. 4, a loss on debt extinguishment of $21.4 million was recorded to other income (expense) in the consolidated statement of operations for the year ended December 31, 2018.

The First Lien Credit Agreement provides for senior secured first lien credit facilities, consisting of the following as of December 31, 2020:

- a $1.99 billion First Lien Term Loan with a final maturity date of February 5, 2024; and
- a $125.0 million revolving credit facility (with a letter of credit sub-facility in the amount of $35.0 million), or the Revolving Credit Facility, consisting of (i) a $100.0 million multicurrency tranche with a final maturity date of February 5, 2022 and (ii) a $25.0 million tranche available only in U.S. dollars, of which $7.5 million has a final maturity date of February 5, 2021 and $17.5 million has a final maturity date of February 5, 2022.

Borrowings under our Revolving Credit Facility bear interest at a floating rate which is, at our option, either (1) a Eurodollar rate for a specified interest period plus an applicable margin of 2.50% or (2) a base rate plus an applicable margin of 1.50%, respectively. The Eurodollar rate applicable to the Revolving Credit Facility is subject to a “floor” of 0.0%.

Borrowings under our First Lien Term Loan bear interest at a floating rate which is, at our option, either (1) a Eurodollar rate for a specified interest period plus an applicable margin of 2.75% or (2) a base rate plus an applicable margin of 1.75%, respectively. The Eurodollar rate applicable to the First Lien Term Loan is subject to a “floor” of 0.0%.

The Eurodollar rate is equal to an adjusted London Interbank Offered Rate, or LIBOR, for a one-, two-, three- or six-month interest period with a LIBOR floor of 0%. The base rate for any day is a fluctuating rate per annum equal to the highest of (a) the rate of interest in effect for such day as publicly announced by Credit Suisse as its “prime rate” and (b) the federal funds effective rate in effect on such day plus 0.50% and (c) the one-month adjusted LIBOR plus 1.0% per annum.

The First Lien Term Loan requires equal quarterly repayments equal to 0.25% of the original principal amount.

In addition to paying interest on loans outstanding under the Revolving Credit Facility and the First Lien Term Loan, we are required to pay a commitment fee of 0.50% per annum of unused commitments under the Revolving Credit Facility. The commitment fee is subject to a reduction to 0.375% per annum based on our first lien net leverage ratio.

The First Lien Credit Agreement contains a number of covenants that, among other things, restrict, subject to certain exceptions, our ability to: incur additional indebtedness; incur liens; engage in mergers, consolidations, liquidations or dissolutions; pay dividends and distributions on, or redeem, repurchase or retire our capital stock; and make certain investments, acquisitions, loans, or advances. In addition, the terms of the First Lien Credit Agreement include a financial covenant which requires that, at the end of each fiscal quarter, if the aggregate amount of borrowings under the Revolving Credit Facility exceeds 35% of the aggregate commitments under the Revolving Credit Facility, our first lien net leverage ratio cannot exceed 7.40 to 1.00. The First Lien Credit Agreement also contains certain customary representations and warranties, affirmative covenants and events of default. As of December 31, 2020, we were in compliance with all covenants of the First Lien Credit Agreement.

The following table summarizes the future minimum principal payments under the First Lien Term Loan outstanding as of December 31, 2020:

	(in thousands)
2021	$ 19,900
2022	19,900
2023	19,900
2024	1,870,600
Total minimum principal payments	$ 1,930,300

Senior Secured Second Lien Credit Facility

In February 2016, in connection with the Take Private, we issued senior secured second lien floating rate notes, or the Second Lien Notes, with approximately $580.0 million aggregate principal amount due in February 2024. In May 2016, we entered into Amendment No.1 to the Second Lien Notes and issued an additional $100.0 million to finance a portion of an acquisition. The Second Lien Notes bore interest at a rate per annum, reset quarterly, equal to a three-month Adjusted LIBOR Rate, with a “floor” of 1.0%, plus 8.75%.

In March 2018, we terminated the agreements governing our Second Lien Notes and repaid or exchanged the then-outstanding principal on our Second Lien Notes of $680.0 million and replaced the Second Lien Notes with a new second lien credit agreement, or the Second Lien Credit Agreement, with Wilmington Trust, National Association or Wilmington Trust, as administrative agent and collateral agent, and certain other financial institutions. The Second Lien Credit Agreement provided for a $315.0 million U.S. dollar term loan, or the Second Lien Term Loan, with a final maturity of February 5, 2025 and did not require periodic principal payments. In connection with the redemption and exchange of our Second Lien Notes, a loss on debt extinguishment of $39.2 million, which includes a $22.7 million redemption premium, was recorded to other income (expense) in the consolidated statement of operations for the year ended December 31, 2018.

In October 2018, we completed our IPO and used a portion of the net proceeds from the offering to repay the $315.0 million in borrowings outstanding under our Second Lien Term Loan. In connection with the repayment of our Second Lien Term Loan, a loss on debt extinguishment of $19.5 million, which includes a $14.2 million prepayment fee, was recorded to other income (expense) in the consolidated statement of operations for the year ended December 31, 2018.

10. Redeemable Convertible Class A Common Stock

Prior to the conversion of Class A Common Stock into common stock at the IPO in October 2018, the Class A Common Stock accrued dividends at a rate of 9% per annum and had a liquidation preference equal to $1,000 per share plus any accrued and unpaid dividends. Redeemable convertible Class A Common Stock was recorded at liquidation value plus accrued, unpaid dividends in our consolidated balance sheets.

In October 2018, we amended our certificate of incorporation to modify the conversion price of the Class A Common Stock from the initial public offering price per share to a stated conversion price of $19.00 per share. Therefore, immediately prior to the completion of our IPO, we converted each outstanding share of our Class A Common Stock into 140,053,370 shares of common stock equal to the result of the liquidation value of such share of Class A Common Stock, divided by $19.00 per share. The liquidation value for each share of Class A Common Stock was equal to $1,000. At the time of the conversion of the Class A Common Stock, we also converted $717.4 million of accrued and unpaid dividends on the Class A Common Stock into 37,758,109 shares of common stock equal to the result of the accrued and unpaid dividends on each share of Class A Common Stock, divided by $19.00 per share. Upon the modification and conversion of the Class A Common Stock into common stock, we recognized a $711.2 million gain related to the difference between the fair value of the consideration transferred to the Class A Common Stock stockholders and the carrying value of the Class A Common Stock. The gain on conversion of Class A Common Stock was recorded in accumulated deficit and included in net income (loss) available to common stockholders in the computation of net income (loss) per share for the year ended December 31, 2018.

11. Stockholders' Equity (Deficit) and Stock-Based Compensation

Common Stock and Preferred Stock

As set by our certificate of incorporation, the Company has authorized 1,000,000,000 shares of common stock, par value of $0.001 per share, and 50,000,000 shares of preferred stock, par value of $0.001 per share. Each share of common stock entitles the holder thereof to one vote on each matter submitted to a vote at any meeting of stockholders.

