MicroStrategy Incorporated 2019 ANNUAL REPORT

MicroStrategy

Dear Fellow Stockholder:

As the world faces uncertain times with the impacts of COVID-19, we believe our vision of Intelligence Everywhere™ has never been more important. MicroStrategy is focused on helping to ensure the health and safety of our employees and maintaining our ability to support our customers — many of whom are on the front lines of this crisis. We're honored our customers have made us a part of their business, and we look forward to a future of great success together as we weather these difficult times.

Our customers, which include many of the world's most admired brands on the Global Fortune 500, rely on MicroStrategy to deliver actionable intelligence to their workforces. Each day, we work alongside them to inspire, innovate, and create



greater value for their enterprises. I'm proud of the tremendous progress and impact our entire team had last year toward making our customers stronger, more competitive, and more successful in their journey toward becoming an Intelligent Enterprise $^{\text{TM}}$.

Marked by digital reinvention and industry consolidation, 2019 was a transformative year for MicroStrategy. As we enter our fourth decade, we are proud to be the largest, independent publicly-traded business intelligence company in the world. Last year, we introduced HyperIntelligence®, an innovative new category of analytics, to deliver actionable insights directly into emails, spreadsheets, calendars, popular business applications, and mobile devices that people use every day. We believe that HyperIntelligence will increase productivity for our customers as it augments their applications with actionable insights. We are encouraged by the rate of early adoption of HyperIntelligence. We saw hundreds of our customers around the world – from The Co-operators in Canada, Sonic Automotive in the U.S., to Clarín in Argentina – build and deploy their first HyperIntelligence solutions.

Earlier this year, we released MicroStrategy 2020[™], our most open, modern, and comprehensive enterprise analytics platform yet. MicroStrategy 2020 is designed to be everything organizations need to build high-performance, governed, secure, and scalable analytics applications without compromise. Our open architecture provides our customers with the flexibility to perform analytics across a variety of business systems and data sources. We scale analytics to the enterprise with strong security, highly-customizable content, mobile applications, and a robust suite of SDKs, connectors, and gateways. Highlights of MicroStrategy 2020 include HyperIntelligence, enhanced AWS and Azure support, visual self-service with MicroStrategy Dossier®, integration with Microsoft Excel, and data science connectors for Jupyter Notebook and RStudio.

Our customers, which include many of the world's most admired brands on the Global Fortune 500, rely on MicroStrategy to deliver actionable intelligence to their workforces. We have seen an increasing number of our customers wanting to move their analytics to the cloud. With the MicroStrategy platform, our customers can deploy on their own infrastructure or in the MicroStrategy Cloud™ Environment, which is hosted and managed by us. Our MicroStrategy Cloud Environment offers customers robust security and API infrastructure and is designed to deliver distinct advantages, including lower total cost of ownership, faster upgrades, and greater flexibility to increase adoption throughout their organizations.

In 2019, we began further investing in our customers' success by including Enterprise Support Program hours in our maintenance plans. Using these complimentary consulting engagements, customers can upgrade to

MicroStrategy 2020, get customized guidance on the performance, capabilities, and potential cost savings associated with moving to the cloud, and explore innovations like HyperIntelligence, our MicroStrategy Dossier product, and more. We continue to focus on building customer trust, satisfaction, and loyalty with our outcome-based assessments, advisories, and architectures based on best practices.

Earlier this year, we took a digital leap in our education offerings, providing more online courses and certifications to help empower our customers and their employees to grow and further their careers. For the first time, students can access MicroStrategy Education™ courses on-demand and receive technical certifications. MicroStrategy students can also access our five-week technical bootcamp, offered quarterly in cities around the world, and pursue new certifications for 12 technical roles.

We are winning new customers with our differentiated marketing campaigns around HyperIntelligence, Cloud, and Mobility. In light of the challenges created by COVID-19, we have converted our onsite symposia into 100% digital events, allowing attendees to experience our products and services through keynote and breakout sessions from anywhere in the world. We strive to adapt quickly and seek out new growth opportunities that digitally engage with our customers and connect them to each other.

We continually look to strengthen our channel partner ecosystem. In 2019, we grew and invested in our relationships with global leaders such as Amazon, Microsoft, Cognizant, and Deloitte Consulting LLP, and worked with key technology players such as DataRobot and Yellowbrick Data to deliver the MicroStrategy platform to more organizations and user communities around the world. As an Apple mobility partner, MicroStrategy continues to help enterprises reimagine how people work with iPhone and iPad. We continue to optimize the HyperIntelligence for Mobile app with iOS and iPadOS exclusive features that provide fast, contextual insights to our customers, empowering their workforces to take action right in the palm of their hands.

MicroStrategy 2020 is designed to be everything organizations need to build high-performance, governed, secure, and scalable analytics applications without compromise.

We care deeply about the performance and development of our people. We promoted new leaders from within the organization and made major enhancements to our employee quarterly review process to increase collaboration and transparency. Employee wellness and community service continue to be central to our culture. We celebrated the two-year anniversary of our employee fitness program and hosted service events across the globe with MicroStrategy Gives. Our employees took support for women in STEM to another level, raising thousands of dollars for the Breast Cancer Research Foundation and Tigerlily Foundation during our Tech Day in Pink.

Looking ahead, we are entering this new decade with excellent business momentum and a determination to serve our customers with the most powerful portfolio in our history. We see a vibrant future for organizations employing actionable intelligence to drive their next era and welcome a wealth of opportunities that we see in the consolidated market. I am energized about the future of MicroStrategy, and I'd like to thank our stockholders for your continued support and confidence.

Very truly yours,

Michael J. Saylor

Chairman of the Board, President & Chief Executive Officer

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

		FORM 10-K	_	
ANNUAL REF		Γ TO SECTION 13 OR	15(d) OF THE SECU	URITIES
	For t	the fiscal year ended December 31.	, 2019	
		OR	,	
TRANSITION EXCHANGE A		UANT TO SECTION 13	3 OR 15(d) OF THE	SECURITIES
		ition period fromto Commission File Number 000-2443	35	
Delaware	(Exact Na	ATEGY INCO	ts Charter) -	51-0323571
(State of Incorporation)		of Principal Executive Offices)	(Zip Code)	(I.R.S. Employer
	·			Identification No.)
	Registrant's Telep	phone Number, Including Area Co	ode: (703) 848-8600	
	Securities r	registered pursuant to Section 12(b	o) of the Act:	
Title of Eacl	ı Class	Trading Symbol	Name of Each Exchang	e on which Registered
Class A common stock, par	value \$0.001 per share	MSTR	The Nasdaq Glob	al Select Market
	Securities registere	d pursuant to Section 12(g) of the	Act: Not applicable	
Indicate by check mark if the	registrant is a well-known se	easoned issuer, as defined in Rule 40	5 of the Securities Act. Yes ⊠	No □
Indicate by check mark if the re	egistrant is not required to fil	le reports pursuant to Section 13 or S	Section 15(d) of the Act. Yes \Box	No ⊠
Indicate by check mark whether during the preceding 12 month requirements for the past 90 days.	ns (or for such shorter period	d all reports required to be filed by add that the registrant was required to	Section 13 or 15(d) of the Secur o file such reports), and (2) has	ities Exchange Act of 1934 been subject to such filing
		ted electronically every Interactive 1 ceding 12 months (or for such sho		

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," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

 Large 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. \Box

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant (based on the last reported sale price of the registrant's class A common stock on June 28, 2019 on the Nasdaq Global Select Market) was approximately \$1,178.7 million.

As of February 3, 2020, the registrant had 8,069,829 and 2,035,184 shares of class A common stock and class B common stock outstanding, respectively.

Documents incorporated by reference: Portions of the definitive proxy statement for the 2020 Annual Meeting of Stockholders of the Registrant to be filed subsequently with the SEC are incorporated by reference into Part III of this Annual Report on Form 10-K to the extent indicated herein.

MICROSTRATEGY INCORPORATED

TABLE OF CONTENTS

PART I		Page
Item 1.	Business	
Item 1A.	Risk Factors	9
Item 1B.	Unresolved Staff Comments	. 25
Item 2.	Properties	. 25
Item 3.	Legal Proceedings	. 25
Item 4.	Mine Safety Disclosures	. 25
PART II		
Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	. 26
Item 6.	Selected Financial Data	. 28
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	. 29
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	. 46
Item 8.	Financial Statements and Supplementary Data	. 47
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	. 47
Item 9A.	Controls and Procedures	. 47
Item 9B.	Other Information	. 49
PART III		
Item 10.	Directors, Executive Officers and Corporate Governance	. 50
Item 11.	Executive Compensation	. 50
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	
Item 13.	Certain Relationships and Related Transactions, and Director Independence	. 50
Item 14.	Principal Accountant Fees and Services	. 50
PART IV		
Item 15.	Exhibits, Financial Statement Schedules	. 51

The trademarks and registered trademarks of MicroStrategy Incorporated and its subsidiaries referred to herein include, but are not limited to, MicroStrategy, Intelligence Everywhere, MicroStrategy 2020, HyperIntelligence, MicroStrategy Consulting, MicroStrategy Education, Dossier, MicroStrategy Cloud, Enterprise Semantic Graph, MicroStrategy Distribution Services, MicroStrategy Services, Global Delivery Center, Intelligent Enterprise, MicroStrategy Analytics, and MicroStrategy 10. Third-party product and company names mentioned herein may be the trademarks of their respective owners.

CERTAIN DEFINITIONS

All references in this Annual Report on Form 10-K ("Annual Report") to "MicroStrategy," the "Company," "we," "us," and "our" refer to MicroStrategy Incorporated and its consolidated subsidiaries (unless the context otherwise indicates).

FORWARD-LOOKING INFORMATION

This Annual Report contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). For this purpose, any statements contained herein that are not statements of historical fact, including without limitation, certain statements under "Item 1. Business," "Item 1A. Risk Factors," and "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and located elsewhere herein regarding industry prospects and our results of operations or financial position, may be deemed to be forward-looking statements. Without limiting the foregoing, the words "believes," "anticipates," "plans," "expects," and similar expressions are intended to identify forward-looking statements. The important factors discussed under "Item 1A. Risk Factors," among others, could cause actual results to differ materially from those indicated by forward-looking statements made herein and presented elsewhere by management from time to time. Such forward-looking statements represent management's current expectations and are inherently uncertain. Investors are warned that actual results may differ from management's expectations.

PART I

Item 1. Business

Overview

MicroStrategy[®] is a global leader in enterprise analytics software and services. Since our founding in 1989, MicroStrategy has been focused on empowering organizations to leverage the immense value of their data. Our vision is to enable Intelligence EverywhereTM by delivering world-class software and services that empower enterprise users with actionable intelligence.

Our core offering is MicroStrategy 2020^{TM} , which delivers modern analytics on an open, comprehensive enterprise platform. Last year, we introduced HyperIntelligence[®], a breakthrough technology that overlays actionable enterprise data on popular business applications and workflows people rely on every day. Businesses can harness MicroStrategy's innovative technology to make information and actions flow significantly faster so their workforce can make more informed decisions and take smarter actions. We also offer MicroStrategy ConsultingTM and MicroStrategy EducationTM to help customers deploy, optimize, and manage their analytics initiatives.

The MicroStrategy Platform

Our core offering is our software platform. Our platform is designed to empower the entire workforce with intelligence through the following differentiated features:

- *Modern Analytics*: We offer a modern analytics experience by delivering insights across multiple devices to users via our HyperIntelligence products, visualization and reporting capabilities, mobility features, and custom applications developed on our platform.
 - Our platform improves business processes by providing cards with contextual intelligence, suggestions, and workflows directly within the websites, applications, and mobile devices that people rely on every day. For example, users can simply hover over a highlighted word on a website to instantly bring up relevant, contextual insights on key data. Our recently released MicroStrategy 2020 delivers new design and performance enhancements to HyperIntelligence for Web, supporting a wider range of business use cases. MicroStrategy 2020 also brings fast, contextual insights to the world of mobile with new apps for iOS and Android that work on both tablets and smartphones.
 - Our platform uses Dossier®, our self-service dashboarding tool, that provides users with the formatting, layout, and input controls they need to build beautiful analytics applications. With MicroStrategy 2020, we added free-form layout and more control over interactivity.
 - Transformational Mobility Our platform empowers the increasingly mobile workforce to make
 decisions and take action quickly on-the-go. It delivers more ways for organizations to quickly
 deploy mobile productivity apps for a variety of business functions and roles on any standard
 device.
 - Custom Applications Our platform enables users to create highly customized web and mobile
 applications using the Document tool. With MicroStrategy 2020, we added Document editing to
 Workstation, providing graph property editors and improving parity between Android and iOS.
- Open, Federated Architecture: Our strategy is to embrace innovation and deliver the most open analytics platform on the market.
 - Federated Analytics Our platform provides analysts and data scientists with seamless access to trusted, governed data directly within their favorite tools. MicroStrategy 2020 includes updated versions of our connectors for Microsoft Excel, Power BI, Tableau, and Qlik to provide users with the flexibility to leverage trusted data from MicroStrategy directly within the client applications they are accustomed to. MicroStrategy 2020 also offers new integrations with leading data science tools to allow data scientists to access trusted, governed data, enrich that data with artificial intelligence ("AI"), and return it back to the MicroStrategy platform.

- Our gateways Our gateways, APIs, and connectors enable MicroStrategy to integrate with the most popular enterprise platforms and tools. MicroStrategy 2020 builds upon our strategy to deliver the most open analytics platform on the market so that our customers have the flexibility they need to choose best-of-breed enterprise software and services that are tailored to their business. In addition to over 200 connectors to popular drivers and gateways to enterprise assets, we offer a comprehensive set of Representational State Transfer ("REST") APIs that makes it easy to embed the platform in packaged and custom applications, workflows, and devices.
- o Multiple Deployment Options We also believe that customers should have the choice of where to deploy their analytics platform without compromising functionality. Our fully featured platform can be deployed in three ways: on premises, the customer's cloud environment, or the MicroStrategy Cloud™ Environment ("MCE"). MCE is a cloud subscription service that allows customers to deploy the platform on Amazon Web Services ("AWS") or Microsoft Azure environments hosted and managed by us.
- *Enterprise Platform*: Our platform is designed to securely scale analytics across the enterprise. MicroStrategy has the tools that enable organizations to deliver secure, high-performance applications at scale.
 - Enterprise Semantic Graph™ The engine of our platform is our proprietary Enterprise Semantic Graph, which provides a structured view of a company's data assets by organizing them into understandable business terms. Our Enterprise Semantic Graph also enriches metadata content with real-time location intelligence and content and system usage telemetry. The Enterprise Semantic Graph allows users to have a consistent and secure view across multiple data sources to deliver a single version of truth.
 - o Scalability Our platform powers some of the largest business intelligence deployments in the world. With MicroStrategy 2020, we continued to enhance our platform's scalability by expanding the functionality of MicroStrategy Distribution Services™, adding the ability to govern performance settings in Workstation. We also further enhanced the automation, availability, and scalability of our platform for both AWS and Azure.
 - Security Our platform includes a comprehensive set of features for superior administration, security, and architecture, including role-based access to both row and column data. We offer integrated digital identity solutions designed to deliver seamless, user-friendly authentication and real-time telemetry applications for location intelligence.

MicroStrategy ServicesTM

Through our MicroStrategy Support, MicroStrategy Consulting, and MicroStrategy Education services, we help customers better leverage our platform by offering a comprehensive set of innovative services to deploy, optimize, and maintain their business intelligence platform.

MicroStrategy Support

Our global network of MicroStrategy-certified support experts brings a wealth of experience and knowledge to help customers achieve their system availability and uptime goals and to improve the overall customer experience through highly responsive troubleshooting and proactive technical product support. Standard support is included in each customer's maintenance plan. For additional services, customers can choose one of our three premium support options – extended support, premier support, or elite support. With these premium support options, customers can receive extended coverage and enhanced service at each touchpoint.

MicroStrategy Consulting

We believe our consulting services materially complement our software by increasing customer adoption and helping our customers achieve returns on investment derived from better understanding their data. Many companies want to better utilize their data to provide actionable insights, but lack the internal expertise to define requirements and deliver solutions. MicroStrategy Consulting provides customers with architecture and implementation services to help them quickly realize results. Our consultants serve as critical resources for operations and maintenance and end-to-end, full-lifecycle projects that develop, deploy, and operate our customers' business intelligence environments. With thousands of successful projects delivered to customers worldwide spanning all major industries, our consultants apply industry best practices to guide our customers in defining, developing, and delivering business analytics solutions. MicroStrategy Consulting operates worldwide across North America, Latin America, South America, Europe, the Middle East, Africa, and the Asia Pacific region, with consultants from our local offices and our Global Delivery Center™ in Warsaw, Poland.