Equity Incentive Awards

2016 Equity Incentive Plan

The board of directors adopted, and the stockholders approved, the SolarWinds Corporation Equity Plan, or 2016 Plan, in June 2016. Under the 2016 Plan, the Company was able to sell or grant shares of Class A Common Stock and Class B Common Stock and common stock-based awards, including nonqualified stock options, to the Company's employees, consultants, directors, managers and advisors. Our ability to grant any future equity awards under the 2016 Plan terminated in October 2018 following the consummation of our IPO. Our 2016 Plan will continue to govern the terms and conditions of all outstanding equity awards granted under the 2016 Plan.

The Company has issued common stock-based incentive awards, consisting of nonqualified stock options exercisable for shares of common stock and restricted shares of common stock, under the 2016 Plan to employees and certain members of the Company's board of directors. Options and restricted stock issued under the 2016 Plan to employees at the level of vice president and below generally vest annually over four or five years on each anniversary of the vesting commencement date, subject to continued employment through each applicable vesting date. Options and restricted stock issued under the 2016 Plan to employees at the level of group vice president and above generally vest 50% annually over four or five years on each anniversary of the vesting commencement date and 50% annually over four or five years after the end of each applicable fiscal year provided specified performance targets set by the board of directors are achieved for that fiscal year, subject to continued employment through each applicable vesting date. The term of an incentive stock option granted under our 2016 Plan may not exceed ten years. Under the terms of the applicable stock option agreements and restricted stock purchase agreements, the Company has the right (but will not be required) to repurchase restricted stock that has been purchased by an employee or director in the event that stockholder ceases to be employed or engaged (as applicable) by the Company for any reason or in the event of a change of control or due to certain regulatory burdens. The repurchase price for any unvested shares is equal to the lesser of (i) the price the stockholder paid for those shares and (ii) the fair market value of those shares. The repurchase price for any vested shares is equal to the fair market value of those shares unless the stockholder was terminated for cause or the stockholder violated any restrictive covenants in its agreements with the Company. If a stockholder is terminated for cause or violates any restrictive covenants, the repurchase price for the stockholder’s vested shares is the same as for unvested shares.

We have granted employees restricted stock and options at exercise prices equal to the fair value of the underlying common stock at the time of grant, as determined by our board of directors on a contemporaneous basis. As of December 31, 2020, common stock-based incentive awards of 2,528,060 were outstanding under the 2016 Plan consisting of 1,259,835 stock options and 1,268,225 shares of restricted common stock. For the years ended December 31, 2020, 2019 and 2018, the Company repurchased 105,100, 407,200 and 272,133 shares, respectively, of vested and unvested restricted common stock upon employee terminations.

2018 Equity Incentive Plan

In October 2018, the board of directors adopted, and the stockholders approved, the SolarWinds Corporation 2018 Equity Incentive Plan, or 2018 Plan. Under the 2018 Plan, the Company is able to sell or grant shares of common stock-based awards, including nonstatutory stock options or incentive stock options, stock appreciation rights, restricted stock, restricted stock units, performance stock units and other cash-based or stock-based awards, to the Company’s employees, contractors, consultants, directors, managers and advisors. The term of a stock option and stock appreciation right granted under our 2018 Plan may not exceed ten years. As of December 31, 2020, stock-based incentive awards of 9,900,827 were outstanding under the 2018 Plan, consisting of 9,594,804 restricted stock units, or RSUs, and 306,023 performance stock units, or PSUs, and 32,488,980 shares were reserved for future grants.

RSUs generally vest over the requisite service period of four years, subject to continued employment through each applicable vesting date. PSUs generally vest over a three-year period based on the achievement of specified performance targets for the fiscal year and subject to continued service through the applicable vesting dates. Based on the extent to which the performance targets are achieved, PSUs vest at a specified range of the target award amount.

Stock Awards Outside of Plan

In connection with our 2019 acquisitions, certain outstanding unvested options to purchase shares of the acquired companies were cancelled and converted into RSUs granted outside any equity plan and subject to substantially the same vesting schedules and other conditions applicable to the unvested options, but settable solely in shares of common stock of the Company. The converted RSUs generally vest on a monthly, quarterly or annual basis over one to four years, subject to continued employment through each applicable vesting date. As of December 31, 2020, stock-based incentive awards outstanding that were granted outside of an equity plan consisted of 191,746 RSUs.

Modification of Stock Awards

During 2020, due the uncertainty of the impacts of COVID-19 on our financial results, we amended the vesting conditions of our 2020 performance-based stock awards granted to employees, excluding our Chief Executive Officer, to remove the performance condition and provide for time-based vesting of the outstanding awards, or the 2020 Performance Modification. No other changes to the original stock award terms were made. As a result of the modification, the original performance stock awards, which include performance stock units, stock options and restricted stock, were cancelled and replacement time-based awards were granted at the modification date. The fair value of the modified awards was determined as of the modification date and the related stock-based compensation expense will be recognized over the remaining service period. We recognized $13.1 million of stock-based compensation expense for the year ended December 31, 2020 related to shares modified as a result of the 2020 Performance Modification.

In addition during 2020, in connection with the resignation of Kevin B. Thompson as the Company's Chief Executive Officer, certain outstanding equity awards were modified to remove or amend performance conditions and provide for time-based vesting of the outstanding awards, or the CEO Modification. The vest date of certain outstanding awards was accelerated to vest on his termination date of December 31, 2020. We recognized $12.8 million of stock-based compensation expense for the year ended December 31, 2020 related to shares modified as a result of the CEO Modification.

Stock-based compensation expense recorded for the years ended December 31, 2020, 2019 and 2018 was $74.2 million, $34.4 million and $5.8 million, respectively.

Stock Option Awards

Option grant activity under the 2016 Plan was as follows:

	Number of Shares Outstanding	Weighted-Average Exercise Price	Aggregate Intrinsic Value (in thousands)	Weighted-Average Remaining Contractual Term (in years)
Outstanding balances at December 31, 2019	2,090,725	$ 1.69		
Options granted[1]	75,821	0.41		
Options exercised	(715,853)	1.48		
Options forfeited[2]	(192,708)	2.66		
Options expired	(3,250)	8.24		
Outstanding balances at December 31, 2020	1,254,735	$ 1.56		
Options exercisable at December 31, 2020	480,235	$ 1.14	$ 6,633	6.5
Options vested and expected to vest at December 31, 2020	1,254,735	$ 1.56	$ 16,805	6.6

(1) Options granted during the year relate to the 2020 Performance Modification which resulted in new time-based stock option grants at the modification date fair value.

(2) Includes the forfeiture of 75,821 stock options from the 2020 Performance Modification which resulted in the forfeiture of the original performance-based grants and the reissue of new time-based stock option grants.

Additional information regarding options follows (in thousands except for per share amounts):

	Year Ended December 31, 2020	2019	2018
Weighted-average grant date fair value per share of options granted during the period	$ 18.45	$ —	$ 1.98
Aggregate intrinsic value of options exercised during the period	12,797	9,989	407
Aggregate fair value of options vested during the period	470	661	109

The unrecognized stock-based compensation expense related to unvested stock options and subject to recognition in future periods was approximately $0.7 million as of December 31, 2020. We expect to recognize this expense over weighted average periods of approximately 1.2 years at December 31, 2020.

Restricted Stock

The following table summarizes information about restricted stock activity subject to vesting under the 2016 Plan:

	Number of Shares Outstanding
Unvested balances at December 31, 2019	3,016,225
Restricted stock granted and issued	—
Restricted stock vested	(1,642,900)
Restricted stock repurchased - unvested shares	(105,100)
Unvested balances at December 31, 2020	1,268,225

Restricted stock was purchased at fair market value by the employee receiving the restricted stock award and restricted common stock was issued at the date of grant. The weighted-average grant date fair market value of restricted common stock purchased was $2.10 per share for the year ended December 31, 2018. The aggregate intrinsic value of restricted stock vested during the years ended December 31, 2020, 2019 and 2018 was $26.1 million, $28.9 million and $3.7 million, respectively.

Restricted stock is subject to certain restrictions, such as vesting and a repurchase right. The common stock acquired by the employee is restricted stock because vesting is conditioned upon (i) continued employment through the applicable vesting date and (ii) for employees at the level of group vice president and above, the achievement of certain financial performance targets determined by the board of directors. The restricted stock is subject to repurchase in the event the stockholder ceases to be employed or engaged (as applicable) by the Company for any reason or in the event of a change of control or due to certain regulatory burdens. As the restricted stock is purchased at fair market value at the time of grant, there is no stock-based compensation expense recognized related to these awards prior to the 2020 Performance Modification. The related liability for unvested shares is included in other long-term liabilities on the consolidated balance sheet and was $1.0 million and $1.9 million as of December 31, 2020 and 2019, respectively.

As a result of the 2020 Performance Modification and the CEO Modification, 330,850 and 214,500 unvested shares of performance restricted stock, respectively, were modified to remove the performance vesting condition and provide for time-based vesting of the outstanding restricted stock. At the modification dates, the fair value of the modified unvested restricted stock was determined to be the current stock price less the original purchase price paid by the stockholder, or intrinsic value. The unrecognized stock-based compensation expense related to unvested restricted stock and subject to recognition in future periods was approximately $1.1 million as of December 31, 2020 and we expect to recognize this expense over weighted average period of approximately 0.5 years.

Restricted Stock Units

The following table summarizes information about restricted stock unit activity under the 2018 Plan and other awards granted outside of a plan:

	Number of Units Outstanding	Weighted-Average Grant Date Fair Value Per Share	Aggregate Intrinsic Value (in thousands)	Weighted-Average Remaining Contractual Term (in years)
Unvested balances at December 31, 2019	6,621,344	$ 15.82		
Restricted stock units granted[1]	7,375,471	15.45		
Restricted stock units vested	(2,341,134)	16.05		
Restricted stock units forfeited	(1,869,131)	15.61		
Unvested balances at December 31, 2020	9,786,550	$ 15.52	$ 146,309	2.6

(1) Includes 1,534,377 RSU grants from the 2020 Performance Modification and 101,289 RSU grants from the CEO Modification which resulted in the forfeiture of the original PSU grants and the reissue of new time-based RSU grants.

The total fair value of restricted stock units vested during the years ended December 31, 2020 and 2019, was $46.7 million and $28.6 million, respectively. The total unrecognized stock-based compensation expense related to unvested restricted stock units and subject to recognition in future periods is $124.8 million as of December 31, 2020 and we expect to recognize this expense over a weighted-average period of 2.6 years.

Performance Stock Units

The following table summarizes information about performance stock unit activity under the 2018 Plan:

	Number of Units Outstanding	Weighted-Average Grant Date Fair Value Per Share	Aggregate Intrinsic Value (in thousands)	Weighted-Average Remaining Contractual Term (in years)
Unvested balances at December 31, 2019	1,004,026	$ 14.77		
Performance stock units granted	2,009,205	13.36		
Performance stock units vested	(327,909)	14.49		
Performance stock units forfeited[1]	(2,379,299)	13.61		
Unvested balances at December 31, 2020	306,023	$ 14.83	$ 4,575	1.0

(1) Includes the forfeiture of 1,534,377 PSU grants from the 2020 Performance Modification and 101,289 PSU grants from the CEO Modification which resulted in the forfeiture of the original PSU grants and the reissue of new time-based RSU grants.

The total fair value of performance stock units vested during the year ended December 31, 2020 was $4.5 million. The total unrecognized stock-based compensation expense related to unvested performance stock units and subject to recognition in future periods is $0.9 million as of December 31, 2020 and we expect to recognize this expense over a weighted-average period of 1.0 year.

For restricted stock units and performance stock units, the number of shares issued on the date of vesting is generally net of statutory withholding requirements that we pay in cash to the appropriate taxing authorities on behalf of our employees. We withheld and retired approximately 633,000 shares and 385,000 shares to satisfy $12.1 million and $7.3 million of employees' tax obligations during the years ended December 31, 2020 and 2019, respectively. These shares are treated as common stock repurchases in our consolidated financial statements.

Employee Stock Purchase Plan

In October 2018, our board of directors adopted and our stockholders approved our 2018 Employee Stock Purchase Plan, or the ESPP. We reserved a total of 3,750,000 shares of our common stock available for sale under our ESPP.

Our ESPP permits eligible participants to purchase common stock through payroll deductions of up to 20% of their eligible compensation during the offering period. The ESPP will typically be implemented through consecutive six-month offering periods. Amounts deducted and accumulated from participant compensation, or otherwise funded in any participating non-U.S. jurisdiction in which payroll deductions are not permitted, are used to purchase shares of our common stock at the end of each offering period. The purchase price of the shares will be 85% of the lesser of the fair market value of our common stock on the first day of the offering period and the fair market value on the last day of the offering period. No participant may purchase more than $25,000 worth of common stock per calendar year.

Stock-based compensation expense related to our ESPP plan was $1.9 million and $0.9 million for the years ended December 31, 2020 and 2019, respectively. We did not have an ESPP offering period in 2018, therefore no stock-based compensation expense was recognized.

12. Net Income Per Share

A reconciliation of net income available to common stockholders and the number of shares in the calculation of basic and diluted income per share follows:

	Year Ended December 31,		
	2020	2019	2018
		(in thousands)	
Basic net earnings per share			
Numerator:			
Net income (loss)	$ 158,475	$ 18,642	$ (102,066)
Accretion of dividends on Class A common stock	—	—	(231,549)
Gain on conversion of Class A common stock	—	—	711,247
Earnings allocated to unvested restricted stock	(967)	(201)	(12,997)
Net income available to common stockholders	$ 157,508	$ 18,441	$ 364,635
Denominator:			
Weighted-average common shares outstanding used in computing basic net earnings per share	310,554	306,768	140,301
Diluted net earnings per share			
Numerator:			
Net income available to common stockholders	$ 157,508	$ 18,441	$ 364,635
Denominator:			
Weighted-average shares used in computing basic net earnings per share	310,554	306,768	140,301
Add stock-based incentive stock awards	5,009	4,400	2,240
Weighted-average shares used in computing diluted net earnings per share	315,563	311,168	142,541

The following weighted-average outstanding shares of common stock equivalents were excluded from the computation of the diluted net income per share attributable to common stockholders for the periods presented because their effect would have been anti-dilutive or for which the performance condition had not been met at the end of the period:

	Year Ended December 31,		
	2020	2019	2018
		(in thousands)	
Stock options to purchase common stock	213	303	524
Performance-based stock options to purchase common stock	40	86	119
Non-vested restricted stock incentive awards	1,879	2,353	3,442
Performance-based non-vested restricted stock incentive awards	28	998	1,559
Restricted stock units	7,162	4,959	1,139
Performance stock units	743	639	175
Employee stock purchase plan	179	89	—
Total anti-dilutive shares	10,244	9,427	6,958

Prior to the conversion at the IPO, Class A Common Stock was not included in the basic or diluted earnings per share calculations as it was contingently convertible upon a future event. See *Note 10. Redeemable Convertible Class A Common Stock* for additional details of the conversion of the Class A Common Stock.