MicroStrategy Education

We believe the path to the Intelligent EnterpriseTM involves skill-specific paths of learning. To help organizations maximize the utility, adoption, and performance of their MicroStrategy deployments, MicroStrategy Education offers free and paid learning options. MicroStrategy Education is available worldwide in multiple languages and a variety of formats.

Business Strategy

Sales and Services

MicroStrategy sells its platform in two basic ways. The first way is to sell product licenses to customers for them to deploy the platform on their infrastructure either on premises or in the customer's cloud environment. The second way is to sell customers MCE, a cloud subscription service, so they can access our software in a cloud environment that is hosted and managed by us. Revenues from product license sales comprise product licenses revenues, and revenues from cloud subscriptions comprise subscription services revenues. Currently, the vast majority of our product sales are license sales.

MicroStrategy sells through our dedicated enterprise sales force and channel partners to increase market coverage in both domestic and international markets. We provide financial incentives for our channel partners to market and distribute our offerings. In addition, we offer a wide range of services that provide support in the discovery, planning, development, and deployment stages of a MicroStrategy offering.

Dedicated Sales Force

We market our offerings chiefly through our direct sales force. We have sales offices in locations throughout the world and use channel partners in several countries where we do not have sales offices.

Channel Partners

We have established strategic alliances with third-party vendors to help ensure the success of our customers' enterprise intelligence initiatives. Our channel partners are system integrators, consulting firms, resellers, solution providers, managed service providers, original equipment manufacturers ("OEMs"), and technology companies. These firms utilize the MicroStrategy platform for a variety of commercial purposes, and our agreements with them generally provide non-exclusive rights to market our offerings and allow access to our marketing materials, product training, and direct sales force for field-level assistance.

We make significant commitments to our channel partners, including investments in joint development, technical training, certifications, pre-sales and sales enablement, and marketing programs. Through our joint efforts, we believe customers are able to minimize their risk and maximize the return on their business intelligence projects. Our channel partners allow us to leverage sales and service resources and marketing and industry-specific expertise to expand our user base and increase our market coverage.

Marketing

Our marketing programs target the following principal constituencies:

- our historical base of enterprise-wide operational and technology executives and departmental buyers across large global enterprises;
- corporate and departmental technology buyers in mid-sized enterprises;
- government technology buyers and the vendors to the government community;
- independent software vendors that want to embed our technology tools in their solutions; and
- system integrators that have technology relationships with large enterprises, governments, and information-intensive businesses.

We continually seek to increase our brand awareness by focusing our messaging on the possibilities for value creation, the benefits of using our platform, and competitive differentiators. The channels we use to communicate with these constituencies include digital and social media, user conferences, advertising, direct email, free and evaluation software, industry events, media coverage, mobile application downloads, channel partners, and word-of-mouth and peer references.

Customers

Our customers include leading companies from a wide range of industries, including retail, consulting, technology, manufacturing, banking, insurance, finance, healthcare, telecommunications, as well as the public sector.

Competition

The analytics market is highly competitive and subject to rapidly changing technology paradigms. Within the analytics space, we compete with many different software vendors, including IBM, Microsoft, Oracle, Qlik, Salesforce, and SAP. Our future success depends on the effectiveness with which we can differentiate our offerings and compete with these vendors and other potential competitors across analytics implementation projects of varying sizes.

Our ability to compete successfully in our markets depends on a number of factors, both within and outside of our control. Some of these factors include software deployment options; analytical, mobility, data discovery, and visualization capabilities; performance and scalability; the quality and reliability of our customer service and support; licensing model; and brand recognition. Failure to compete successfully in any one of these or other areas may reduce the demand for our offerings, as well as materially adversely affect our revenue from both existing and prospective customers.

Key Differentiators

- A comprehensive, modern, and open enterprise analytics and mobility platform uniquely featuring HyperIntelligence, transformational mobility, and federated analytics.
- Our proprietary Enterprise Semantic Graph.
- Over 200 connectors to popular drivers and gateways to enterprise assets.
- A comprehensive set of REST APIs that makes it easy to embed the platform in packaged and custom
 applications, workflows, and devices.
- Flexible deployment methods that allow our customers to deploy our platform efficiently and securely
 using their own hardware or in a cloud environment they manage or via the MCE, our cloud
 subscription service.

- Comprehensive platform administration, security, and architecture, including role-based access to both row and column data.
- A platform that is designed to scale with large datasets and deliver rapid response times.
- A single platform with a full suite of capabilities, including enterprise-class reporting, automated distribution, advanced analytics, and integrated mobile application development.
- Integrated digital identity solutions designed to deliver seamless, user-friendly authentication and realtime telemetry applications for location intelligence.

Employees

As of December 31, 2019, we had a total of 2,396 employees, of whom 1,078 were based in the United States and 1,318 were based internationally. None of our employees in the United States is represented by a labor union; however, in certain foreign subsidiaries, some employees are members of trade or local unions. In France, our employees are represented by a works council as required by local law. We have not experienced any work stoppages and consider our relations with our employees to be good.

The following table summarizes employee headcount as of the dates indicated:

	December 31, 2019	December 31, 2018	December 31, 2017
Subscription services	69	56	53
Product support	219	202	172
Consulting	392	452	441
Education	38	47	41
Sales and marketing	597	707	652
Research and development	743	716	559
General and administrative	338	348	298
Total headcount	2,396	2,528	2,216

Available Information

Our website is located at www.microstrategy.com. We make available free of charge, on or through the Investor Relations section of our website (http://ir.microstrategy.com), our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports, as soon as reasonably practicable after electronically filing such reports with the Securities and Exchange Commission ("SEC"). Information found on our website is not part of this Annual Report or any other report filed with the SEC. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers, including us, that file electronically with the SEC at www.sec.gov.

Item 1A. Risk Factors

You should carefully consider the risks described below before making an investment decision. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations.

If any of the following risks occurs, our business, financial condition, or results of operations could be materially adversely affected. In such case, the market price of our class A common stock could decline, and you may lose all or part of your investment.

We adopted Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* and its subsequent amendments ("ASU 2014-09") effective January 1, 2018 and adjusted our prior period Consolidated Financial Statements to reflect full retrospective adoption. In our Annual Report on Form 10-K for the year ended December 31, 2018, prior period information in "Item 1A. Risk Factors" was also adjusted to reflect the full retrospective adoption of ASU 2014-09, where applicable. No further adjustments for the year ended December 31, 2017 have been made in this Annual Report.

Our quarterly operating results, revenues, and expenses may fluctuate significantly, which could have an adverse effect on the market price of our stock

For many reasons, including those described below, our operating results, revenues, and expenses have varied in the past and may vary significantly in the future from quarter to quarter. These fluctuations could have an adverse effect on the market price of our class A common stock.

Fluctuations in Quarterly Operating Results. Our quarterly operating results may fluctuate, in part, as a result of:

- the size, timing, volume, and execution of significant orders and shipments;
- the mix of our offerings ordered by customers, including product licenses and cloud subscriptions, which can affect the extent to which revenue is recognized immediately or over future quarterly periods;
- the timing of the release or delivery of new or enhanced offerings, which may affect the period in which we can recognize revenue;
- the timing of announcements of new offerings by us or our competitors;
- changes in our pricing policies or those of our competitors;
- market acceptance of new and enhanced versions of our offerings;
- the length of our sales cycles;
- seasonal or other buying patterns of our customers;
- changes in our operating expenses;
- the timing of research and development projects and the capitalization of software development costs;
- personnel changes;
- our use of channel partners;
- utilization of our consulting and education services, which can be affected by delays or deferrals of customer implementation of our software;
- changes in foreign currency exchange rates;
- our profitability and expectations for future profitability and their effect on our deferred tax assets and net income for the period in which any adjustment to our net deferred tax asset valuation allowance may be made;
- increases or decreases in our liability for unrecognized tax benefits; and
- changes in customer decision-making processes or customer budgets.

Limited Ability to Adjust Expenses. We base our operating expense budgets on expected revenue trends and strategic objectives. Many of our expenses, such as office leases and certain personnel costs, are relatively fixed. We may be unable to adjust spending quickly enough to offset any unexpected revenue shortfall. Accordingly, any shortfall in revenue may cause significant variation in operating results in any quarter. For example, if our revenues in the future are not sufficient to offset our operating expenses, or we are unable to adjust our operating expenses in a timely manner in response to any shortfall in anticipated revenue, we may incur operating losses.

Based on the above factors, we believe that quarter-to-quarter comparisons of our operating results are not a good indication of our future performance. It is possible that in one or more future quarters, our operating results may be below the expectations of public market analysts and investors. In that event, the market price of our class A common stock may fall.

The market price of our class A common stock has been and may continue to be volatile

The market price of our class A common stock historically has been volatile and may continue to be volatile. The market price of our class A common stock may fluctuate widely in response to various factors, some of which are beyond our control. These factors include, but are not limited to:

- quarterly variations in our results of operations or those of our competitors;
- announcements about our earnings that are not in line with analyst expectations, the likelihood of which
 may be enhanced because it is our policy not to give guidance relating to our anticipated financial
 performance in future periods;
- announcements by us or our competitors of acquisitions, dispositions, new offerings, significant contracts, commercial relationships, or capital commitments;
- the emergence of new sales channels in which we are unable to compete effectively;
- our ability to develop, market, and deliver new and enhanced offerings on a timely basis;
- commencement of, or our involvement in, litigation;
- any major change in our Board of Directors, management, or governing documents;
- changes in government regulations or in the status of our regulatory approvals;
- recommendations by securities analysts or changes in earnings estimates and our ability to meet those estimates;
- investor perception of our Company;
- announcements by our competitors of their earnings that are not in line with analyst expectations;
- the volume of shares of our class A common stock available for public sale;
- sales or purchases of stock by us or by our stockholders, and issuances of awards under our stock incentive plan;
- short sales, hedging, and other derivative transactions involving shares of our class A common stock;
 and
- general economic conditions and slow or negative growth of related markets.

In addition, the stock market in general, and the market for technology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of companies in those markets. These broad market and industry factors may seriously harm the market price of our class A common stock, regardless of our actual operating performance.

We may not be able to sustain or increase profitability in the future

We generated net income for each of the fiscal years ended December 31, 2019, 2018, and 2017; however, we may not be able to sustain or increase profitability on a quarterly or annual basis in the future. If our revenues are not sufficient to offset our operating expenses, or we are unable to adjust our operating expenses in a timely manner in response to any shortfall in anticipated revenue, we may incur operating losses in future periods, our profitability may decrease, or we may cease to be profitable. As a result, our business, results of operations, and financial condition may be materially adversely affected.

As of December 31, 2019, we had \$19.4 million of deferred tax assets, net of a \$2.1 million valuation allowance. If we are unable to sustain or increase profitability in the future, we may be required to increase the valuation allowance against these deferred tax assets, which could result in a charge that would materially adversely affect net income in the period in which the charge is incurred.

Economic uncertainty and increased competition for our customers, particularly in the retail industry, could materially adversely affect our business and results of operations

The U.S. and other significant markets have experienced cyclical downturns, and worldwide economic conditions remain uncertain. Economic uncertainty and associated macroeconomic conditions make it extremely difficult for our customers and us to accurately forecast and plan future business activities and could cause our customers to slow spending on our offerings, which could delay and lengthen sales cycles. Furthermore, during uncertain economic times, our customers may face issues gaining timely access to sufficient credit, which could result in an impairment of their ability to make timely payments to us. If that were to occur, we may be required to increase our allowance for doubtful accounts and our results would be negatively impacted.

Furthermore, we have a significant number of customers in the retail industry, which has experienced intense competition and structural changes. A significant downturn or the intensification of competition in this industry may cause organizations to reduce their capital expenditures in general or specifically reduce their spending on IT. In addition, customers in this industry may delay or cancel IT projects or seek to lower their costs by renegotiating vendor contracts. Customers with excess IT resources may choose to develop in-house software solutions rather than obtain those solutions from us. Consumers have increasingly migrated toward large e-commerce platforms and other online applications. As a result, the retail industry has experienced consolidation and other ownership changes. In the future, retailers may further consolidate, undergo restructurings or reorganizations, or realign their affiliations, any of which could decrease the number of competitors within the retail industry, reducing the number of potential customers for our offerings. Moreover, our competitors may respond to challenging market conditions by lowering prices and attempting to lure away our customers.

We cannot predict the timing, strength, or duration of any economic slowdown, or any subsequent recovery generally, or competitive and structural changes in the retail industry. If the conditions in the general economy and the markets in which we operate worsen from present levels, our business, financial condition, and results of operations could be materially adversely affected.

We may have exposure to greater than anticipated tax liabilities

We are subject to income taxes and non-income taxes in a variety of domestic and foreign jurisdictions. Our future income taxes could be materially adversely affected by earnings that are lower than anticipated in jurisdictions where we have lower statutory rates, earnings that are higher than anticipated in jurisdictions where we have higher statutory rates, changes in the valuation of our deferred tax assets and liabilities, changes in the amount of unrecognized tax benefits, or changes in tax laws, regulations, accounting principles, or interpretations thereof.

In the United States, the Tax Cuts and Jobs Act (the "Tax Act") was enacted in December 2017, bringing about broad changes in the existing corporate tax system. Over time, the Tax Act may result in material impacts to our results of operations and may affect customer behavior and our ability to forecast our effective tax rate.

In the United Kingdom, legislation imposing a tax related to offshore receipts in respect of intangible property held in low tax jurisdictions became effective in April 2019. Certain aspects of this legislation and its implementation remain unclear at this time, and, as a result, we have not yet been able to determine the full impact of the legislation on our business, operating results, or financial condition.

Further changes in the tax laws of foreign jurisdictions could arise, including as a result of the project undertaken by the Organisation for Economic Co-operation and Development ("OECD") to combat base erosion and profit shifting ("BEPS"). The OECD, which represents a coalition of member countries, has issued recommendations that, in some cases, make substantial changes to numerous long-standing tax positions and principles. These changes, many of which have been adopted or are under active consideration by OECD members and/or other countries, could increase tax uncertainty and may adversely affect our provision for income taxes.

Our determination of our tax liability is subject to review by applicable domestic and foreign tax authorities. Any adverse outcome of such reviews could have an adverse effect on our operating results and financial condition. The determination of our worldwide provision for income taxes and other tax liabilities requires significant judgment and, in the ordinary course of business, there are many transactions and calculations where the ultimate tax determination is uncertain. Moreover, as a multinational business, we have subsidiaries that engage in many intercompany transactions in a variety of tax jurisdictions where the ultimate tax determination is uncertain.

We also have contingent tax liabilities that, in management's judgment, are not probable of assertion. If such unasserted contingent liabilities were to be asserted, or become probable of assertion, we may be required to record significant expenses and liabilities in the period in which these liabilities are asserted or become probable of assertion.

As a result of these and other factors, the ultimate amount of tax obligations owed may differ from the amounts recorded in our financial statements and any such difference may materially affect our financial results in future periods in which we change our estimates of our tax obligations or in which the ultimate tax outcome is determined.

If the market for analytics software fails to grow as we expect or if businesses fail to adopt our offerings, our business, operating results, and financial condition could be materially adversely affected

Our revenue is derived from sales of our analytics software and related services. We expect these sales to account for a large portion of our revenues for the foreseeable future. Although demand for analytics software has grown in recent years, the market for analytics offerings continues to evolve. Resistance from consumer and privacy groups to commercial collection, use, and sharing of data on spending patterns and other personal behavior (including individuals' online or offline activities, mobile data, sensor data, social data, web log data, Internet of Things data, and other personal data) has grown in recent years and our customers, potential customers, or the public in general may perceive that use of our analytics software could violate individual privacy rights. In addition, increasing government restrictions on the collection, use, and transfer of personal data could impair the further growth of the market for analytics software. We cannot be sure that this market will continue to grow or, even if it does grow, that businesses will adopt our solutions.

We have spent, and intend to keep spending, considerable resources to educate potential customers about analytics offerings in general and our offerings in particular. However, we cannot be sure that these expenditures will help any of our offerings achieve any additional market acceptance. If the market fails to grow or grows more slowly than we currently expect or businesses fail to adopt our offerings, our business, operating results, and financial condition could be materially adversely affected.