The calculation of diluted earnings per share requires us to make certain assumptions related to the use of proceeds that would be received upon the assumed exercise of stock options, purchase of restricted stock or proceeds from the employee stock purchase plan.

13. Employee Benefit Plans

401(k) Plan

We maintain a 401(k) matching program for all eligible employees. We, as sponsor of the plan, use an independent third party to provide administrative services to the plan. We have the right to terminate the plan at any time. Employees are fully vested in all contributions to the plan. Our expense related to the plan was as follows:

	Year Ended December 31,		
	2020	2019	2018
		(in thousands)	
Employee benefit plan expense	$ 5,278	$ 5,009	$ 4,474

14. Related Party Transactions

Management Fee Agreement with Silver Lake Management, Thoma Bravo and TB Partners

On February 5, 2016, we entered into a Management Fee Agreement with Silver Lake Management Company IV, L.L.C. (Silver Lake Management), Thoma Bravo, LLC (Thoma Bravo) and Thoma Bravo Partners XI, L.P. (TB Partners and, collectively with Silver Lake Management and Thoma Bravo, the Managers), pursuant to which the Managers provided business and organizational strategy and financial and advisory services. Under the Management Fee Agreement, we paid to the Managers quarterly payments of $2.5 million in the aggregate, plus fees for certain corporate transactions in the Managers' discretion. Each payment of fees under the Management Fee Agreement was allocated among the Managers as follows: 50% to Silver Lake Management, 40.73% to Thoma Bravo and 9.27% to TB Partners. We also reimbursed each of the Managers for all out-of-pocket costs incurred in connection with activities under the Management Fee Agreement, and we indemnified the Managers and their respective related parties from and against all losses, claims, damages and liabilities related to the performance of the Managers obligations under the Management Fee Agreement. The Management Fee Agreement terminated upon the consummation of the IPO in October 2018 and no future payments are required.

The following table details the management fees:

	Year Ended December 31, 2018
	(in thousands)
Silver Lake Management	$ 4,063
Thoma Bravo	3,309
TB Partners	753
	$ 8,125

15. Income Taxes

U.S. and international components of income (loss) before income taxes were as follows:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
U.S.	$ (66,908)	$ (7,122)	$ (116,459)
International	97,227	34,626	(5,251)
Income (loss) before income taxes	$ 30,319	$ 27,504	$ (121,710)

Income tax expense (benefit) was composed of the following:

	Year Ended December 31,		
	2020	2019	2018
	(in thousands)		
Current:			
Federal	$ 16,684	$ 25,958	$ (10,906)
State	5,734	2,485	2,191
International	34,130	19,863	10,759
	56,548	48,306	2,044
Deferred:			
Federal	(32,923)	(30,750)	(14,978)
State	(1,326)	(3,789)	670
International	(150,455)	(4,905)	(7,380)
	(184,704)	(39,444)	(21,688)
	$ (128,156)	$ 8,862	$ (19,644)

The difference between the income tax expense (benefit) derived by applying the federal statutory income tax rate to our income (loss) before income taxes and the amount recognized in our consolidated financial statements is as follows:

	Year Ended December 31,		
	2020	2019	2018
		(in thousands)	
Expense (benefit) derived by applying the federal statutory income tax rate to income (loss) before income taxes	$ 6,367	$ 5,776	$ (25,558)
State taxes, net of federal benefit	3,015	(1,898)	2,435
Permanent items	332	(489)	224
Impact of the Tax Act			
One-time transition tax	—	—	140
Foreign-derived intangible income	(2,460)	(2,595)	—
Research and experimentation tax credits	807	(446)	(1,503)
Withholding tax	2,913	3,074	2,486
Foreign Tax Credits	(5,601)	(207)	(452)
Discrete tax benefit due to IP Transfer	(138,199)	—	—
Valuation allowance	3,714	5,181	—
Stock-based compensation	1,541	(763)	238
Effect of foreign operations	(585)	1,229	2,346
	$ (128,156)	$ 8,862	$ (19,644)

During the year ended December 31, 2020, we completed an intra-group transfer of certain of our intellectual property rights to our Irish subsidiary, where our international business is headquartered, or the IP Transfer. The transaction will change our mix of international income from a lower non-U.S. tax jurisdiction to Ireland, which is subject to a statutory tax rate of 12.5%. As a result of the IP Transfer, we recorded a deferred tax asset and related tax benefit of $138.2 million for the year ended December 31, 2020. The deferred tax asset was recognized as a result of the book and tax basis difference of the transferred intellectual property rights and was based on the current fair value of the intellectual property. We applied significant judgment when determining the fair value of the intellectual property, which serves as the tax basis of the deferred tax asset, and in evaluating the associated tax laws in the applicable jurisdictions. The fair value of the intellectual property is based on the present value of projected cash flows related to the intellectual property, which reflects management’s assumptions regarding projected revenues, operating expenses and discount rate. The tax-deductible amortization related to the transferred intellectual property rights will be recognized in future periods and any amortization that is unused in a particular year can be carried forward indefinitely under Irish tax law. The deferred tax asset and the tax benefit were measured based on the Irish tax rate expected to apply in the years the asset will be recovered. We expect to realize the deferred tax asset resulting from the IP Transfer and will assess the realizability of the deferred tax asset quarterly.

The effective tax rate for the year ended December 31, 2019 increased from the year ended December 31, 2018 primarily due to the valuation allowance recognized on the deferred tax assets of the entities acquired in the Samanage acquisition, partially offset by the foreign-derived intangible income deduction.

During 2018, we completed our accounting for the income tax effects of the Tax Act. Upon further analysis of the Tax Act, additional guidance issued by the U.S. Treasury Department, state taxing authorities, and other standard-setting bodies, we finalized our calculation of the transition tax during the year ended December 31, 2018. We recognized an additional expense of $0.1 million to the provisional amounts recognized during the year ended December 31, 2017 and included these adjustments as a component of income tax expense from continuing operations. We reduced our liability related to the transition tax by $9.6 million. The final transition tax liability of $111.2 million will be paid over eight years.

The components of the net deferred tax amounts recognized in the accompanying consolidated balance sheets were:

	December 31, 2020	December 31, 2019
	(in thousands)	
Deferred tax assets:		
Allowance for doubtful accounts	$ 1,077	$ 403
Accrued expenses	—	1,478
Net operating loss	32,193	38,869
Research and experimentation credits	3,336	1,435
Stock-based compensation	9,326	3,073
Intangibles	63,039	—
Interest	1,056	737
Deferred revenue	2,782	1,394
Unrealized exchange gain	—	1,361
Leases	22,837	19,168
Other credits	2,895	685
Total deferred tax assets	138,541	68,603
Valuation allowance	(14,481)	(9,923)
Deferred tax assets, net of valuation allowance	124,060	58,680
Deferred tax liabilities:		
Property and equipment	5,292	3,705
Prepaid expenses	1,494	1,180
Debt costs	5,788	7,364
Foreign royalty	767	847
Leases	19,098	16,315
Unremitted foreign earnings	600	816
Unrealized exchange loss	336	—
Accrued expenses	379	—
Intangibles	—	121,804
Total deferred tax liabilities	33,754	152,031
Net deferred tax asset (liability)	$ 90,306	$ (93,351)

At December 31, 2020 and 2019, we had net operating loss carry forwards for U.S. federal income tax purposes of approximately $67.5 million and $66.6 million, respectively, of which $22.6 million and $33.8 million, respectively, are limited due to IRC Section 382 limitations. These U.S. federal net operating losses are available to offset future U.S. federal taxable income and begin to expire at various dates from 2021 through 2038.

At December 31, 2020 and 2019, we had net operating loss carry forwards for certain state income tax purposes of approximately $112.4 million and $180.8 million, respectively, some of which are limited due to IRC Section 382. These state net operating losses are available to offset future state taxable income and begin to expire in 2031.

At December 31, 2020 and 2019, we had foreign net operating loss carry forwards of approximately $56.0 million and $88.3 million, respectively, which are available to offset future foreign taxable income, and begin to expire in 2022.

At December 31, 2020 and 2019, we had research and experimentation tax credit carry forwards of approximately $0.7 million and $0.7 million, respectively, which are available to offset future U.S. federal income tax. These U.S. federal tax credits begin to expire in 2035.

We received a corporate income tax holiday in the Philippines which expired on March 31, 2019. The income tax expense related to the Philippines after expiration of the holiday has been recognized.

We establish valuation allowances when necessary to reduce deferred tax assets to amounts expected to be realized. As of December 31, 2020 and 2019, we have recorded a valuation allowance of $14.5 million and $9.9 million, respectively. The valuation allowance is related to the deferred tax assets of the entities acquired in the Samanage acquisition and a Canadian subsidiary.

The Tax Act imposes a mandatory transition tax on accumulated foreign earnings as of December 31, 2017. Effective January 1, 2018, the Tax Act creates a new territorial tax system in which we recognize the tax impact of including certain foreign earnings in U.S. taxable income as a period cost. For the year ended December 31, 2020, we do not anticipate incurring a global intangible low-taxed income, or GILTI, liability; however, to the extent that we incur expense under the GILTI provisions, we will treat it as a component of income tax expense in the period incurred. As a result of the Tax Act, our accumulated foreign earnings as of December 31, 2017 have been subjected to U.S. tax. Moreover, all future foreign earnings will be subject to a new territorial tax system and dividends received deduction regime in the U.S. As of December 31, 2020, undistributed earnings of certain foreign subsidiaries of approximately $1.0 billion are intended to be permanently reinvested outside the U.S. Accordingly, no provision for foreign withholding tax or state income taxes associated with a distribution of these earnings has been made. Determination of the amount of the unrecognized deferred tax liability on these unremitted earnings is not practicable. We have recorded an immaterial amount of deferred income taxes for state income taxes related to the earnings that are not indefinitely reinvested.

Gross unrecognized tax benefits, all of which, if recognized, would affect our effective tax rate were as follows:

	Year Ended December 31,		
	2020	2019	2018
		(in thousands)	
Gross unrecognized tax benefits	$ 27,526	$ 25,568	$ 19,709

At December 31, 2020 and 2019, we had accrued interest and penalties related to unrecognized tax benefits of approximately $5.1 million and $5.5 million, respectively.

The aggregate changes in the balance of our gross unrecognized tax benefits, excluding accrued interest and penalties, were as follows:

	Year Ended December 31,		
	2020	2019	2018
		(in thousands)	
Balance, beginning of year	$ 25,568	$ 19,709	$ 19,504
Increases for tax positions related to the current year	6,620	4,980	59
Decreases for tax positions related to the current year	—	—	—
Increases for tax positions related to prior years	761	995	146
Decreases for tax positions related to prior years	(1,933)	(116)	—
Settlement with taxing authorities	(3,490)	—	—
Reductions due to lapsed statute of limitations	—	—	—
Balance, end of year	$ 27,526	$ 25,568	$ 19,709

We do not believe that it is reasonably possible that our unrecognized tax benefits will significantly change in the next twelve months.

We file U.S., state and foreign income tax returns in jurisdictions with varying statutes of limitations. The 2011 through 2019 tax years generally remain open and subject to examination by federal tax authorities. The 2011 through 2019 tax years generally remain open and subject to examination by the state tax authorities and foreign tax authorities. We are currently under examination by the IRS for the tax years 2011 through the period ending February 2016. In December 2020, we received a settlement offer from the IRS for the years 2011 and 2012 which we accepted and recorded the impacts in our consolidated financial statements for the year ended December 31, 2020. We are under audit by the Indian Tax Authority for the 2014 and 2017 tax years. We are currently under audit by the California Franchise Tax Board for the 2012 through 2014 tax years. We are currently under audit by the Massachusetts Department of Revenue for the 2015 through February 2016 tax years. We are not currently under audit in any other taxing jurisdictions.

On July 27, 2015, the U.S. Tax Court issued an opinion in Altera Corp. v. Commissioner related to the treatment of stock-based compensation expense in an intercompany cost-sharing arrangement. In February 2016, the U.S. Internal Revenue Service appealed the decision to the U.S. Court of Appeals for the Ninth Circuit. On June 7, 2019, the Ninth Circuit reversed the 2015 decision of the U.S. Tax Court. On February 10, 2020, Altera Corp. submitted a petition for writ of certiorari to the U.S. Supreme Court. On June 22, 2020, the Supreme Court of the United States denied Altera's petition to review the Ninth Circuit’s decision. Due to the uncertainty surrounding the status of the current regulations and questions related to the scope of potential benefits or obligations, we have not recorded any benefit or expense as of December 31, 2020. We will continue to monitor ongoing developments and potential impacts to our consolidated financial statements.

16. Commitments and Contingencies

Cyber Incident

On December 14, 2020, we announced that we had been the victim of a cyberattack on our Orion Software Platform and internal systems, or the Cyber Incident. Together with outside security professionals and other third parties, we are conducting investigations into the Cyber Incident which are on-going.