Our offerings face intense competition, which may lead to lower prices for our offerings, reduced gross margins, loss of market share, and reduced revenue

The analytics market is highly competitive and subject to rapidly changing technology paradigms. Within the analytics space, we compete with many different software vendors, including IBM, Microsoft, Oracle, Qlik, Salesforce, and SAP. Our future success depends on the effectiveness with which we can differentiate our offerings and compete with these vendors and other potential competitors across analytics implementation projects of varying sizes. Our ability to compete successfully in our markets depends on a number of factors, both within and outside of our control. Some of these factors include software deployment options; analytical, mobility, data discovery, and visualization capabilities; performance and scalability; the quality and reliability of our customer service and support; licensing model; and brand recognition. Failure to compete successfully in any one of these or other areas may reduce the demand for our offerings, as well as materially adversely affect our revenue from both existing and prospective customers.

Some of our competitors have longer operating histories and significantly greater financial, technical, and marketing resources than we do. As a result, they may be able to respond more quickly to new or emerging technologies and changes in customer requirements or devote greater resources to the development, promotion, sale, and marketing of their offerings than we can, such as offering certain analytics products free of charge when bundled with other products. In addition, many of our competitors have strong relationships with current and potential customers, extensive industry and specialized business knowledge, as well as corresponding proprietary technologies that they can leverage, such as multidimensional databases and enterprise resource planning repositories. As a result, they may be able to prevent us from penetrating new accounts or expanding within existing accounts.

Increased competition may lead to price cuts, reduced gross margins, and loss of market share. We may not be able to compete successfully against current and future competitors, and the failure to meet the competitive pressures we face may have a material adverse effect on our business, operating results, and financial condition.

Current and future competitors may also make strategic acquisitions or establish cooperative relationships among themselves or with others. By doing so, these competitors may increase their ability to meet the needs of our potential customers by their expanded offerings. Our current or prospective channel partners may establish cooperative relationships with our current or future competitors. These relationships may limit our ability to sell our analytics offerings through specific distribution channels. Accordingly, new competitors or alliances among current and future competitors may emerge and rapidly gain significant market share. These developments could limit our ability to obtain revenues from new customers and to sustain software maintenance revenues from our installed customer base. In addition, basic office productivity software suites, such as Microsoft Office, could evolve to offer advanced analysis and reporting capabilities that may reduce the demand for our analytics offerings.

We depend on revenue from a single software platform and related services as well as revenue from our installed customer base

Our revenue is derived from sales of our software platform and related services. Because of this revenue concentration, our business could be harmed by a decline in demand for, or in the adoption or prices of, our platform and related services as a result of, among other factors, any change in our pricing or packaging model, increased competition, maturation in the markets for our platform, or other risks described in this Annual Report.

We also depend on our installed customer base for a substantial portion of our revenue. We have contracts for cloud subscriptions that provide recurring revenues to us, as well as contracts with our license customers for ongoing support and maintenance. In addition, our installed customer base has historically generated additional new license and services revenues for us. If our existing customers cancel or fail to renew their service contracts or fail to make additional purchases from us, our revenue could decrease and our operating results could be materially adversely affected.

If we are unable to develop and release new offerings and software enhancements to respond to rapid technological change, new customer requirements, or evolving industry standards in a timely and cost-effective manner, our business, operating results, and financial condition could be materially adversely affected

The market for our offerings is characterized by frequent new offerings and software enhancements in response to rapid technological change, new customer requirements, and evolving industry standards. The introduction of offerings embodying new technologies can quickly make existing offerings obsolete and unmarketable. We believe that our future success depends largely on our ability to:

- continue to support a number of popular operating systems and databases;
- maintain and improve our current offerings;
- rapidly develop new offerings and software enhancements that achieve market acceptance;
- maintain technological competitiveness; and
- meet an expanding range of customer requirements.

Analytics applications are inherently complex, and it can take a long time and require significant research and development expenditures to develop and test new offerings and software enhancements. In addition, customers may delay their purchasing decisions because they anticipate that new or enhanced versions of our offerings will soon become available. We cannot be sure that we will succeed in developing, marketing, and delivering, on a timely and cost-effective basis, new or enhanced offerings that respond to technological change, new customer requirements, or evolving industry standards, nor can we be sure that any new or enhanced offerings will achieve market acceptance. Moreover, even if we introduce a new offering, we may experience a decline in revenues of our existing offerings that is not fully matched by the new offering's revenue. For example, customers may delay making purchases of a new offering to permit them to make a more thorough evaluation of the offering or until industry and marketplace reviews become widely available. Some customers may hesitate migrating to a new offering due to concerns regarding the complexity of migration or performance issues that may occur in product infancy. In addition, we may lose existing customers who choose a competitor's offering rather than migrate to our new offering. This could result in a temporary or permanent revenue shortfall and materially adversely affect our business, operating results, and financial condition.

A substantial customer shift in the deployment of MicroStrategy Analytics $^{\text{\tiny{M}}}$ from a product license model to a cloud subscription model could affect the timing of revenue recognition, reduce product licenses and product support revenues, and materially adversely affect our operating results

We offer our analytics platform in the form of a product license or a cloud subscription. The payment streams and revenue recognition timing for our product licenses are different from those for our cloud subscriptions. For product licenses, customers typically pay us a lump sum soon after entering into a license agreement and we typically recognize product licenses revenue when control of the license is transferred to the customer. For cloud subscriptions, customers typically make periodic payments over the subscription period and we recognize subscription services revenues ratably over the subscription period. As a result, if a substantial number of current customers shift to, or new customers purchase, cloud subscriptions instead of product licenses, the resulting change in payment terms and revenue recognition may result in our recognizing less revenue in the reporting period in which the sale transactions are consummated than has been the case in prior periods, with more revenue being recognized in future periods. This change in the timing of revenue recognition could materially adversely affect our operating results and cash flows for the periods during which such a shift or change in purchasing occurs. Accordingly, in any particular reporting period, cloud subscription sales could negatively impact product license sales to our existing and prospective customers, which could reduce product licenses and product support revenues.

Our investment in new business strategies and initiatives could disrupt the operations of our ongoing business and present risks that we have not adequately anticipated

We have invested, and in the future may invest, in new business strategies and initiatives. For example, we have introduced a number of innovative technologies designed to enable companies to capitalize on Big Data, mobile applications, cloud services, security, Internet of Things, and AI trends in the marketplace. These endeavors may involve significant risks and uncertainties, including distraction of management from other business operations, the dedication of significant research and development, sales and marketing, and other resources to these new initiatives

at the expense of our other business operations, generation of insufficient revenue to offset expenses associated with new initiatives, incompatibility of our new technologies with third-party platforms, inadequate return of capital, and other risks that we may not have adequately anticipated. Because new strategies and initiatives are inherently risky, these strategies and initiatives may not be successful and could materially adversely affect our financial condition and operating results.

Business disruptions, including interruptions, delays, or failures of our systems, third-party data center hosting facility or other third-party services, could materially adversely affect our operating results or result in a material weakness in our internal controls that could adversely affect the market price of our stock

A significant portion of our research and development activities or certain other critical business operations are concentrated in facilities in Northern Virginia, China, and Poland. In addition, we serve our customers and manage certain critical internal processes using a third-party data center hosting facility located in the United States and other third-party services, including AWS, Azure, and other cloud services. We could experience a disruption or failure of our systems or the third-party hosting facility or other services that we use. Such disruptions or failures could include a natural disaster, fire, cyber-attack, act of terrorism, geopolitical conflict, the effects of climate change, or other catastrophic event, as well as power outages or telecommunications infrastructure outages, or a decision by one of our third-party service providers to close facilities that we use without adequate notice or to materially change the pricing or terms of their services, or other unanticipated problems with the third-party services that we use, including a failure to meet service standards.

We are a highly automated business and any such disruptions or failures could (i) result in the destruction or disruption of any of our critical business operations, controls or procedures, or IT systems, (ii) severely affect our ability to conduct normal business operations, including delaying completion of sales and provision of services, (iii) result in a material weakness in our internal control over financial reporting, (iv) cause our customers to terminate their subscriptions, (v) result in our issuing credits to customers or paying penalties or fines, (vi) harm our reputation, (vii) adversely affect our attrition rates or our ability to attract new customers, or (viii) cause our offerings to be perceived as not being secure, any of which could materially adversely affect our future operating results.

We have significant international sales and operations and face risks related to health epidemics that could significantly disrupt our operations.

Our business could be adversely affected by the effects of health epidemics, particularly in regions where we have significant operations or concentrations of customers or suppliers. For example, we rely on the research and development activities and certain other critical business operations that are conducted from our office in Hangzhou, China, and several of our customers and suppliers are also located in cities throughout China. As a result, we could be adversely affected by health epidemics in China, including the recent outbreak of a novel coronavirus first identified in Wuhan, China. Consequences of the coronavirus outbreak have included disruptions or restrictions on our ability to travel and temporary closures of our Hangzhou office or the facilities of our customers or suppliers in China. The coronavirus outbreak could also delay our release or delivery of new or enhanced offerings or require us to make unexpected changes to such offerings. Our operating results could be adversely affected to the extent that the coronavirus outbreak harms the Chinese economy in general. Any disruption of our customers or suppliers may also materially adversely affect our business and operating results. In addition, the coronavirus outbreak could evolve into a worldwide health crisis that could adversely affect the economies and financial markets of many countries, resulting in an economic downturn that could affect demand for our offerings and materially adversely affect our business, operating results, and financial condition.

We use channel partners and if we are unable to maintain successful relationships with them, our business, operating results, and financial condition could be materially adversely affected

In addition to our direct sales force, we use channel partners, such as system integrators, consulting firms, resellers, solution providers, managed service providers, OEMs, and technology companies, to license and support our offerings. For the year ended December 31, 2019, transactions by channel partners for which we recognized revenue accounted for 27.6% of our total product licenses revenues. Our channel partners may offer customers the products and services of several different companies, including offerings that compete with ours. Because our

channel partners generally do not have exclusive relationships with us, we cannot be certain that they will prioritize or devote adequate resources to selling our offerings. Moreover, divergence in strategy or contract defaults by any of these channel partners may materially adversely affect our ability to develop, market, sell, or support our offerings.

Although we believe that direct sales will continue to account for a majority of our product licenses revenues, we seek to maintain a significant level of sales activities through our channel partners. There can be no assurance that our channel partners will continue to cooperate with us. In addition, actions taken or not taken by such parties may materially adversely affect us. Our ability to achieve revenue growth in the future will depend in part on our ability to maintain successful relationships with our channel partners. If we are unable to maintain our relationships with these channel partners, our business, operating results, and financial condition could be materially adversely affected.

In addition, we rely on our channel partners to operate in accordance with applicable laws and regulatory requirements. If they fail to do so, we may need to incur significant costs in responding to investigations or enforcement actions or paying penalties assessed by the applicable authorities. We also rely on our channel partners to operate in accordance with the terms of their contractual agreements with us. For example, some of our agreements with our channel partners prescribe the terms and conditions pursuant to which they are authorized to resell or distribute our software and offer technical support and related services. If our channel partners do not comply with their contractual obligations to us, our business, operating results, and financial condition may be materially adversely affected.

Our recognition of deferred revenue and advance payments is subject to future performance obligations and may not be representative of revenues for succeeding periods

Our current and non-current deferred revenue and advance payments totaled \$191.5 million as of December 31, 2019. The timing and ultimate recognition of our deferred revenue and advance payments depend on various factors, including our performance of various service obligations.

Because of the possibility of customer changes or delays in customer development or implementation schedules or budgets, and the need for us to satisfactorily perform product support and other services, deferred revenue and advance payments at any particular date may not be representative of actual revenue for any succeeding period.

Our international operations are complex and expose us to risks that could have a material adverse effect on our business, operating results, and financial condition

We receive a significant portion of our total revenues from international sales and conduct our business activities in various foreign countries, including some emerging markets where we have limited experience, where the challenges of conducting our business can be significantly different from those we have faced in more developed markets, and where business practices may create internal control risks. International revenues accounted for 43.7%, 42.3%, and 41.8% of our total revenues for the years ended December 31, 2019, 2018, and 2017, respectively. Our international operations require significant management attention and financial resources.

Our international business activities expose us to additional risks, including:

- fluctuations in foreign currency exchange rates;
- new, or changes in, regulatory requirements;
- tariffs, export and import restrictions, restrictions on foreign investments, sanctions, laws and policies
 that favor local competitors (such as mandatory technology transfers), and other trade barriers or
 protection measures;
- costs of localizing offerings;
- lack of acceptance of localized offerings;
- difficulties in and costs of staffing, managing, and operating our international operations;

- tax issues, including restrictions on repatriating earnings;
- weaker intellectual property protection;
- economic weakness or currency related crises;
- the burden of complying with a wide variety of laws, including those relating to labor matters, antitrust, procurement and contracting, consumer and data protection, privacy, data localization, governmental access to data, network security, and encryption;
- generally longer payment cycles and greater difficulty in collecting accounts receivable;
- our ability to adapt to sales practices and customer requirements in different cultures;
- increased risk of misappropriation, theft, or misuse of intellectual property, particularly in foreign countries where we have significant software development operations that have access to product source code, such as China;
- corporate espionage; and
- political instability and security risks in the countries where we are doing business.

Disruptions to trade, weakening of economic conditions, economic and legal uncertainties, or changes in currency rates may adversely affect our business, financial condition, operating results, and cash flows. For example, we may face heightened risks in connection with our international operations as a result of the withdrawal of the United Kingdom from the European Union, commonly referred to as "Brexit." The future effects of Brexit are uncertain and will depend on, among other things, the terms of any agreements the United Kingdom enters into governing U.K. access to E.U. and other markets either during the transitional period that is currently scheduled to end on December 31, 2020 or more permanently. Brexit could, among other outcomes, disrupt the free movement of goods, services, and people between the United Kingdom and the European Union. Brexit could also lead to legal uncertainty and potentially divergent national laws and regulations, including tax laws and regulations, as the United Kingdom determines which E.U. laws to replace or replicate. In addition, the Trump administration has called for substantial changes to U.S. foreign trade policy, including the imposition of greater restrictions on international trade and significant increases in tariffs on goods imported into the United States, and has increased tariffs on certain goods imported into the United States from a number of foreign markets, following which retaliatory tariffs have been imposed on exports of certain U.S. goods to those markets. These tariffs and any further escalation of protectionist trade measures could adversely affect the markets in which we sell our offerings and, in turn, our business, financial condition, operating results, and cash flows.

Changes to the U.S. taxation of our international income, or changes in foreign tax laws, could have a material effect on our future operating results. For example, the Tax Act brought about, among other items, corporate income tax rate changes, the modification or elimination of certain tax incentives, changes to the existing regime for taxing overseas earnings, and measures to prevent BEPS, and the United Kingdom adopted legislation imposing a tax related to offshore receipts in respect of intangible property held in low tax jurisdictions.

In addition, from time to time, we may undertake various potential intercompany transactions and legal entity restructurings that involve our international subsidiaries. We consider various factors in evaluating these potential transactions and restructurings, including the alignment of our corporate structure with our organizational objectives, the operational and tax efficiency of our corporate structure, and the long-term cash flows and cash needs of our business. Such transactions and restructurings could negatively impact our overall tax rate and result in additional tax liabilities.

Moreover, compliance with foreign and U.S. laws and regulations that are applicable to our international operations is complex and may increase our cost of doing business in international jurisdictions, and our international operations could expose us to fines and penalties if we fail to comply with these regulations. These laws and regulations include anti-bribery laws, such as the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, local laws prohibiting corrupt payments to government officials, and local laws relating to procurement, contracting, and antitrust. These laws and regulations also include import and export requirements and economic and trade sanctions administered by the Office of Foreign Assets Control and the U.S. Department of Commerce based on U.S. foreign policy and national security goals against targeted foreign states, organizations, and individuals. Although we have

implemented policies and procedures designed to help ensure compliance with these laws, there can be no assurance that our employees, channel partners, and other persons with whom we do business will not take actions in violation of our policies or these laws. Any violations of these laws could subject us to civil or criminal penalties, including substantial fines or prohibitions on our ability to sell our offerings to one or more countries, and could also materially damage our reputation and our brand.

These factors may have a material adverse effect on our future sales and, consequently, on our business, operating results, and financial condition.

We may lose sales, or sales may be delayed, due to the long sales and implementation cycles of certain of our offerings, which could reduce our revenues

To date, our customers have typically invested substantial time, money, and other resources and involved many people in the decision to purchase our software and related services. As a result, we may wait nine months or more after the first contact with a customer for that customer to place an order while it seeks internal approval for the purchase of our software or services. During this long sales cycle, events may occur that affect the size and/or timing of the order or even cause it to be canceled. For example, our competitors may introduce new offerings, or the customer's own budget and purchasing priorities may change.