Our investigations to date revealed that as part of this attack, malicious code, or Sunburst, was injected into builds of our Orion Software Platform that we released between March 2020 and June 2020. We released remediations for the versions of our Orion Software Platform known to be affected by Sunburst and have taken and expect to continue to take extensive efforts to support and protect our customers.

Expenses Incurred

Through December 31, 2020, we recorded $3.5 million of pretax expenses related to the Cyber Incident. We have included $0.1 million of these expenses in cost of recurring revenue, $0.3 million in sales and marketing expense and $3.2 million in general and administrative expense in the consolidated statements of operations for the year ended December 31, 2020. Expenses include costs to investigate and remediate the Cyber Incident, and legal and other professional services related thereto, and consulting services being provided to customers at no charge, all of which were expensed as incurred.

Litigation, Claims and Government Investigations

As a result of the Cyber Incident, we are subject to numerous lawsuits and investigations. Multiple class action lawsuits alleging, among other things, violations of the federal securities laws are pending against us and certain of our current and former officers. The complainants seek certification of a class of all persons who purchased or otherwise acquired our securities during set periods of time and unspecified monetary damages, costs and attorneys' fees. We dispute the allegations in these complaints and intend to defend against the claims.

In addition, there are underway numerous investigations and inquiries by domestic and foreign law enforcement and other governmental authorities related to the Cyber Incident, including from the Department of Justice, the Securities and Exchange Commission, and various state Attorneys General. We are cooperating and providing information in connection with these investigations and inquiries and are incurring, and in future periods expect to incur, costs and other expenses in connection with these investigations and inquiries.

While we believe it is reasonably possible that we could incur losses associated with these proceedings and investigations, it is not possible to estimate the amount of any loss or range of possible loss that might result from adverse judgments, settlements, penalties or other resolutions of such proceedings and investigations based on the early stage thereof, the fact that alleged damages have not been specified, the uncertainty as to the certification of a class or classes and the size of any certified class, as applicable, and the lack of resolution on significant factual and legal issues. The Company will continue to evaluate information as it becomes known and will record an estimate for losses at the time or times when it is both probable that a loss has been incurred and the amount of the loss is reasonably estimable. Losses associated with any adverse judgments, settlements, penalties or other resolutions of such proceedings and investigations could be material to our business, results of operations, financial condition or cash flows in future periods.

Additional lawsuits and claims related to the Cyber Incident may be asserted by or on behalf of customers, stockholders or others seeking damages or other related relief and additional inquiries from governmental agencies may be received or investigations by governmental agencies commenced.

Insurance Coverage

The Company maintains $15 million of cybersecurity insurance coverage to limit its exposure to losses such as those related to the Cyber Incident.

Other Matters

In addition to the Cyber Incident described above, we are involved in litigation arising from the normal course of business. In management's opinion, this litigation is not expected to have a material adverse effect on our consolidated financial condition, results of operations or cash flows.

17. Operating Segments and Geographic Information

We operate as a single segment. Our chief operating decision-maker, or CODM, is considered to be our Chief Executive Officer. The chief operating decision-maker allocates resources and assesses performance of the business at the consolidated level.

The authoritative guidance for disclosures about segments of an enterprise establishes standards for reporting information about operating segments. It defines operating segments as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision-maker in deciding how to allocate resources and in assessing performance. Our Chief Executive Officer manages the business as a multi-product business that utilizes its model to deliver software products to customers regardless of their geography or IT environment. Operating results including discrete financial information and profitability metrics are reviewed at the consolidated entity level for purposes of making resource allocation decisions and for evaluating financial performance. Accordingly, we considered ourselves to be in a single operating and reporting segment structure.

We based revenue by geography on the shipping address of each customer. Other than the United States, no single country accounted for 10% or more of our total revenues during these periods. The following tables set forth revenue and net long-lived assets by geographic area:

	Year Ended December 31,		
	2020	2019	2018
		(in thousands)	
Revenue			
United States, country of domicile	$ 625,758	$ 573,290	$ 505,304
International	393,483	359,235	327,785
Total revenue	$ 1,019,241	$ 932,525	$ 833,089

	December 31,	
	2020	2019
	(in thousands)	
Long-lived assets, net		
United States, country of domicile	$ 33,414	$ 24,023
Switzerland	10,202	6,045
Philippines	7,081	1,141
All other international	7,952	7,736
Total long-lived assets, net	$ 58,649	$ 38,945

18. Quarterly Results of Operations

The following table sets forth our unaudited quarterly consolidated statements of operations data for each of the quarters indicated. The information for each quarter has been prepared on a basis consistent with our audited consolidated financial statements included in this Annual Report on Form 10-K, and reflect, in the opinion of management, all adjustments of a normal, recurring nature that are necessary for a fair statement of the financial information contained in those statements. Our historical results are not necessarily indicative of the results that may be expected in the future. The following quarterly financial data should be read in conjunction with our consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

	Three months ended,							
	Dec 31, 2020	Sep 30, 2020	June 30, 2020	Mar 31, 2020	Dec 31, 2019	Sep 30, 2019	June 30, 2019	Mar 31, 2019
	(in thousands, except per share data) (unaudited)							
Revenue	$ 265,294	$ 260,982	$ 246,015	$ 246,950	$ 247,495	$ 240,490	$ 228,748	$ 215,792
Gross profit	193,274	192,035	179,359	179,957	182,161	175,704	165,390	153,816
Income (loss) before income taxes	(7,468)	17,766	17,191	2,830	15,431	7,288	1,075	3,710
Net income (loss)	132,713	12,502	12,845	415	13,223	4,393	(2,119)	3,145
Net income (loss) available to common stockholders	132,025	12,433	12,772	412	13,095	4,350	(2,119)	3,103
Basic income (loss) per share	$ 0.42	$ 0.04	$ 0.04	$ —	$ 0.04	$ 0.01	$ (0.01)	$ 0.01
Diluted income (loss) per share	$ 0.42	$ 0.04	$ 0.04	$ —	$ 0.04	$ 0.01	$ (0.01)	$ 0.01
Shares used in computation of basic income (loss) per share	312,119	310,894	310,244	308,937	307,914	306,890	306,587	305,653
Shares used in computation of diluted income (loss) per share	317,797	316,721	314,898	312,865	311,922	311,102	306,587	309,783

SOLARWINDS CORPORATION
FINANCIAL STATEMENT SCHEDULE
SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS

	Beginning Balance	Additions (Charge to Expense)	Deductions (Write-offs, net of Recoveries)	Ending Balance
	(in thousands)			
Allowance for doubtful accounts, customers and other:				
Year ended December 31, 2018	$ 2,065	$ 2,498	$ 1,367	$ 3,196
Year ended December 31, 2019	3,196	1,524	1,549	3,171
Year ended December 31, 2020	3,171	2,670	3,105	2,736
Tax valuation allowances:				
Year ended December 31, 2018	$ 1,811	$ —	$ 36	$ 1,775
Year ended December 31, 2019	1,775	8,148	—	9,923
Year ended December 31, 2020	9,923	4,558	—	14,481

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

SolarWinds Corporation ("SolarWinds" or "we") has one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended: our common stock, par value $0.001 per share (the "common stock").