Even after an order is placed, the time it takes to deploy our software and complete services engagements can vary widely. Implementing some of our offerings can take several months, depending on the customer's needs, and may begin only with a pilot program. It may be difficult to deploy our software if the customer has complicated deployment requirements, such as deployments that involve integrating databases, hardware, and software from different vendors. If a customer hires a third party to deploy our software, we cannot be sure that our software will be deployed successfully.

Our results in any particular period may depend on the number and volume of large transactions in that period and these transactions may involve lengthier, more complex, and more unpredictable sales cycles than other transactions

As existing and potential customers seek to standardize on a single analytics vendor or require greater vendor capacity to meet their growing analytics needs, our business may experience larger transactions at the enterprise level and larger transactions may account for a greater proportion of our business. The presence or absence of one or more large transactions in a particular period may have a material positive or negative effect on our revenue and operating results for that period. For the years ended December 31, 2019, 2018, and 2017, our top three product licenses transactions with recognized revenue totaled \$5.4 million, \$7.7 million, and \$5.5 million, respectively, or 6.2%, 8.7%, and 5.9% of total product licenses revenues, respectively. These transactions represent significant business and financial decisions for our customers, require considerable effort on the part of customers to assess alternative products, and often require additional levels of management approval. In addition, large transactions are often more complex than smaller transactions. These factors generally lengthen the typical sales cycle and increase the risk that customers may postpone or delay purchasing decisions from one period to a subsequent period or that customers will alter their purchasing requirements. We may also encounter greater competition and pricing pressure in larger transactions, and the sales effort and service delivery scope for larger transactions may require us to use additional resources to execute the transactions. These factors could result in lower than anticipated revenue and earnings for a particular period or lower estimated revenue and earnings in future periods.

We face a variety of risks in doing business with U.S. and foreign federal, state, and local governments and government agencies, including risks related to the procurement process, budget constraints and cycles, termination of contracts, and compliance with government contracting requirements

Our customers include the U.S. government and a number of state and local governments and government agencies. There are a variety of risks in doing business with government entities, including:

Procurement. Contracting with public sector customers is highly competitive and can be time-consuming and expensive, requiring us to incur significant up-front time and expense without any assurance that we will win a contract.

Budgetary Constraints and Cycles. Demand and payment for our offerings are impacted by public sector budgetary cycles and funding availability, with funding reductions or delays adversely impacting public sector demand for our offerings.

Termination of Contracts. Public sector customers often have contractual or other legal rights to terminate contracts for convenience or due to a default. If a contract is terminated for convenience, which can occur if the customer's needs change, we may only be able to collect fees for software or services delivered prior to termination and settlement expenses. If a contract is terminated due to a default, we may not recover even those amounts, and we may be liable for excess costs incurred by the customer for procuring alternative software or services.

Compliance with Government Contracting Requirements. Government contractors are required to comply with a variety of complex laws, regulations, and contractual provisions relating to the formation, administration, or performance of government contracts that give public sector customers substantial rights and remedies, many of which are not typically found in commercial contracts. These may include rights with respect to price protection, the accuracy of information provided to the government, contractor compliance with socio-economic policies, and other terms that are particular to government contracts. Federal, state, and local governments and government agencies routinely investigate and audit contractors for compliance with these requirements. If, as a result of an audit or review, it is determined that we have failed to comply with these requirements, we may be subject to civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, fines, and suspensions or debarment from future government business and we may suffer harm to our reputation.

Our customers also include a number of foreign governments and government agencies. Similar procurement, budgetary, contract, and audit risks also apply to our doing business with these entities. In addition, compliance with complex regulations and contracting provisions in a variety of jurisdictions can be expensive and consume significant management resources. In certain jurisdictions, our ability to win business may be constrained by political and other factors unrelated to our competitive position in the market. Each of these difficulties could materially adversely affect our business and results of operations.

We depend on technology licensed to us by third parties, and the loss of this technology could impair our software, delay implementation of our offerings, or force us to pay higher license fees

We license third-party technologies that are incorporated into or utilized by our existing offerings. There can be no assurance that the licenses for such third-party technologies will not be terminated or that we will be able to license third-party technologies for future offerings. In addition, we may be unable to renegotiate acceptable third-party license terms, or we may be subject to infringement liability if third-party technologies that we license is found to infringe intellectual property rights of others. Changes in or the loss of third-party licenses could lead to a material increase in our costs or to our offerings becoming inoperable or their performance being materially reduced. As a result, we may need to incur additional development costs to help ensure continued performance of our offerings, and we may experience a decreased demand for our offerings.

If we are unable to recruit or retain skilled personnel, or if we lose the services of our Chairman of the Board of Directors, President & Chief Executive Officer, our business, operating results, and financial condition could be materially adversely affected

Our future success depends on our continuing ability to attract, train, assimilate, and retain highly skilled personnel. Competition for these employees is intense, and competition may be amplified by evolving restrictions on immigration, travel, or availability of visas for skilled technology workers. We may not be able to retain our current key employees or attract, train, assimilate, and retain other highly skilled personnel in the future. Competition for qualified employees in the technology industry has historically been high, particularly for software engineers and other technical positions. Our future success also depends in large part on the continued service of Michael J. Saylor, our Chairman of the Board of Directors, President & Chief Executive Officer. If we lose the services of Mr. Saylor, or if we are unable to attract, train, assimilate, and retain the highly skilled personnel we need, our business, operating results, and financial condition could be materially adversely affected.

Changes in third-party software or systems or the emergence of new industry standards could materially adversely affect the operation of and demand for our existing software

The functionalities of our software depend in part on the ability of our software to interface with our customers' information technology ("IT") infrastructure and cloud environments, including software applications, network infrastructure, and end user devices, which are supplied to our customers by various other vendors. When new or updated versions of these third-party software or systems are introduced, or new industry standards in related fields emerge, we may be required to develop updated versions of or enhancements to our software to help ensure that it continues to effectively interoperate with our customers' IT infrastructure and cloud environments. For example, if new or modified operating systems are introduced or new web standards and technologies or new standards in the field of database access technology emerge that are incompatible with our software, and we are unable to adapt our software on a timely basis, the ability of our software to deliver reports, access customer databases, or otherwise perform key functions could be impaired, which may impact our customers' satisfaction with our software and potentially result in breach of warranty claims or other claims. Development efforts to maintain the interoperability of our software with our customers' IT infrastructure and cloud environments could require substantial capital investment and employee resources, and we may not be able to update our software quickly, cost-effectively, or at all. If we are unable to update our software in a timely manner, demand for our software could be materially adversely affected.

The nature of our software makes it particularly susceptible to undetected errors, bugs, or security vulnerabilities, which could cause problems with how the software performs and, in turn, reduce demand for our software, reduce our revenue, and lead to litigation claims against us

Software as complex as ours may contain undetected errors, bugs, or security vulnerabilities. Although we test our software extensively, we have in the past discovered software errors, bugs, or security vulnerabilities in our offerings after their introduction. Despite testing by us and our current and potential customers, errors, bugs, or security vulnerabilities may be found in new offerings or releases after commercial shipments begin. This could result in lost revenue, damage to our reputation, or delays in market acceptance, which could have a material adverse effect on our business, operating results, and financial condition. We may also need to expend resources and capital to correct these defects if they occur.

Our agreements with customers typically contain provisions designed to limit our exposure to product liability, warranty, and other claims. It is possible, however, that these provisions may not be effective under the laws of certain domestic or international jurisdictions and we may be exposed to product liability, warranty, and other claims. A successful product liability claim against us could have a material adverse effect on our business, operating results, and financial condition.

Changes in laws or regulations relating to privacy or the collection, processing, disclosure, storage, localization, or transmission of personal data, or any actual or perceived failure by us or our third-party service providers to comply with such laws and regulations, contractual obligations, or applicable privacy policies, could materially adversely affect our business

Aspects of our business, including our digital identity offering and the cloud environments we manage, involve collecting, processing, disclosing, storing, and transmitting personal data, which are subject to certain privacy policies, contractual obligations, and U.S. federal, U.S. state, and foreign laws, regulations, and directives relating to privacy and data protection. We store a substantial amount of customer and employee data, including personal data, on our networks and other systems and the cloud environments we manage. In addition, the types of data subject to protection as personal data in the European Union, the United States, and elsewhere, including Asia and Latin America, have been expanding. In recent years, the collection and use of personal data by companies have come under increased regulatory and public scrutiny, especially in relation to the collection and processing of sensitive data, such as healthcare, biometric, genetic, financial services, and government data, children's data, precise location data, and data regarding a person's race or ethnic origins, political opinions, religious or philosophical beliefs, trade union membership, or sex life or sexual orientation. For example, in the United States, protected health information is subject to the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"). HIPAA has been supplemented by the Health Information Technology for Economic and Clinical Health Act with the result of increased civil and criminal penalties for noncompliance. Entities performing certain functions that engage in

creating, receiving, maintaining, or transmitting protected health information provided by covered entities and other business associates are directly subject to enforcement under HIPAA. Our access to protected health information through the cloud environments we manage triggers obligations to comply with certain privacy rules and data security requirements under HIPAA.

Any systems failure or security breach that results in the release of, or unauthorized access to, personal data, or any failure or perceived failure by us or our third-party service providers to comply with applicable privacy policies, contractual obligations, or any applicable laws or regulations relating to privacy or data protection, could result in proceedings against us by domestic or foreign government entities or others, including private plaintiffs in litigation. Such proceedings could result in the imposition of sanctions, fines, penalties, liabilities, government orders, and/or orders arising out of private proceedings, requiring that we change our data practices, any of which could have a material adverse effect on our business, operating results, reputation, and financial condition.

Various U.S. federal, U.S. state, and foreign legislative, regulatory, or other government bodies may enact new or additional laws or regulations, or issue rulings that invalidate prior laws or regulations, concerning privacy, data storage, data protection, and cross-border transfer of data that could materially adversely impact our business. For example, in the European Union, the General Data Protection Regulation ("GDPR") took effect in May 2018. GDPR governs data practices and privacy, establishes requirements regarding the handling and security of personal data, requires disclosure of data breaches to individuals, customers, and data protection authorities in certain circumstances, requires companies to honor data subjects' requests relating to their personal data, permits regulators to impose fines of up to €20,000,000 or 4% of global annual revenue, whichever is higher, and establishes a private right of action. Furthermore, a new ePrivacy Regulation, regulating electronic communications, was proposed in 2017 and is under consideration by the European Commission, the European Parliament, and the European Council. Brazil also enacted the Lei Geral de Proteção de Dados (the Brazilian General Data Protection Law), which will impose requirements largely similar to GDPR on products and services offered to users in Brazil, effective in August 2020. We may also be subject to a cybersecurity law that went into effect in China in June 2017 that has uncertain but broad application and imposes a number of new privacy and data security obligations, including a data localization requirement for certain types of data.

The state of California has also adopted a new comprehensive privacy law, the California Consumer Protection Act ("CCPA"), modeled largely on GDPR, that took effect on January 1, 2020 and is expected to become enforceable no later than July 1, 2020. We may be required to devote substantial resources to implement and maintain compliance with the CCPA, and noncompliance could carry the threat of regulatory investigations and fines or private litigation. In addition, several states are also now considering bills similar to the CCPA.

Furthermore, the U.S. Congress is considering comprehensive privacy legislation. At this time, it is unclear whether it will in fact pass such a law and if so, when and what it will require and prohibit. Moreover, it is not clear whether any such legislation would give the Federal Trade Commission ("FTC") any new authority to impose civil penalties for violations of the Federal Trade Commission Act in the first instance, or whether the U.S. Congress will grant the FTC rulemaking authority over privacy and information security.

Complying with these and other changing requirements could cause us or our customers to incur substantial costs or pay substantial fines or penalties, require us to change our business practices, require us to take on more onerous obligations in our contracts, or limit our ability to provide certain offerings in certain jurisdictions, any of which could materially adversely affect our business and operating results. In addition, mechanisms for lawfully transferring personal data from the European Union to the United States and certain other countries are being challenged in European courts, which could lead to uncertainty about the legality of such transfers, or burdensome or inconsistent legal requirements. New laws or regulations restricting or limiting the collection or use of mobile data could also reduce demand for certain of our offerings or require changes to our business practices, which could materially adversely affect our business and operating results.

If we or our third-party service providers experience a security breach and unauthorized parties obtain access to our customers', prospects', vendors', or channel partners' data, our data, our networks or other systems, or the cloud environments we manage, our offerings may be perceived as not being secure, our reputation may be harmed, demand for our offerings may be reduced, our operations may be disrupted, we may incur significant legal and financial liabilities, and our business could be materially adversely affected

As part of our business, we process, store, and transmit our customers', prospects', vendors', and channel partners' information and data as well as our own, including in our networks and other systems and the cloud environments we manage. There can be no assurance that any security measures that we or our third-party service providers have implemented will be effective against all current or future security threats. For example, security measures may be breached as a result of technological error, computer viruses, or third-party action, including intentional misconduct by computer hackers, physical break-ins, the actions of state actors, industrial espionage, fraudulent inducement of employees, customers, or channel partners to disclose sensitive information such as user names or passwords, and employee, customer, or channel partner error or malfeasance. We have experienced attempts by third parties to identify and exploit software and service vulnerabilities, penetrate or bypass our security measures, and gain unauthorized access to our or our customers' or service providers' cloud environments, networks, and other systems.

A security breach could result in unauthorized access to or disclosure, modification, misuse, loss, or destruction of our customers', prospects', vendors', or channel partners' data, our data (including our proprietary information, intellectual property, or trade secrets), our networks or other systems, or the cloud environments we manage. Because there are many different security breach techniques and such techniques continue to evolve, we may be unable to anticipate, detect, or mitigate attempted security breaches and implement adequate preventative measures. Third parties may also conduct attacks designed to prevent access to critical data or systems through ransomware or temporarily deny customers access to our cloud environments.

Any security breach or successful denial of service attack could result in a loss of customer confidence in the security of our offerings and damage to our brand, reduce the demand for our offerings, disrupt our normal business operations, require us to spend material resources to investigate or correct the breach, require us to notify affected customers or individuals and/or applicable regulators and others, and provide identity theft protection services to individuals under applicable laws, expose us to legal liabilities, including litigation, regulatory enforcement, and indemnity obligations, and materially adversely affect our revenue and operating results. Our software operates in conjunction with and is dependent on third-party products and components across a broad ecosystem. If there is a security vulnerability in one of these products or components, and if there is a security exploit targeting it, we could face increased costs, liability claims, customer dissatisfaction, reduced revenue, or harm to our reputation or competitive position. These risks will increase as we continue to grow the number and scale of our cloud subscriptions and process, store, and transmit increasingly large amounts of our customers', prospects', vendors', channel partners', and our own information and data, which may include proprietary or confidential data or personal or other identifying information. Moreover, if a high-profile security breach occurs with respect to an industry peer, our customers and potential customers may lose trust in the security of business intelligence or analytics platforms generally, which could adversely impact our ability to retain existing customers or attract new ones.

Our intellectual property is valuable, and any inability to protect it could reduce the value of our offerings and brand

We rely on a combination of copyrights, patents, trademarks, trade secrets, confidentiality procedures, and contractual commitments to protect our intellectual property worldwide. Despite our efforts, these measures can only provide limited protection. Unauthorized third parties may try to copy or reverse engineer portions of our software or otherwise obtain and use our intellectual property. Any intellectual property owned by us may be invalidated, circumvented, or challenged. Any of our pending or future intellectual property applications, whether or not currently being challenged, may not be issued with the scope we seek, if at all. Moreover, amendments to and developing jurisprudence regarding U.S. and international law may affect our ability to protect our intellectual property and defend against claims of infringement. In addition, although we generally enter into confidentiality agreements with our employees and contractors, there can be no assurance that the confidential nature of our intellectual property will be maintained. Furthermore, the laws of some countries do not provide the same level of protection of our intellectual property as do the laws of the United States. If we cannot protect our intellectual property against unauthorized copying or use, we may not remain competitive.

Third parties may claim we infringe their intellectual property rights

We periodically receive notices from third parties claiming we are infringing their intellectual property rights, principally patent, copyright, and trademark rights. We expect the number of such claims will increase as we continue to expand our offerings and branding, the number of offerings and level of competition in our industry segments grow, the functionality of offerings overlaps, and the volume of issued patents, patent applications, and copyright and trademark registrations continues to increase. Responding to any infringement claim, regardless of its validity, could:

- be time-consuming, costly, and/or result in litigation;
- divert management's time and attention from developing our business;
- require us to pay monetary damages or enter into royalty and licensing agreements that we would not normally find acceptable;
- require us to stop selling certain of our offerings;
- require us to redesign certain of our offerings using alternative non-infringing technology or practices, which could require significant effort and expense;
- require us to rename certain of our offerings or entities; or
- require us to satisfy indemnification obligations to our customers and channel partners.

Additionally, while we monitor our use of third-party software, including open source software, we cannot assure you that our processes for controlling such use in our offerings will be effective. If we fail to comply with the terms or conditions associated with third-party software that we use, including any changes to the license terms or conditions that may occur, if we inadvertently embed certain types of third-party software into one or more of our offerings, or if third-party software that we license is found to infringe the intellectual property rights of others, we could subject ourselves to infringement liability and be required to re-engineer our offerings, discontinue the sale of our offerings if re-engineering could not be accomplished on a timely or cost-effective basis, or make available to certain third parties or generally available, in source code form, our proprietary code, any of which could materially adversely affect our business, operating results, and financial condition.

If a successful infringement claim is made against us and we fail to develop or license a substitute technology or brand name, as applicable, our business, results of operations, financial condition, or cash flows could be materially adversely affected.

Because of the rights of our two classes of common stock and because we are controlled by Michael J. Saylor, who beneficially owns the majority of our class B common stock, Mr. Saylor could transfer control of MicroStrategy to a third party without the approval of our Board of Directors or our other stockholders, prevent a third party from acquiring us, or limit the ability of our other stockholders to influence corporate matters

We have two classes of common stock: class A common stock and class B common stock. Holders of our class A common stock generally have the same rights as holders of our class B common stock, except that holders of class A common stock have one vote per share while holders of class B common stock have ten votes per share. As of February 3, 2020, holders of our class B common stock owned 2,035,184 shares of class B common stock, or 71.6% of the total voting power. As of February 3, 2020, Mr. Saylor, our Chairman of the Board of Directors, President & Chief Executive Officer, beneficially owned 2,011,668 shares of class B common stock, or 70.8% of the total voting power. Accordingly, Mr. Saylor can control MicroStrategy through his ability to determine the outcome of elections of our directors, amend our certificate of incorporation and by-laws, and take other actions requiring the vote or consent of stockholders, including mergers, going-private transactions, and other extraordinary transactions and their terms.

Our certificate of incorporation allows holders of class B common stock to transfer shares of class B common stock, subject to the approval of stockholders holding a majority of the outstanding class B common stock. Mr. Saylor could, without the approval of our Board of Directors or our other stockholders, transfer voting control of MicroStrategy to a third party. Such a transfer of control could have a material adverse effect on our business, operating results, and financial condition. Mr. Saylor could also prevent a change of control of MicroStrategy, regardless of whether holders of class A common stock might otherwise receive a premium for their shares over the then current market price. In addition, this concentrated control limits stockholders' ability to influence corporate matters and, as a result, we may take actions that our non-controlling stockholders do not view as beneficial or that conflict with their interests. As a result, the market price of our class A common stock could be materially adversely affected.

Our status as a "controlled company" could make our class A common stock less attractive to some investors or otherwise materially adversely affect our stock price

Because we qualify as a "controlled company" under the corporate governance rules for Nasdaq-listed companies, we are not required to have independent directors comprise a majority of our Board of Directors. Additionally, our Board of Directors is not required to have an independent compensation or nominating committee, or to have the independent directors exercise the nominating function. We are also not required to have the compensation of our executive officers be determined by a compensation committee of independent directors. In addition, we are not required to empower our Compensation Committee with the authority to engage the services of any compensation consultants, legal counsel, or other advisors, or to have the Compensation Committee assess the independence of compensation consultants, legal counsel, and other advisors that it engages.

In light of our status as a controlled company, our Board of Directors has determined not to establish an independent nominating committee or have its independent directors exercise the nominating function and has elected instead to have the Board of Directors be directly responsible for nominating members of the Board. A majority of our Board of Directors is currently comprised of independent directors, and our Board of Directors has established a Compensation Committee comprised entirely of independent directors. The Compensation Committee determines the compensation of our Chief Executive Officer. However, our Board of Directors has authorized our Chief Executive Officer to determine the compensation of executive officers other than himself, rather than having such compensation determined by the Compensation Committee, except that certain performance-based executive officer compensation is determined by the Compensation Committee. Awards under our 2013 Stock Incentive Plan (as amended, the "2013 Equity Plan") are also approved by the Compensation Committee. Additionally, while our Compensation Committee is empowered with the authority to retain and terminate outside counsel, compensation consultants, and other experts or consultants, it is not required to assess their independence.

Although currently a majority of our Board of Directors is comprised of independent directors and the Compensation Committee is comprised entirely of independent directors, we may elect in the future not to have independent directors constitute a majority of the Board of Directors or the Compensation Committee, our Chief Executive Officer's compensation determined by a compensation committee of independent directors, or a compensation committee of the Board of Directors at all.

Accordingly, should the interests of our controlling stockholder differ from those of other stockholders, the other stockholders may not have the same protections that are afforded to stockholders of companies that are required to follow all of the corporate governance rules for Nasdaq-listed companies. Our status as a controlled company could make our class A common stock less attractive to some investors or otherwise materially adversely affect our stock price.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

As of December 31, 2019, we leased approximately 214,000 square feet of office space at a location in Northern Virginia that serves as our corporate headquarters. This lease provides for certain tenant allowances and incentives and will expire in December 2030.

In addition, we lease offices in U.S. and foreign locations for our services and support, sales and marketing, research and development, and administrative personnel. As of December 31, 2019, we leased approximately 26,000 square feet of office space in the United States, in addition to our corporate headquarters, and approximately 163,000 square feet of office space in various foreign locations.

Item 3. Legal Proceedings

We are involved in various legal proceedings arising in the normal course of business. Although the outcomes of these legal proceedings are inherently difficult to predict, we do not expect the resolution of these legal proceedings to have a material adverse effect on our financial position, results of operations, or cash flows.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Our class A common stock is traded on the Nasdaq Global Select Market under the symbol "MSTR." There is no established public trading market for our class B common stock. As of February 3, 2020, there were approximately 1,319 stockholders of record of our class A common stock and three stockholders of record of our class B common stock.

Holders of our class A common stock generally have the same rights as holders of our class B common stock, except that holders of class A common stock have one vote per share while holders of class B common stock have ten votes per share.

We have never declared or paid any cash dividends on either our class A or class B common stock and have no current plans to declare or pay any such dividends.

Information regarding our equity compensation plans and the securities authorized for issuance thereunder is incorporated herein by reference to "Part III. Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters."

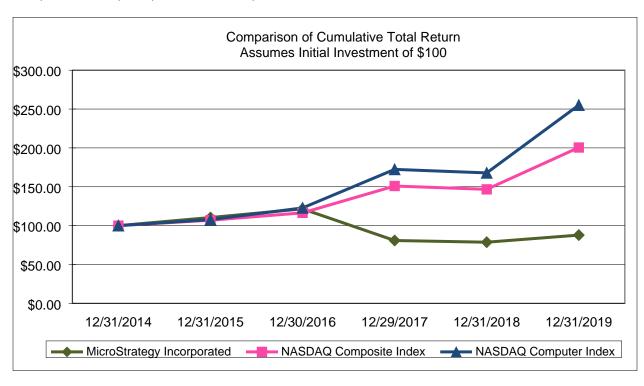
The following table provides information about our repurchases of equity securities that are registered by us pursuant to Section 12 of the Exchange Act during the periods indicated:

	(a)	(b)	(c)	(d)
			Total Number of	Maximum Number (or Approximate Dollar
	Total Number of	Average Price Paid	Shares (or Units) Purchased as Part of	Value) of Shares (or Units) that May Yet Be
	Shares (or	per Share	Publicly Announced	Purchased Under the
Period	Units) Purchased	(or Unit) (1)	Plans or Programs (1)	Plans or Programs (1)
October 1, 2019 – October 31, 2019	0	N/A	0	\$ 295,487,864
November 1, 2019 – November 30, 2019	87,524	\$ 154.91	87,524	\$ 281,929,685
December 1, 2019 – December 31, 2019	72,171	\$ 151.27	72,171	\$ 271,012,425
Total:	159,695	\$ 153.26	159,695	\$ 271,012,425

(1) The Board of Directors has authorized us to repurchase up to an aggregate of \$800.0 million of our class A common stock from time to time on the open market through April 29, 2023 (the "Share Repurchase Program"), although the program may be suspended or discontinued by us at any time. The timing and amount of any shares repurchased will be determined by management based on its evaluation of market conditions and other factors. The Share Repurchase Program may be funded using our working capital, as well as proceeds from any other funding arrangements that we may enter into in the future. As of December 31, 2019, pursuant to the Share Repurchase Program, we had repurchased an aggregate of 5,229,457 shares of our class A common stock at an average price per share of \$101.16 and an aggregate cost of \$529.0 million. As of December 31, 2019, \$271.0 million of our class A common stock remained available for repurchase pursuant to the Share Repurchase Program. The average price per share and aggregate cost amounts disclosed above include broker commissions.

Performance Graph

The following graph compares the cumulative total stockholder return on our class A common stock from December 31, 2014 (the last trading day before the beginning of our fifth preceding fiscal year) to December 31, 2019 (the last trading day of the fiscal year ended December 31, 2019) with the cumulative total return of (i) the Total Return Index for The Nasdaq Stock Market (U.S. Companies) (the "Nasdaq Composite Index") and (ii) the Nasdaq Computer Index. The graph assumes the investment of \$100.00 on December 31, 2014 in our class A common stock, the Nasdaq Composite Index, and the Nasdaq Computer Index, and assumes that any dividends are reinvested. Measurement points are December 31, 2014, December 31, 2015, December 30, 2016, December 29, 2017, December 31, 2018, and December 31, 2019.



	12/31/14	12/31/15	12/30/16	12/29/17	12/31/18	12/31/19
MicroStrategy Incorporated	\$ 100.00	\$ 110.40	\$ 121.55	\$ 80.85	\$ 78.66	\$ 87.83
Nasdaq Composite Index	\$ 100.00	\$ 106.96	\$ 116.45	\$ 150.96	\$ 146.67	\$ 200.49
Nasdaq Computer Index	\$ 100.00	\$ 107.67	\$ 122.78	\$ 172.36	\$ 167.84	\$ 255.04

Item 6. Selected Financial Data

The following selected consolidated financial data should be read in conjunction with "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations," the Consolidated Financial Statements and notes thereto, and other financial information appearing elsewhere in this Annual Report.

As discussed in Note 3, Recent Accounting Standards, to the Consolidated Financial Statements, we adopted ASU 2014-09 effective as of January 1, 2018 and adjusted our prior period Consolidated Financial Statements to reflect full retrospective adoption. In our Annual Report on Form 10-K for the year ended December 31, 2018, our Statements of Operations Data for the years ended December 31, 2017 and 2016 and our Balance Sheet Data as of December 31, 2017 and 2016 in the selected consolidated financial data below were also adjusted to reflect the full retrospective adoption of ASU 2014-09, where applicable. No further adjustments for the years ended December 31, 2017 and 2016 have been made in this Annual Report. Data for preceding years are not directly comparable as they have not been restated to reflect the adoption of ASU 2014-09.

As discussed in Note 3, Recent Accounting Standards, to the Consolidated Financial Statements, we adopted Accounting Standards Update No. 2016-02, *Leases (Topic 842)*, and its subsequent amendments ("ASU 2016-02") effective as of January 1, 2019 and did not restate comparative prior period Consolidated Financial Statements. As such, certain Balance Sheet Data as of December 31, 2018 and prior years are not directly comparable to the Balance Sheet Data as of December 31, 2019.

	Years Ended December 31,									
	2019 2018					2017	2016			2015
					<u>(a</u>	s adjusted)	<u>(a:</u>	s adjusted)		
	(in thousands, except per share data)									
Statements of Operations Data										
Total revenues	\$	486,327	\$	497,638	\$	503,843	\$	513,589	\$	529,869
Net income	\$	34,355	\$	22,501	\$	18,195	\$	92,239	\$	105,931
Earnings per share (1)(2):										
Basic earnings per share	\$	3.35	\$	1.98	\$	1.59	\$	8.07	\$	9.33
Diluted earnings per share	\$	3.33	\$	1.97	\$	1.58	\$	8.01	\$	9.18
	_			A	s of	f December .	31,			
	_	2019	_	2018	_	2017	_	2016	_	2015
					_	s adjusted)	_	s adjusted)		
	_				(ir	thousands)				
Balance Sheet Data										
Total assets	\$	916,571	\$	855,768	\$	933,219	\$	869,716	\$	656,894
Long-term liabilities, excluding deferred revenue										
and advance payments	\$	133,850	\$	61,299	\$	50,150	\$	16,741	\$	19,960
Total stockholders' equity	\$	508,559	\$	529,731	\$	605,726	\$	566,317	\$	455,281

- (1) Basic and fully diluted earnings per share for class A and class B common stock are the same.
- (2) We have never declared or paid any cash dividends on either class A or class B common stock.

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

Forward-Looking Information

This Annual Report contains forward-looking statements within the meaning of Section 21E of the Exchange Act. For this purpose, any statements contained herein that are not statements of historical fact, including without limitation, certain statements regarding industry prospects and our results of operations or financial position, may be deemed to be forward-looking statements. Without limiting the foregoing, the words "believes," "anticipates," "plans," "expects," and similar expressions are intended to identify forward-looking statements. The important factors discussed under "Part I. Item 1A. Risk Factors," among others, could cause actual results to differ materially from those indicated by forward-looking statements made herein and presented elsewhere by management from time to time. Such forward-looking statements represent management's current expectations and are inherently uncertain. Investors are warned that actual results may differ from management's expectations.

Management's Discussion and Analysis for the Year Ended December 31, 2017

In accordance with the SEC's recently issued disclosure simplification rules, we have elected to exclude from this Annual Report discussion of our results for the year ended December 31, 2017. Management's discussion and analysis of financial condition and results of operations for the year ended December 31, 2017, as adjusted to reflect the full retrospective adoption of ASU 2014-09, including comparison of our results for the years ended December 31, 2018 and 2017, is included in Item 7 of our Annual Report on Form 10-K for the year ended December 31, 2018.

Overview

MicroStrategy is a global leader in enterprise analytics software and services. The MicroStrategy platform brings together data from our customers' enterprise applications, such as their financial systems, human resources systems, and supply chain management and customer relationship management tools, and provides analytics for actionable insights. Customers can also use our consulting and education offerings to harness MicroStrategy's innovative technology and empower their workforce to make better decisions.

Over recent years, we have invested in innovation by making our platform more usable, powerful, scalable, flexible, and secure. Examples of these innovations include:

- HyperIntelligence products that enable more users in the organization to access information rapidly by
 providing cards with contextual intelligence, suggestions, and workflows directly within the websites,
 applications, and mobile devices that people rely on every day.
- Mobile productivity apps that deploy our technology on any standard device for a variety of business functions and roles.
- Open architecture, including federated analytics, that provides analysts and data scientists with seamless access to trusted, governed data directly within their favorite tools, including Excel, Power BI, Tableau, Qlik, and more. Recent integrations also allow data scientists to access trusted, governed data, enrich that data with AI, and return it back to the MicroStrategy platform.
- Flexible deployment methods that allow our customers to deploy our platform efficiently and securely
 using their own hardware or in a cloud environment they manage or via MCE, our cloud subscription
 service.

Our customers include leading companies from a wide range of industries, including retail, consulting, technology, manufacturing, banking, insurance, finance, healthcare, telecommunications, as well as the public sector.

The analytics market is highly competitive. Our future success depends on the effectiveness with which we can differentiate our offerings from those offered by large software vendors that provide products across multiple lines of business, including one or more products that directly compete with our offerings, and other potential competitors across analytics implementation projects of varying sizes. We believe a key differentiator of MicroStrategy is our comprehensive, modern, and open enterprise analytics and mobility platform that uniquely features HyperIntelligence, transformational mobility, and federated analytics.

The following table sets forth certain operating highlights (in thousands) for the years ended December 31, 2019 and 2018:

		Years Ended	Decen	nber 31,
		2019		2018
Revenues				
Product licenses	\$	87,471	\$	88,057
Subscription services		29,394		29,570
Total product licenses and subscription services		116,865		117,627
Product support		292,035		296,216
Other services		77,427		83,795
Total revenues		486,327		497,638
Cost of revenues				
Product licenses		2,131		4,864
Subscription services		15,161		13,620
Total product licenses and subscription services		17,292		18,484
Product support		28,317		20,242
Other services		54,365		60,773
Total cost of revenues		99,974		99,499
Gross profit		386,353		398,139
Operating expenses				
Sales and marketing		191,235		205,525
Research and development		109,423		102,499
General and administrative		86,697		86,134
Total operating expenses	-	387,355		394,158
(Loss) income from operations	\$	(1,002)	\$	3,981

As discussed in Note 15, Sale of Domain Name, to the Consolidated Financial Statements, on May 30, 2019, we completed the sale of our Voice.com domain name (the "Domain Name Sale"), resulting in a one-time gain of \$29.8 million, recorded in "Other income (expense), net" in the Consolidated Statements of Operations and an associated discrete tax provision of \$8.1 million during the second quarter of 2019.