The following summary description sets forth some of the general terms and provisions of our common stock and certain provisions of our restated charter and restated bylaws. This summary does not purport to be complete and is qualified by the provisions of our restated charter and restated bylaws, copies of which have been filed as exhibits to the Annual Report on 10-K of which this Exhibit 4.3 is a part.

As used herein, the term "Silver Lake Funds" refers to Silver Lake Partners IV, L.P., Silver Lake Technology Investors IV, L.P., and SLP Aurora Co-Invest, L.P., and the term "Silver Lake" refers to Silver Lake Group, L.L.C., the ultimate general partner of the Silver Lake Funds. The term "Thoma Bravo Funds" refers to Thoma Bravo Fund XI, L.P., Thoma Bravo Fund XI-A, L.P., Thoma Bravo Fund XII, L.P., Thoma Bravo Fund XII-A, L.P., Thoma Bravo Executive Fund XI, L.P., Thoma Bravo Executive Fund XII, L.P., Thoma Bravo Executive Fund XII-a, L.P., Thoma Bravo Special Opportunities Fund II, L.P. and Thoma Bravo Special Opportunities Fund II-A, L.P. and the term "Thoma Bravo" refers to Thoma Bravo, LLC, the ultimate general partner of the Thoma Bravo Funds. The term "Sponsors" refers collectively to Silver Lake and Thoma Bravo, together with the Silver Lake Funds and the Thoma Bravo Funds and, as applicable, their co-investors. The term "Lead Sponsors" refers collectively to the Silver Lake Funds, the Thoma Bravo Funds and their respective affiliates.

Our authorized capital stock consists of 1,000,000,000 shares of common stock, $0.001 par value, and 50,000,000 shares of undesignated preferred stock, $0.001 par value.

Common Stock

The holders of common stock are entitled to one vote per share on all matters submitted to a vote of our stockholders and do not have cumulative voting rights. Accordingly, holders of a majority of the shares of common stock entitled to vote in any election of directors may elect all of the directors standing for election. Subject to preferences that may be applicable to any preferred stock outstanding at the time, the holders of outstanding shares of common stock are entitled to receive ratably any dividends declared by our board of directors out of assets legally available. See "*Dividend Policy*." Upon our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preference of any then-outstanding shares of preferred stock. Holders of common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock.

Listing

Our common stock is listed on the NYSE under the symbol "SWI".

Dividend Policy

We have never declared or paid any cash dividends on our common stock. Neither Delaware law nor our restated charter requires our board of directors to declare dividends on our common stock. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not expect to pay any dividends on our common stock in the foreseeable future. Any future determination to declare cash dividends on our common stock will be made at the discretion of our board of directors and will depend on a number of factors, including our financial condition, results of operations, capital requirements, contractual restrictions, general business conditions and other factors that our board of directors may deem relevant. In addition, our credit facilities place restrictions on our ability to pay cash dividends.

Anti-Takeover Provisions Under Our Restated Charter and Restated Bylaws and Delaware Law

Certain provisions of Delaware law, our restated charter and restated bylaws contain provisions that could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, may have the effect of discouraging coercive takeover practices and inadequate takeover bids. These provisions are also designed, in part, to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquiror outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

Undesignated Preferred Stock. As discussed above, our board of directors has the ability to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control of us or our management.

Limitations on the Ability of Stockholders to Act by Written Consent or Call a Special Meeting. Pursuant to Section 228 of the DGCL, any action required to be taken at any annual or special meeting of the stockholders may be taken without a meeting, without prior notice and without a vote if a consent or consents in writing, setting forth the action so taken, is signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares of our stock entitled to vote thereon were present and voted, unless our certificate of incorporation provides otherwise. Our restated charter provides that so long as the Lead Sponsors beneficially own 40% of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, any action required or permitted to be taken by our stockholders may be effected by written consent. Our restated charter also provides that, after the Lead Sponsors cease to beneficially own 40% of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, our stockholders may not take action by written consent but may take action only at annual or special meetings of our stockholders. As a result, a holder controlling a majority of our capital stock would not be able to amend our restated bylaws or remove directors without holding a meeting of our stockholders called in accordance with our restated bylaws. Our restated charter provides that special meetings of the stockholders may be called only upon a resolution approved by a majority of the total number of directors that we would have if there were no vacancies or, prior to the date that the Lead Sponsors cease to beneficially own 40% of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, at the request of the holders of a majority of the voting power of our then-outstanding shares of voting capital stock. These provisions might delay the ability of our stockholders to force consideration of a proposal or for stockholders controlling a majority of our capital stock to take any action, including the removal of directors.

Requirements for Advance Notification of Stockholder Nominations and Proposals. Our restated bylaws establish advance-notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of our board of directors or a committee of our board of directors. However, our restated bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed. These provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of us.

Board Vacancies. Our restated charter and restated bylaws provide that, subject to the rights granted to one or more series of preferred stock then outstanding, or the rights granted under the stockholders' agreement, only our board of directors will be allowed to fill vacant directorships. In addition, after the Lead Sponsors cease to beneficially own 40% of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, the number of directors constituting our board of directors will be permitted to be set only by a resolution adopted by a majority vote of our entire board of directors. These provisions would prevent a stockholder from increasing the size of our board of directors and then gaining control of our board of directors by filling the resulting vacancies with its own nominees. This will make it more difficult to change the composition of our board of directors and will promote continuity of management.

Classified Board. Our restated charter and restated bylaws provide that our board of directors is classified into three classes of directors, with each class serving three-year staggered terms. A third party may be discouraged from making a tender offer or otherwise attempting to obtain control of us as it is more difficult and time-consuming for stockholders to replace a majority of the directors on a classified board of directors.

No Cumulative Voting. The DGCL provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless our restated charter provides otherwise. Our restated charter provides that there shall be no cumulative voting, and our restated bylaws do not expressly provide for cumulative voting.

Directors Removed Only for Cause. Prior to the first date on which the Lead Sponsors cease to beneficially own 30% of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, our directors may be removed with or without cause upon the affirmative vote of a majority in voting power of all outstanding capital stock entitled to vote generally in the election of directors. Our restated charter provides that after the Lead Sponsors cease to beneficially own 30% of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, stockholders may remove directors only for cause and by the affirmative vote of the holders of at least 66 2/3% of the shares then entitled to vote generally in the election of directors.

Amendment of Charter Provisions and Bylaws. Our restated charter provides that so long as the Lead Sponsors own 40% of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, our restated bylaws may be adopted, amended, altered or repealed by the vote of a majority of the voting power of our then-outstanding voting stock, voting together as a single class. After the Lead Sponsors cease to beneficially own 40% of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, our restated bylaws may be adopted, amended, altered or repealed by either (i) a vote of a majority of the total number of directors that the company would have if there were no vacancies or (ii) in addition to any other vote otherwise required by law, the affirmative vote of the holders of at least 66 2⁄3% of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, voting together as a single class.