As discussed in Note 10, Share-based Compensation, to the Consolidated Financial Statements, we have outstanding stock options to purchase shares of our class A common stock and certain other stock-based awards under our 2013 Equity Plan. Share-based compensation expense (in thousands) from these awards was recognized in the following operating expense line items in our Consolidated Statements of Operations for the periods indicated:

	 Years Ended	Dece	mber 31,
	 2019		2018
Cost of subscription services revenues	\$ 7	\$	0
Cost of product support revenues	331		293
Cost of consulting revenues	198		72
Cost of education revenues	20		176
Sales and marketing	1,943		3,572
Research and development	2,460		3,078
General and administrative	5,250		7,445
Total share-based compensation expense	\$ 10,209	\$	14,636

As of December 31, 2019, we estimated that approximately \$36.8 million of additional share-based compensation expense for awards granted under the 2013 Equity Plan will be recognized over a remaining weighted average period of 3.2 years.

We base our internal operating expense forecasts on expected revenue trends and strategic objectives. Many of our expenses, such as office leases and certain personnel costs, are relatively fixed. Accordingly, any shortfall in revenue may cause significant variation in our operating results. We therefore believe that quarter-to-quarter comparisons of our operating results may not be a good indication of our future performance.

Non-GAAP Financial Measures

We are providing supplemental financial measures for (i) non-GAAP income from operations that excludes the impact of our share-based compensation arrangements, (ii) non-GAAP net income and non-GAAP diluted earnings per share that exclude the impact from the Tax Act in 2018 and the Domain Name Sale in 2019, and (iii) certain non-GAAP constant currency revenues, cost of revenues, and operating expenses that exclude foreign currency exchange rate fluctuations. These supplemental financial measures are not measurements of financial performance under generally accepted accounting principles in the United States ("GAAP") and, as a result, these supplemental financial measures may not be comparable to similarly titled measures of other companies. Management uses these non-GAAP financial measures internally to help understand, manage, and evaluate our business performance and to help make operating decisions.

We believe that these non-GAAP financial measures are also useful to investors and analysts in comparing our performance across reporting periods on a consistent basis. The first supplemental financial measure excludes a significant non-cash expense that we believe is not reflective of our general business performance, and for which the accounting requires management judgment and the resulting share-based compensation expense could vary significantly in comparison to other companies. The second set of supplemental financial measures excludes the impact from the Tax Act, which was a one-time tax charge, and the Domain Name Sale, which is outside of our normal business operations. The third set of supplemental financial measures excludes changes resulting from fluctuations in foreign currency exchange rates so that results may be compared to the same period in the prior year on a non-GAAP constant currency basis. We believe the use of these non-GAAP financial measures can also facilitate comparison of our operating results to those of our competitors.

Non-GAAP financial measures are subject to material limitations as they are not in accordance with, or a substitute for, measurements prepared in accordance with GAAP. For example, we expect that share-based compensation expense, which is excluded from the first non-GAAP financial measure, will continue to be a significant recurring expense over the coming years and is an important part of the compensation provided to certain employees, officers, and directors. Our non-GAAP financial measures are not meant to be considered in isolation and should be read only in conjunction with our Consolidated Financial Statements, which have been prepared in accordance with GAAP. We rely primarily on such Consolidated Financial Statements to understand, manage, and evaluate our business performance and use the non-GAAP financial measures only supplementally.

The following is a reconciliation of our non-GAAP income from operations excluding the impact of our share-based compensation arrangements to its most directly comparable GAAP measures (in thousands) for the periods indicated:

	Years Ended December 31,					
		2019		2018		
Reconciliation of non-GAAP income from operations:						
(Loss) income from operations	\$	(1,002)	\$	3,981		
Share-based compensation expense		10,209		14,636		
Non-GAAP income from operations	\$	9,207	\$	18,617		

The following are reconciliations of our non-GAAP net income and non-GAAP diluted earnings per share, in each case excluding the impact of the Tax Act in 2018 and the Domain Name Sale in 2019, to their most directly comparable GAAP measures (in thousands, except per share data) for the periods indicated:

	7	Years Ended	Dece	ember 31,
		2019		2018
Reconciliation of non-GAAP net income:				
Net income	\$	34,355	\$	22,501
Measurement-period adjustment related to the Tax Act		0		(3,106)
Gain from Domain Name Sale, net of tax		(21,778)		0
Non-GAAP net income	\$	12,577	\$	19,395
Reconciliation of non-GAAP diluted earnings per share:				
Diluted earnings per share	\$	3.33	\$	1.97
Measurement-period adjustment related to the Tax Act				
(per diluted share)		0.00		(0.27)
Gain from Domain Name Sale, net of tax (per diluted				
share)		(2.11)		0.00
Non-GAAP diluted earnings per share	\$	1.22	\$	1.70

The following are reconciliations of our non-GAAP constant currency revenues, cost of revenues, and operating expenses to their most directly comparable GAAP measures (in thousands) for the periods indicated. As discussed in Note 3, Recent Accounting Standards, to the Consolidated Financial Statements, we adopted ASU 2014-09 effective as of January 1, 2018 and adjusted our prior period Consolidated Financial Statements to reflect full retrospective adoption. Where applicable, information for the year ended December 31, 2017 within the following reconciliations was also adjusted to reflect the full retrospective adoption of ASU 2014-09, as presented in our Annual Report on Form 10-K for the year ended December 31, 2018. No further adjustments for the year ended December 31, 2017 have been made in this Annual Report.

	Years Ended										
	_					Decembe	r 31	,			
	_	GAAP		reign Currency xchange Rate Impact (1)		Ion-GAAP Constant urrency (2)		GAAP	GAAP % Change		Non- GAAP Constant Currency % Change (3)
		2019		2019		2019		2018	2019		2019
Product licenses revenues	\$	87,471	\$	(3,642)	\$	91,113	\$	88,057	-0.	7%	3.5%
Subscription services revenues		29,394		(333)		29,727		29,570	-0.	6%	0.5%
Product support revenues		292,035		(7,110)		299,145		296,216	-1.	4%	1.0%
Other services revenues		77,427		(2,091)		79,518		83,795	-7.	6%	-5.1%
Cost of product support revenues		28,317		(479)		28,796		20,242	39.	9%	42.3%
Cost of other services revenues		54,365		(1,834)		56,199		60,773	-10.	5%	-7.5%
Sales and marketing expenses		191,235		(5,169)		196,404		205,525	-7.	0%	-4.4%
Research and development expenses		109,423		(1,143)		110,566		102,499	6.	8%	7.9%
General and administrative expenses		86,697		(1,029)		87,726		86,134	0.	7%	1.8%

_	GAAP 2018		•	(Constant	(as	GAAP 2017 s adjusted)	GAAP % Change 2018	GAAP Constant Currency % Change (3) 2018
\$	88,057	\$	(1,692)	\$	89,749	\$	93,259	-5.6%	-3.8%
	29,570		215		29,355		32,368	-8.6%	-9.3%
	296,216		1,278		294,938		289,184	2.4%	2.0%
	83,795		856		82,939		89,032	-5.9%	-6.8%
	20,242		36		20,206		17,481	15.8%	15.6%
	60,773		522		60,251		58,557	3.8%	2.9%
	205,525		(603)		206,128		175,045	17.4%	17.8%
	102,499		396		102,103		78,766	30.1%	29.6%
	86,134		(22)		86,156		80,161	7.5%	7.5%
	\$	\$ 88,057 29,570 296,216 83,795 20,242 60,773 205,525 102,499	\$ 88,057 \$ 29,570 296,216 83,795 20,242 60,773 205,525 102,499	2018 2018 \$ 88,057 \$ (1,692) 29,570 215 296,216 1,278 83,795 856 20,242 36 60,773 522 205,525 (603) 102,499 396	GAAP Exchange Rate Impact (1) Compact (1) 2018 2018 Compact (1) \$ 88,057 \$ (1,692) \$ 29,570 215 296,216 1,278 83,795 856 20,242 36 60,773 522 205,525 (603) 102,499 396	GAAP Exchange Rate Impact (1) Currency (2) 2018 2018 2018 \$ 88,057 \$ (1,692) \$ 89,749 29,570 215 29,355 296,216 1,278 294,938 83,795 856 82,939 20,242 36 20,206 60,773 522 60,251 205,525 (603) 206,128 102,499 396 102,103	GAAP Exchange Rate Impact (1) Constant Currency (2) 2018 2018 2018 \$ 88,057 \$ (1,692) \$ 89,749 \$ 29,570 296,216 1,278 294,938 83,795 856 82,939 20,242 36 20,206 60,773 522 60,251 205,525 (603) 206,128 102,499 396 102,103	GAAP Exchange Rate Impact (1) Currency (2) GAAP 2018 2018 2017 (as adjusted) \$ 88,057 \$ (1,692) \$ 89,749 \$ 93,259 29,570 215 29,355 32,368 296,216 1,278 294,938 289,184 83,795 856 82,939 89,032 20,242 36 20,206 17,481 60,773 522 60,251 58,557 205,525 (603) 206,128 175,045 102,499 396 102,103 78,766	GAAP Exchange Rate Impact (1) Currency (2) GAAP GAAP Change 2018 2018 2018 2017 2018 \$ 88,057 \$ (1,692) \$ 89,749 \$ 93,259 -5.6% 29,570 215 29,355 32,368 -8.6% 296,216 1,278 294,938 289,184 2.4% 83,795 856 82,939 89,032 -5.9% 20,242 36 20,206 17,481 15.8% 60,773 522 60,251 58,557 3.8% 205,525 (603) 206,128 175,045 17.4% 102,499 396 102,103 78,766 30.1%

Non-

(1) The "Foreign Currency Exchange Rate Impact" reflects the estimated impact from fluctuations in foreign currency exchange rates on international components of our Consolidated Statements of Operations. It shows the increase (decrease) in material international revenues or expenses, as applicable, from the same period in the prior year, based on comparisons to the prior year quarterly average foreign currency exchange rates. The term "international" refers to operations outside of the United States and Canada.

- (2) The "Non-GAAP Constant Currency" reflects the current period GAAP amount, less the Foreign Currency Exchange Rate Impact.
- (3) The "Non-GAAP Constant Currency % Change" reflects the percentage change between the current period Non-GAAP Constant Currency amount and the GAAP amount for the same period in the prior year.

Critical Accounting Policies

Our discussion and analysis of our financial condition and results of operations are based on our Consolidated Financial Statements, which have been prepared in accordance with GAAP.

The preparation of our Consolidated Financial Statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, and equity, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. These estimates, particularly estimates relating to revenue recognition, have a material impact on our Consolidated Financial Statements. Actual results and outcomes could differ from these estimates and assumptions.

Revenue Recognition

We recognize revenue using a five-step model:

- (i) Identifying the contract(s) with a customer,
- (ii) Identifying the performance obligation(s),
- (iii) Determining the transaction price,
- (iv) Allocating the transaction price to the performance obligations in the contract, and
- (v) Recognizing revenue when, or as, we satisfy a performance obligation.

We have elected to exclude taxes assessed by government authorities in determining the transaction price, and therefore revenue is recognized net of taxes collected from customers.

Performance Obligations and Timing of Revenue Recognition

We primarily sell goods and services that fall into the categories discussed below. Each category contains one or more performance obligations that are either (i) capable of being distinct (i.e., the customer can benefit from the good or service on its own or together with readily available resources, including those purchased separately from us) and distinct within the context of the contract (i.e., separately identifiable from other promises in the contract) or (ii) a series of distinct goods or services that are substantially the same and have the same pattern of transfer to the customer. Aside from our term and perpetual product licenses, which are delivered at a point in time, the majority of our services are delivered over time.

Product Licenses

We sell different types of business intelligence software, licensed on a term or perpetual basis and installed either on premises or on a public cloud that is procured and managed by the customer. Although product licenses are sold with product support, the software is fully functional at the outset of the arrangement and is considered a distinct performance obligation. Revenue from product license sales is recognized when control of the license is transferred to the customer, which is the later of delivery or commencement of the license term. We may also sell through resellers and OEMs who purchase our software for resale. In reseller arrangements, revenue is recognized when control of the license is transferred to the end user. In OEM arrangements, revenue is recognized upon delivery of the license to the OEM.

Subscription Services

We also sell access to our software through MCE, a cloud subscription service, wherein customers access the software through a cloud environment that we manage on behalf of the customer. Control of the software itself does not transfer to the customer under this arrangement and is not considered a separate performance obligation. Cloud subscriptions are regularly sold on a standalone basis and include telephone support, monitoring, backups, updates, and quarterly service reviews. Revenue related to cloud subscriptions is recognized on a straight-line basis over the contract period, which is the period over which the customer has continuous access to the software.

Product Support

In all product license transactions, customers are required to purchase a standard product support package and may also purchase a premium product support package for a fixed annual fee. All product support packages include both technical support and when-and-if-available software upgrades, which are treated as a single performance obligation as they are considered a series of distinct services that are substantially the same and have the same duration and measure of progress. Revenue from product support is recognized on a straight-line basis over the contract period, which is the period over which the customer has continuous access to product support.

Consulting Services

We sell consulting services to help customers plan and execute deployment of our software. Customers are not required to use consulting services to fully benefit from the software. Consulting services are regularly sold on a standalone basis and either (i) prepaid upfront or (ii) sold on a time and materials basis. Consulting arrangements are each considered separate performance obligations because they do not integrate with each other or with other offerings to deliver a combined output to the customer, do not modify or customize (or are not modified or customized by) each other or other offerings, and do not affect the customer's ability to use the other consulting services or our other offerings. Revenue under consulting arrangements is recognized over time as services are delivered. For time and materials-based consulting arrangements, we have elected the practical expedient of recognizing revenue upon invoicing since the invoiced amount corresponds directly to the value of our service to date.

Education Services

We sell various education and training services to our customers. Education services are sold on a standalone basis under three different arrangements: (i) prepaid bulk training units that may be redeemed on training courses based on standard redemption rates, (ii) an annual subscription to unlimited training courses, and (iii) individual courses purchased a la carte. Education arrangements are each considered separate performance obligations because they do not integrate with each other or with other offerings to deliver a combined output to the customer, do not modify or customize (or are not modified or customized by) each other or other offerings, and do not affect the customer's ability to use the other education services or our other offerings. Revenue on prepaid bulk training units and individual course purchases are recognized when the courses are delivered. Revenue on the annual subscription is recognized on a straight-line basis over the contract period, which is the period over which the customer has continuous access to unlimited training courses.

See Note 14, Segment Information, to the Consolidated Financial Statements for information regarding total revenues by geographic region.

Estimates and Judgments

We make estimates and judgments to allocate the transaction price based on an observable or estimated standalone selling price ("SSP"). We also make estimates and judgements with respect to capitalizing incremental costs to obtain a customer contract and determining the subsequent amortization period. These estimates and judgments are discussed further below.

Determining the Transaction Price

The transaction price includes both fixed and variable consideration. Variable consideration is included in the transaction price to the extent it is probable that a significant reversal will not occur. The amount of variable consideration excluded from the transaction price was not material for the years ended December 31, 2019 and 2018. Our estimates of variable consideration are also subject to subsequent true-up adjustments and may result in changes to our transaction prices. Such true-up adjustments have not been and are not expected to be material. We have the following sources of variable consideration:

- (i) Performance penalties Subscription services and product support arrangements generally contain performance response time guarantees. For subscription services arrangements, we estimate variable consideration using a portfolio approach because performance penalties are tied to standard up-time requirements. For product support arrangements, we estimate variable consideration on a contract basis because such arrangements are customer-specific. For both subscription services and product support arrangements, we use an expected value approach to estimate variable consideration based on historical business practices and current and future performance expectations to determine the likelihood of incurring penalties.
- (ii) Extended payment terms Our standard payment terms are generally within 180 days of invoicing. If extended payment terms are granted to customers, those terms generally do not exceed one year. For contracts with extended payment terms, we estimate variable consideration on a contract basis because such estimates are customer-specific, and we use an expected value approach to analyze historical business experience on a customer-by-customer basis to determine the likelihood that extended payment terms lead to an implied price concession.
- (iii) Sales and usage-based royalties Certain product license arrangements include sales or usage-based royalties, covering both product license and product support. In these arrangements, we use an expected value approach to estimate and recognize revenue for royalty sales each period, utilizing historical data on a contract-by-contract basis. True-up adjustments are recorded in subsequent periods when royalty reporting is received from the OEMs.

We provide a standard software assurance warranty to repair, replace, or refund software that does not perform in accordance with documentation. The standard software assurance warranty period is generally less than one year. Assurance warranty claims were not material for the years ended December 31, 2019 and 2018.

We do not adjust the transaction price for significant financing components where the time period between cash payment and performance is one year or less. However, there are circumstances where the timing between cash payment and performance may exceed one year. These circumstances generally involve prepaid multi-year product support and subscription services arrangements where the customer determines when the service is utilized (e.g., when to request on-call support services or when to use and access the software in the cloud). In these circumstances, we have determined no significant financing component exists because the customer controls when to utilize the service and because there are significant business purposes behind the timing difference between payment and performance (e.g., maximizing profit in the case of product support services and ensuring collectability in the case of subscription services).

Allocating the Transaction Price Based on Standalone Selling Prices (SSP)

We allocate the transaction price to each performance obligation in a contract based on its relative SSP. The SSP is the price, or estimated price, of the software or service when sold on a standalone basis at contract inception. In circumstances where SSP is not directly observable, we estimate SSP using the following methodologies:

(i) Product licenses – Product licenses are not sold on a standalone basis and pricing is highly variable. We establish SSP of product licenses using a residual approach after first establishing the SSP of standard product support. Standard product support is sold on a standalone basis within a narrow range of the net license fee, and because an economic relationship exists between product licenses and standard product support, we have concluded that the residual method to estimate SSP of product licenses sold on both a perpetual and term basis is a fair allocation of the transaction price.

- (ii) Subscription services Given the highly variable selling price of subscription services, we establish the SSP of our subscription services arrangements using a similar residual approach after first establishing the SSP of consulting and education services to the extent they are included in the arrangement. We have concluded that the residual method to estimate SSP of our subscription services is a fair allocation of the transaction price.
- (iii) Standard product support We establish SSP of standard product support as a percentage of the stated net license fee, given such pricing is consistent with our normal pricing practices and there exists sufficient history of customers renewing standard product support on a standalone basis at similar percentages. Each quarter, we track renewal rates negotiated when standard product support is initially sold with a perpetual license in order to determine the SSP of standard product support within each geographic region for the upcoming quarter. If the stated standard product support fee falls within the SSP range, the specific rate in the contract will be used to estimate SSP. If the stated fee is above or below SSP, the highest or lowest end of the range, respectively, will generally be used to estimate SSP of standard product support.
- (iv) Premium product support, consulting services, and education services SSP of premium product support, consulting services, and education services is established by using a bell-shaped curve approach to define a narrow range within each geographic region in which the services are discounted off of the list price on a standalone basis.

We often provide options to purchase future offerings at a discount. We analyze the option price against the previously established SSP of the goods or services to determine if the options represent material rights that should be accounted for as separate performance obligations. In general, an option sold at or above SSP is not considered a material right because the customer could have received that right without entering into the contract. If a material right exists, revenue associated with the option is deferred and recognized when the future goods or services are transferred, or when the option expires. During the years ended December 31, 2019 and 2018, separate performance obligations arising from future purchase options have not been material.

Incremental Costs to Obtain Customer Contracts

Incremental costs incurred to obtain contracts with customers include certain variable compensation (e.g., commissions and bonuses) paid to our sales team. Although we may bundle our goods and services into one contract, commissions are individually determined on each distinct good or service in the contract. We expense as incurred those amounts earned on consulting and education services, which are generally performed within a oneyear period and primarily sold on a standalone basis. We also expense as incurred those amounts earned on product license sales, since the amount is earned when the license is delivered. We capitalize those amounts earned on product support and initial-year cloud subscriptions and amortize the costs over a period of time that is consistent with the pattern of transfer to the customer, which we have determined to be a period of three years. Although we typically sell product support and cloud subscriptions for a period of one year, a majority of customers renew their product support and cloud subscription arrangements. Three years is generally the period after which platforms are no longer supported by our support team and when customers generally choose to upgrade their software platform. Although we pay variable compensation on cloud subscription renewals, commissions paid on cloud subscription renewals are not considered commensurate with the initial contract year. We expense as incurred those amounts earned on all cloud subscription renewals as the renewal periods are generally for one year and the variable compensation on these renewals are commensurate with each other. We do not pay variable compensation on product support renewals.

Results of Operations

Comparison of the Years Ended December 31, 2019 and 2018

Revenues

Except as otherwise indicated herein, the term "domestic" refers to operations in the United States and Canada and the term "international" refers to operations outside of the United States and Canada.

Product licenses and subscription services revenues. The following table sets forth product licenses and subscription services revenues (in thousands) and related percentage changes for the periods indicated:

	Years Ended	Dece			
	2019		2018		% Change
Product Licenses and Subscription Services Revenues:					
Product Licenses					
Domestic	\$	45,850	\$	48,824	-6.1%
International		41,621		39,233	6.1%
Total product licenses revenues		87,471		88,057	-0.7%
Subscription Services					
Domestic		21,453		23,114	-7.2%
International		7,941		6,456	23.0%
Total subscription services revenues		29,394		29,570	-0.6%
Total product licenses and subscription services revenues	\$	116,865	\$	117,627	-0.6%

The following table sets forth a summary, grouped by size, of the number of recognized product licenses transactions for the periods indicated:

	Years Ended I	December 31,
	2019	2018
Product Licenses Transactions with Recognized Licenses Revenue in the Applicable Period:		
More than \$1.0 million in licenses revenue recognized	10	9
Between \$0.5 million and \$1.0 million in licenses revenue recognized	17	21
Total	27	30
Domestic:		
More than \$1.0 million in licenses revenue recognized	7	6
Between \$0.5 million and \$1.0 million in licenses revenue recognized	10	12
Total	17	18
International:		
More than \$1.0 million in licenses revenue recognized	3	3
Between \$0.5 million and \$1.0 million in licenses revenue recognized	7	9
Total	10	12

The following table sets forth the recognized revenue (in thousands) attributable to product licenses transactions, grouped by size, and related percentage changes for the periods indicated:

	Years Ended		
	2019	2018	<u> % Change</u>
Product Licenses Revenue Recognized in the Applicable Period:			
More than \$1.0 million in licenses revenue recognized	\$ 13,830	\$ 14,730	-6.1%
Between \$0.5 million and \$1.0 million in licenses revenue			
recognized	11,233	13,527	-17.0%
Less than \$0.5 million in licenses revenue recognized	62,408	59,800	4.4%
Total	87,471	88,057	-0.7%
Domestic:			
More than \$1.0 million in licenses revenue recognized	8,707	11,156	-22.0%
Between \$0.5 million and \$1.0 million in licenses revenue			
recognized	6,908	7,548	-8.5%
Less than \$0.5 million in licenses revenue recognized	30,235	30,120	0.4%
Total	45,850	48,824	-6.1%
International:	-		
More than \$1.0 million in licenses revenue recognized	5,123	3,574	43.3%
Between \$0.5 million and \$1.0 million in licenses revenue			
recognized	4,325	5,979	-27.7%
Less than \$0.5 million in licenses revenue recognized	32,173	29,680	8.4%
Total	\$ 41,621	\$ 39,233	6.1%
Between \$0.5 million and \$1.0 million in licenses revenue recognized Less than \$0.5 million in licenses revenue recognized Total International: More than \$1.0 million in licenses revenue recognized Between \$0.5 million and \$1.0 million in licenses revenue recognized Less than \$0.5 million in licenses revenue recognized	6,908 30,235 45,850 5,123 4,325 32,173	7,548 30,120 48,824 3,574 5,979 29,680	-8.5% 0.4% -6.1% 43.3% -27.7% 8.4%

Product licenses revenues decreased \$0.6 million during 2019, as compared to the prior year. For the years ended December 31, 2019 and 2018, product licenses transactions with more than \$0.5 million in recognized revenue represented 28.7% and 32.1%, respectively, of our product licenses revenues. During 2019, our top three product licenses transactions totaled \$5.4 million in recognized revenue, or 6.2% of total product licenses revenues, compared to \$7.7 million, or 8.7% of total product licenses revenues, during 2018.

Domestic product licenses revenues. Domestic product licenses revenues decreased \$3.0 million during 2019, as compared to the prior year, primarily due to a decrease in the average deal size of transactions with more than \$1.0 million in recognized revenue and a decrease in the number of transactions with recognized revenue between \$0.5 million and \$1.0 million.

International product licenses revenues. International product licenses revenues increased \$2.4 million during 2019, as compared to the prior year, primarily due to an increase in the number of transactions with less than \$0.5 million in recognized revenue and an increase in the average deal size of transactions with more than \$1.0 million in recognized revenue, partially offset by a \$3.6 million unfavorable foreign currency exchange impact and a decrease in the number of transactions with recognized revenue between \$0.5 million and \$1.0 million.

Subscription services revenues. Subscription services revenues are derived from MCE, a cloud subscription service, that are recognized ratably over the service period of the contract. Subscription services revenues did not materially change during 2019, as compared to the prior year.

Product support revenues. The following table sets forth product support revenues (in thousands) and related percentage changes for the periods indicated:

	_	Years Ended		
		2019	2018	% Change
Product Support Revenues:				
Domestic	\$	172,124	\$ 174,437	-1.3%
International		119,911	121,779	-1.5%
Total product support revenues	\$	292,035	\$ 296,216	-1.4%

Product support revenues are derived from providing technical software support and software updates and upgrades to customers. Product support revenues are recognized ratably over the term of the contract, which is generally one year. Product support revenues decreased \$4.2 million during 2019, as compared to the prior year, primarily due to a \$7.1 million unfavorable foreign currency exchange impact, partially offset by an increase in new product support contracts and reductions in our estimated sales allowance reserves.

Other services revenues. The following table sets forth other services revenues (in thousands) and related percentage changes for the periods indicated:

		2019		2018	% Change
Other Services Revenues:					
Consulting					
Domestic	\$	29,779	\$	35,086	-15.1%
International		39,880		39,523	0.9%
Total consulting revenues		69,659		74,609	-6.6%
Education		7,768		9,186	-15.4%
Total other services revenues	\$	77,427	\$	83,795	-7.6%

Consulting revenues. Consulting revenues are derived from helping customers plan and execute the deployment of our software. Consulting revenues decreased \$5.0 million during 2019, as compared to the prior year, primarily due to a decrease in billable hours worldwide and a \$1.9 million unfavorable foreign currency exchange impact, partially offset by an increase in average bill rates.

Education revenues. Education revenues are derived from the education and training that we provide to our customers to enhance their ability to fully utilize the features and functionality of our software. These offerings include self-tutorials, custom course development, joint training with customers' internal staff, and standard course offerings, with pricing dependent on the specific offering delivered. Education revenues decreased \$1.4 million during 2019, as compared to the prior year, primarily due to a decrease in overall contract values.

Costs and Expenses

Cost of revenues. The following table sets forth cost of revenues (in thousands) and related percentage changes for the periods indicated:

		Years Ended		
	2019		 2018	% Change
Cost of Revenues:				
Product licenses and subscription services:				
Product licenses	\$	2,131	\$ 4,864	-56.2%
Subscription services		15,161	13,620	11.3%
Total product licenses and subscription services		17,292	18,484	-6.4%
Product support		28,317	20,242	39.9%
Other services:				
Consulting		47,664	53,605	-11.1%
Education		6,701	 7,168	-6.5%
Total other services		54,365	60,773	-10.5%
Total cost of revenues	\$	99,974	\$ 99,499	0.5%

Cost of product licenses revenues. Cost of product licenses revenues consists of amortization of capitalized software development costs, referral fees paid to channel partners, the costs of product manuals and media, and royalties paid to third-party software vendors. Capitalized software development costs are generally amortized over a useful life of three years.

Cost of product licenses revenues decreased \$2.7 million during 2019, as compared to the prior year, primarily due to a \$2.5 million decrease in amortization of capitalized software development costs related to MicroStrategy 10^{TM} , which became fully amortized in May 2018. As of December 31, 2019, all previously capitalized software development costs have been fully amortized.

Cost of subscription services revenues. Cost of subscription services revenues consists of equipment, facility and other related support costs, and personnel and related overhead costs. Cost of subscription services revenues increased \$1.5 million during 2019, as compared to the prior year, primarily due to a \$1.8 million increase in third-party hosting service provider fees, partially offset by a \$0.6 million decrease in equipment, facility, and other related support costs. Subscription services headcount increased 23.2% to 69 at December 31, 2019 from 56 at December 31, 2018.

Cost of product support revenues. Cost of product support revenues consists of personnel and related overhead costs. Cost of product support revenues increased \$8.1 million during 2019, as compared to the prior year, primarily due to a \$7.7 million increase in compensation and related costs due to an increase in services provided by our consulting personnel under our Enterprise Support program and an increase in product support staffing levels. Our Enterprise Support program utilizes primarily consulting personnel to provide product support to our customers at our discretion. Compensation related to consulting personnel providing Enterprise Support services is reported as cost of product support revenues. Product support headcount increased 8.4% to 219 at December 31, 2019 from 202 at December 31, 2018.

Cost of consulting revenues. Cost of consulting revenues consists of personnel and related overhead costs. Cost of consulting revenues decreased \$5.9 million during 2019, as compared to the prior year, primarily due to a \$5.4 million decrease in compensation and related costs due to an increase in services provided by our consulting personnel under our Enterprise Support program, the associated costs of which are allocated to cost of product support revenues, and a decrease in consulting staffing levels and a \$0.5 million decrease in recruiting costs. Included in cost of consulting revenues for 2019 is an aggregate \$1.7 million favorable foreign currency exchange impact. Consulting headcount decreased 13.3% to 392 at December 31, 2019 from 452 at December 31, 2018.

Cost of education revenues. Cost of education revenues consists of personnel and related overhead costs. Cost of education revenues did not materially change during 2019, as compared to the prior year. Education headcount decreased 19.1% to 38 at December 31, 2019 from 47 at December 31, 2018.

Sales and marketing expenses. Sales and marketing expenses consist of personnel costs, commissions, office facilities, travel, advertising, public relations programs, and promotional events, such as trade shows, seminars, and technical conferences. The following table sets forth sales and marketing expenses (in thousands) and related percentage changes for the periods indicated:

	Years Ended	Dece	mber 31,	
	2019		2018	% Change
s and marketing expenses	\$ 191.235	\$	205.525	-7.0%

Sales and marketing expenses decreased \$14.3 million during 2019, as compared to the prior year, primarily due to an \$8.5 million decrease in marketing and advertising costs, a \$5.4 million decrease in compensation and related costs due to a decrease in staffing levels, a \$3.6 million decrease in travel and entertainment expenditures, a \$1.6 million net decrease in share-based compensation expense, a \$1.6 million decrease in recruiting costs, and a \$0.5 million decrease in subcontractor costs, partially offset by a \$4.6 million increase in variable compensation, a \$1.8 million increase in facility and other related support costs, and a \$0.6 million increase in the amortization of capitalized variable compensation. The \$1.6 million net decrease in share-based compensation expense is primarily due to the forfeiture of certain stock options, including those related to the departures of two executive officers in 2019, and certain awards under the 2013 Equity Plan becoming fully vested, partially offset by the grant of additional awards under the 2013 Equity Plan. Included in sales and marketing expenses for 2019 is an aggregate \$5.2 million favorable foreign currency exchange impact. Sales and marketing headcount decreased 15.6% to 597 at December 31, 2019 from 707 at December 31, 2018.