Our restated charter also provides that after the Lead Sponsors cease to beneficially own 40% of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, the provisions of our restated charter relating to the size and composition of our board of directors, limitation on liabilities of directors, stockholder action by written consent, the ability of stockholders to call special meetings, business combinations with interested persons, amendment of our restated bylaws or restated charter and the Court of Chancery of the State of Delaware as the exclusive forum for certain disputes, may be amended, altered, changed or repealed only by the affirmative vote of the holders of at least 66 2⁄3% of the voting power of all of our outstanding shares of capital stock entitled to vote generally in the election of directors, voting together as a single class. So long as the Lead Sponsors own 40% of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, such provisions may be amended, altered, changed or repealed by the affirmative vote of the holders of a majority of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, voting together as a single class. Our restated charter also provides that the provision of our restated charter that deals with corporate opportunity may be amended, altered or repealed only by a vote of 80% of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, voting together as a single class.

After the Lead Sponsors cease to beneficially own 40% of the voting power of our then-outstanding capital stock entitled to vote generally in the election of directors, any amendment of the above provisions in our restated charter would require approval by holders of at least 66 2⁄3% of our then-outstanding capital stock.

Business Combinations with Interested Stockholders. We have elected in our restated charter not to be subject to Section 203 of the DGCL, or Section 203, an anti-takeover law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a business combination, such as a merger, with an interested stockholder (i.e., a person or group owning 15% or more of the corporation's voting stock) for a period of three years following the date the person became an interested stockholder, unless (with certain exceptions) the business combination or the transaction in which the person became an interested stockholder is approved in a prescribed manner. Accordingly, we will not be subject to any anti-takeover effects of Section 203. However, our restated charter contains provisions that have the same effect as Section 203, except that they provide that the Sponsors, including the Silver Lake Funds and the Thoma Bravo Funds and any persons to whom any Lead Sponsor sells its common stock, will not constitute "interested stockholders" for purposes of this provision, and thereby will not be subject to the restrictions set forth in our restated charter that have the same effect as Section 203.

Forum Selection. Our restated charter provides that unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will, to the fullest extent permitted by applicable law, be the sole and exclusive forum for:

- any derivative or proceeding brought on our behalf;
- any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, employees or agents to us or our stockholders;
- any action asserting a claim against us or any director or officer or other employee of ours arising pursuant to any provision of the DGCL, our restated charter or our restated bylaws; or
- any action asserting a claim against us or any director or officer or other employee of ours that is governed by the internal affairs doctrine;

in each such case, subject to such Court of Chancery of the State of Delaware having personal jurisdiction over the indispensable parties named as defendants therein.

Our restated charter also provides that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of, and to have consented to, this forum selection provision.

SUBSIDIARIES OF THE REGISTRANT

LLC SolarWinds MSP Technology (Delaware)
LogicNow Acquisition Limited (Belarus)
N-able Acquisition Company B.V. (Netherlands)
N-able Australia Pty Ltd (Australia)
N-able Cloud GmbH (Switzerland)
N-able International Ltd. (United Kingdom)
N-able Portugal, Unipessoal Lda (Portugal)
N-able Solutions Ltd (United Kingdom)
N-able Solutions ULC (British Columbia)
N-able Technologies Ltd (United Kingdom)
N-able Technologies S.R.L. (Romania)
N-able Technologies, Inc. (Delaware)
Passportal ULC (British Columbia)
Pingdom AB (Sweden)
Pragmatic Works Software, Inc. (Florida)
SAManage Australia Pty Ltd. (Australia)
SentryOne Innovative Solutions Limited (Ireland)
SentryOne Innovative Solutions UK Limited (United Kingdom)
SolarWinds Canada Corporation (Nova Scotia)
SolarWinds Czech s.r.o. (Czech Republic)
SolarWinds Holdings, Inc. (Delaware)
SolarWinds India Pvt. Ltd. (India)
SolarWinds Intermediate Holdings I, Inc. (Delaware)
SolarWinds Intermediate Holdings II, Inc. (Delaware)
SolarWinds International Holdings, Ltd. (Delaware)
SolarWinds IP Holding Company Unlimited Company (Ireland)
SolarWinds ITSM Israel Ltd. (Israel)
SolarWinds ITSM Netherlands B.V. (Netherlands)
SolarWinds ITSM UK Limited (United Kingdom)
SolarWinds ITSM US, Inc. (Delaware)
SolarWinds Japan K.K. (Japan)
SolarWinds MSP International B.V. (Netherlands)
SolarWinds North America, Inc. (Delaware)
SolarWinds Poland sp. Z o.o (Poland)
SolarWinds Software Asia Pte. Ltd. (Singapore)
SolarWinds Software Australia Pty. Ltd. (Australia)
SolarWinds Software Europe (Holdings) Limited (Ireland)
SolarWinds Software Europe Designated Activity Company (Ireland)
SolarWinds Software Germany GmbH (Germany)
SolarWinds Software UK Limited (United Kingdom)
SolarWinds Sweden Holdings AB (Sweden)
SolarWinds US, Inc. (Delaware)
SolarWinds Worldwide, LLC (Delaware)
SpamExperts B.V. (Netherlands)
SQL Sentry Holdings, LLC (Delaware)
SQL Sentry, LLC (Delaware)
SWI SpinCo, LLC (Delaware)
Trusted Metrics (Delaware)
VividCortex, Inc. (Delaware)

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-227937, 333-230814, 333-235453 and 333-236602) of SolarWinds Corporation of our report dated March 1, 2021, relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Austin, Texas
March 1, 2021

Exhibit 31.1

CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Sudhakar Ramakrishna, certify that:

1. I have reviewed this annual report on Form 10-K of SolarWinds Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation;

    d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date:	March 1, 2021	By:	/s/ Sudhakar Ramakrishna
			Sudhakar Ramakrishna
			President and Chief Executive Officer
			(Principal Executive Officer)

Exhibit 31.2

**CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF
THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002**

I, J. Barton Kalsu, certify that:

1. I have reviewed this annual report on Form 10-K of SolarWinds Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation;

    d. Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date:	March 1, 2021	By:	/s/ J. Barton Kalsu
			J. Barton Kalsu
			Chief Financial Officer
			(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of SolarWinds Corporation for the year ended December 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Sudhakar Ramakrishna, as Principal Executive Officer of SolarWinds Corporation, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of SolarWinds Corporation.

Date:	March 1, 2021	By:	/s/ Sudhakar Ramakrishna
			Sudhakar Ramakrishna
			President and Chief Executive Officer
			(Principal Executive Officer)

The foregoing certification is being furnished pursuant to 18 U.S.C. Section 1350. It is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and it is not to be incorporated by reference into any filing of the Company, regardless of any general incorporation language in such filing.

In connection with the Annual Report on Form 10-K of SolarWinds Corporation for the year ended December 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, J. Barton Kalsu, as Principal Financial Officer of SolarWinds Corporation, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of SolarWinds Corporation.

Date:	March 1, 2021	By:	/s/ J. Barton Kalsu
			J. Barton Kalsu
			Chief Financial Officer
			(Principal Financial Officer)

The foregoing certification is being furnished pursuant to 18 U.S.C. Section 1350. It is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and it is not to be incorporated by reference into any filing of the Company, regardless of any general incorporation language in such filing.