Research and development expenses. Research and development expenses consist of the personnel costs for our software engineering personnel, depreciation of equipment, and other related costs. The following table summarizes research and development expenses and amortization of capitalized software development costs (in thousands) and related percentage changes for the periods indicated:

	Years Ended		
	2019	2018	% Change
Research and development expenses	\$ 109,423	\$ 102,499	6.8%
Amortization of capitalized software development costs included			
in cost of product licenses revenues	\$ 0	\$ 2,499	-100.0%

Research and development expenses increased \$6.9 million during 2019, as compared to the prior year, primarily due to an \$8.3 million increase in compensation and related costs due to an increase in staffing levels and a \$1.9 million increase in facility and other related support costs, partially offset by a \$1.6 million decrease in technology infrastructure, a \$0.7 million decrease in consulting and advisory costs, and a \$0.6 million net decrease in share-based compensation expense. The increase in research and development expenses reflects our previously announced strategy to seek to take greater advantage of the opportunities in the market by increasing our research and development expenditures as we invest in our technology offerings and personnel. The \$0.6 million net decrease in share-based compensation expense is primarily due to certain awards under the 2013 Equity Plan becoming fully vested, partially offset by the grant of additional awards under the 2013 Equity Plan. Included in research and development expenses for 2019 is an aggregate \$1.1 million favorable foreign currency exchange impact. Research and development headcount increased 3.8% to 743 at December 31, 2019 from 716 at December 31, 2018. All of our capitalized software development costs were fully amortized as of May 2018. Due to the pace of our software development efforts and frequency of our software releases, our software development costs are currently expensed as incurred. We do not expect to capitalize material software development costs in the near term.

General and administrative expenses. General and administrative expenses consist of personnel and related overhead costs, and other costs of our executive, finance, human resources, information systems, and administrative departments, as well as third-party consulting, legal, and other professional fees. The following table sets forth general and administrative expenses (in thousands) and related percentage changes for the periods indicated:

	 Years Ended	Dece	mber 31,		
	2019		2018	% Change	
General and administrative expenses	\$ 86,697	\$	86,134	0.7%	

General and administrative expenses did not materially change during 2019, as compared to the prior year. Included in general and administrative expenses for 2019 is an aggregate \$1.0 million favorable foreign currency exchange impact. General and administrative headcount decreased 2.9% to 338 at December 31, 2019 from 348 at December 31, 2018.

Other Income, Net

Other income, net is comprised primarily of proceeds from the Domain Name Sale and foreign currency transaction gains and losses. During 2019, other income, net, of \$28.4 million was comprised primarily of a \$29.8 million gain from the Domain Name Sale in the second quarter of 2019. During 2018, other income, net, of \$4.6 million was comprised primarily of foreign currency transaction net gains arising mainly from the revaluation of U.S. dollar denominated cash balances held at international locations.

Provision for (Benefit from) Income Taxes

During 2019, we recorded a provision for income taxes of \$3.9 million that resulted in an effective tax rate of 10.2%, as compared to a benefit from income taxes of \$2.0 million that resulted in an effective tax rate of (9.9)% during 2018. The change in our effective tax rate in 2019, as compared to the prior year, was primarily due to the change in the proportion of U.S. versus foreign income and the benefit from the \$3.1 million measurement-period adjustment discussed below.

The Tax Act imposed a mandatory deemed repatriation transition tax ("Transition Tax") on previously untaxed accumulated and current earnings and profits of certain of our foreign subsidiaries. The Company recorded a final tax expense of \$37.2 million related to the Transition Tax, comprised of a provisional Transition Tax obligation of \$40.3 million in 2017 and a subsequent \$(3.1) million measurement-period adjustment in 2018. The Company has elected to pay the Transition Tax over an eight-year period beginning in 2018, as permitted under the Tax Act. As of December 31, 2019, \$28.9 million of the Transition Tax was unpaid, of which \$28.0 million is included in "Other long-term liabilities" and \$0.9 million is included in "Accounts payable, accrued expenses, and operating lease liabilities" in our Consolidated Balance Sheets.

As of December 31, 2019, we had no U.S. federal net operating loss ("NOL") carryforwards and \$4.1 million of foreign NOL carryforwards. As of December 31, 2019, foreign NOL carryforwards, other temporary differences and carryforwards, and credits resulted in deferred tax assets, net of valuation allowances and deferred tax liabilities, of \$19.4 million.

As of December 31, 2019, we had a valuation allowance of \$2.1 million primarily related to certain foreign tax credit carryforwards that, in our present estimation, more likely than not will not be realized. If we are unable to sustain or increase profitability in future periods, we may be required to increase the valuation allowance against our deferred tax assets, which could result in a charge that would materially adversely affect net income in the period in which the charge is incurred. We will continue to regularly assess the realizability of deferred tax assets.

As of December 31, 2019, we intend to indefinitely reinvest \$231.2 million of our undistributed foreign earnings. This amount takes into consideration a repatriation we made during 2019. After taking into account the Transition Tax, the Company estimates such repatriation generated only an immaterial U.S. tax expense related to U.S. state income taxes.

Deferred Revenue and Advance Payments

Deferred revenue and advance payments represent amounts received or due from our customers in advance of our transferring our software or services to the customer. Revenue is subsequently recognized in the period(s) in which control of the software or services is transferred to the customer.

The following table summarizes deferred revenue and advance payments (in thousands), as of:

	December 31,				
		2019		2018	
Current:					
Deferred product licenses revenue	\$	481	\$	1,768	
Deferred subscription services revenue		16,561		13,508	
Deferred product support revenue		161,670		152,501	
Deferred other services revenue		8,395		8,763	
Total current deferred revenue and advance payments	\$	187,107	\$	176,540	
Non-current:					
Deferred product licenses revenue	\$	293	\$	542	
Deferred subscription services revenue		97		2,384	
Deferred product support revenue		3,417		3,091	
Deferred other services revenue		537		452	
Total non-current deferred revenue and advance payments	\$	4,344	\$	6,469	
Total current and non-current:					
Deferred product licenses revenue	\$	774	\$	2,310	
Deferred subscription services revenue		16,658		15,892	
Deferred product support revenue		165,087		155,592	
Deferred other services revenue		8,932		9,215	
Total current and non-current deferred revenue and advance payments	\$	191,451	\$	183,009	

Total deferred revenue and advance payments increased \$8.4 million in 2019, as compared to the prior year, primarily due to an increase in product support and subscription services contracts, partially offset by the recognition of previously deferred product licenses and other services revenues and a decrease in our international deferred revenue balances from the general strengthening of the U.S. dollar. The increase in product support contracts was partially due to renewals that were delayed from the fourth quarter of 2018.

We expect to recognize approximately \$187.1 million of deferred revenue and advance payments over the next 12 months. However, the timing and ultimate recognition of our deferred revenue and advance payments depend on our satisfaction of various performance obligations, and the amount of deferred revenue and advance payments at any date should not be considered indicative of revenues for any succeeding period.

Liquidity and Capital Resources

Liquidity. Our principal sources of liquidity are cash and cash equivalents and on-going collection of our accounts receivable. Cash and cash equivalents may include holdings in bank demand deposits, money market instruments, certificates of deposit, and U.S. Treasury securities. We also periodically invest a portion of our excess cash in short-term investments with stated maturity dates between three months and one year from the purchase date.

As of December 31, 2019 and 2018, the amount of cash and cash equivalents and short-term investments held by our U.S. entities was \$289.4 million and \$173.6 million, respectively, and by our non-U.S. entities was \$276.2 million and \$402.5 million, respectively. We earn a significant amount of our revenues outside the United States and our accumulated foreign earnings and profits as of December 31, 2019 and 2018 were \$431.2 million and \$397.4 million, respectively. As of December 31, 2019, we intend to indefinitely reinvest \$231.2 million of our undistributed foreign earnings. This amount takes into consideration a repatriation we made during 2019. After taking into account the Transition Tax, the Company estimates such repatriation generated only an immaterial U.S. tax expense related to U.S. state income taxes. We do not anticipate needing to repatriate additional cash or cash equivalents held by non-U.S. entities to the United States to finance our U.S. operations.

We believe that existing cash and cash equivalents and short-term investments held by us and cash and cash equivalents anticipated to be generated by us are sufficient to meet working capital requirements, anticipated capital expenditures, and contractual obligations for at least the next 12 months.

The following table sets forth a summary of our cash flows (in thousands) and related percentage changes for the periods indicated:

		Years Ended			
		2019	2018	% Change	
Net cash provided by operating activities	\$	60,867	\$ 10,627	472.8%	
Net cash provided by (used in) investing activities	\$	353,687	\$ (209,064)	-269.2%	
Net cash used in financing activities	\$	(66,150)	\$ (108,515)	-39.0%	

Net cash provided by operating activities. The primary source of our cash provided by operating activities is cash collections of our accounts receivable from customers following the sales and renewals of our product licenses and product support, as well as consulting, education, and subscription services, and, in 2019, consideration received from the Domain Name Sale, net of related income taxes and immaterial transaction costs. Our primary uses of cash in operating activities are for personnel-related expenditures for software development, personnel-related expenditures for providing consulting, education, and subscription services, and for sales and marketing costs, general and administrative costs, and income taxes.

Net cash provided by operating activities increased \$50.2 million during 2019, as compared to the prior year, due to a \$28.9 million increase from changes in operating assets and liabilities, a \$9.5 million increase from changes in non-cash items, and a \$11.9 million increase in net income. Included in net cash provided by operating activities during 2019 is a gain of \$21.7 from the Domain Name Sale, net of related income taxes and immaterial transaction costs. Non-cash items consist primarily of depreciation and amortization, sales allowances and bad debt expense, deferred taxes, release of liabilities for unrecognized tax benefits, and share-based compensation expense.

Net cash provided by (used in) investing activities. The changes in net cash provided by (used in) investing activities primarily relate to purchases and redemptions of short-term investments and expenditures on property and equipment. Net cash provided by investing activities increased \$562.8 million during 2019, as compared to the prior year, due to a \$373.5 million decrease in purchases of short-term investments and a \$192.6 million increase in proceeds from the redemption of short-term investments, partially offset by a \$3.3 million increase in purchases of property and equipment.

Net cash used in financing activities. The changes in net cash (used in) provided by financing activities primarily relate to the purchase of treasury stock and the exercise of stock options under the 2013 Equity Plan. Net cash used in financing activities decreased \$42.4 million during 2019, as compared to the prior year, primarily due to a \$38.3 million decrease in purchases of treasury stock and a \$4.1 million increase in proceeds from the exercise of stock options under the 2013 Equity Plan.

Share repurchases. Our Board of Directors has authorized us to repurchase up to an aggregate of \$800.0 million of our class A common stock from time to time on the open market through April 29, 2023 under the Share Repurchase Program, although the program may be suspended or discontinued by us at any time. The timing and amount of any shares repurchased will be determined by management based on its evaluation of market conditions and other factors. The Share Repurchase Program may be funded using working capital, as well as proceeds from any other funding arrangements that we may enter into in the future. During the year ended December 31, 2019, we repurchased an aggregate of 521,843 shares of our class A common stock at an average price per share of \$139.35 and an aggregate cost of \$72.7 million pursuant to the Share Repurchase Program. During the year ended December 31, 2018, we repurchased an aggregate of 880,667 shares of our class A common stock at an average price per share of \$126.02 and an aggregate cost of \$111.0 million pursuant to the Share Repurchase Program.

Contractual obligations. The following table shows future minimum rent payments under noncancellable operating leases and purchase agreements with initial terms of greater than one year and anticipated payments related to the Transition Tax resulting from the Tax Act, based on the expected due dates of the various installments as of December 31, 2019 (in thousands):

		Payments due by period ended December 31,																																																																													
	Total	2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020		2020 2		2020		2020 2021-2022 2023-202		2021-2022		2020 2021-2		2020 2021-2		2020 2021-2022		2020 20		2020 2021-2022		2021-2022 20		Tl	nereafter
Contractual Obligations:																																																																															
Operating leases	\$ 160,030	\$	16,783	\$	32,686	\$	30,047	\$	80,514																																																																						
Purchase obligations	20,397		12,004		5,654		1,347		1,392																																																																						
Transition Tax	28,935		896		5,903		12,913		9,223																																																																						
Total	\$ 209,362	\$	29,683	\$	44,243	\$	44,307	\$	91,129																																																																						

Unrecognized tax benefits. As of December 31, 2019, we had \$1.7 million of total gross unrecognized tax benefits, including accrued interest, recorded in "Other long-term liabilities." The timing of any payments that could result from these unrecognized tax benefits will depend on a number of factors, and accordingly the amount and period of any future payments cannot be estimated. We do not expect any significant tax payments related to these obligations during 2020.

Off-balance sheet arrangements. As of December 31, 2019, we did not have any off-balance sheet arrangements that had a material impact on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures, or capital resources.

Recent Accounting Standards

See Note 3, Recent Accounting Standards, to the Consolidated Financial Statements for further information.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

The following discussion about our market risk exposures involves forward-looking statements. Actual results could differ materially from those projected in the forward-looking statements. In our Annual Report on Form 10-K for the year ended December 31, 2018, prior period information in this "Item 7A. Quantitative and Qualitative Disclosures About Market Risk" was adjusted to reflect the full retrospective adoption of ASU 2014-09, where applicable. No further adjustments for the year ended December 31, 2017 have been made in this Annual Report.

We are exposed to the impact of both interest rate changes and foreign currency fluctuations.

Interest Rate Risk. We face exposure to changes in interest rates primarily relating to our investments. We generally invest our excess cash in short-term, highly-rated, fixed-rate financial instruments. These fixed-rate instruments are subject to interest rate risk and may fall in value if interest rates increase. We do not hold or invest in these fixed-rate instruments for trading purposes or speculation. As of December 31, 2019, we held approximately \$108.9 million of investments in U.S. Treasury securities with stated maturity dates between three months and one year from the purchase date.

Foreign Currency Risk. We conduct a significant portion of our business in currencies other than the U.S. dollar, the currency in which we report our Consolidated Financial Statements. International revenues accounted for 43.7%, 42.3%, and 41.8% of our total revenues for the years ended December 31, 2019, 2018, and 2017, respectively. We anticipate that international revenues will continue to account for a significant portion of our total revenues. The functional currency of each of our foreign subsidiaries is generally the local currency.

Assets and liabilities of our foreign subsidiaries are translated into U.S. dollars at exchange rates in effect as of the applicable Balance Sheet date and any resulting translation adjustments are included as an adjustment to stockholders' equity. Revenues and expenses generated from these subsidiaries are translated at average monthly exchange rates during the quarter in which the transactions occur. Gains and losses from transactions in local currencies are included in net income.

As a result of transacting in multiple currencies and reporting our Consolidated Financial Statements in U.S. dollars, our operating results may be adversely impacted by currency exchange rate fluctuations in the future. The impact of foreign currency exchange rate fluctuations on current and comparable periods is described in the "Non-GAAP Financial Measures" section under "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

We cannot predict the effect of exchange rate fluctuations upon our future results. We attempt to minimize our foreign currency risk by converting our excess foreign currency held in foreign jurisdictions to U.S. dollar denominated cash and investment accounts.

As of December 31, 2019, a 10% adverse change in foreign currency exchange rates versus the U.S. dollar would have decreased our aggregate reported cash and cash equivalents and short-term investments by 0.3%. If average exchange rates during the year ended December 31, 2019 had changed unfavorably by 10%, our revenues for the year ended December 31, 2019 would have decreased by 4.0%. During the year ended December 31, 2019, our revenues were lower by 2.6% as a result of a 5.2% unfavorable change in weighted average exchange rates, as compared to the prior year.

Item 8. Financial Statements and Supplementary Data

Our Consolidated Financial Statements, together with the related notes and the associated Reports of Independent Registered Public Accounting Firm, are set forth on the pages indicated in Item 15.

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

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this Annual Report. 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. Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their control objectives. Based on the evaluation of our disclosure controls and procedures as of the end of the period covered by this Annual Report, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) promulgated under the Exchange Act as a process designed by, or under the supervision of, the Company's principal executive and principal financial officers and effected by the Company's Board of Directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. Such internal control 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 GAAP, 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. Projections of any evaluation of effectiveness to future periods are subject to the risk that the control may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the oversight of our Chief Executive Officer and Chief Financial Officer, our management conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2019 based on the criteria set forth in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on its assessment, management has determined that, as of December 31, 2019, our internal control over financial reporting is effective based on those criteria.

Our independent registered public accounting firm, KPMG LLP, which audited the Consolidated Financial Statements included in this Annual Report, has issued an attestation report on our internal control over financial reporting. This report is included in the Reports of Independent Registered Public Accounting Firm in "Item 15. Exhibits, Financial Statement Schedules."

Remediation of Material Weaknesses

As disclosed in "Part II. Item 9A. Controls and Procedures" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, we identified material weaknesses in our internal control over financial reporting. During the fiscal year ended December 31, 2019, management implemented our previously disclosed remediation plan that included: (i) creating and filling an Enterprise Applications Oversight function and establishing an IT management oversight plan to monitor IT general controls ("ITGCs") that support our financial reporting processes and automated controls; (ii) developing a training program addressing ITGCs and policies, including educating control owners on the design, implementation, operation, and documentation requirements related to user access, change-management, and system development controls that support financial reporting processes; (iii) developing enhanced risk assessment procedures related to changes in IT systems; and (iv) designing and implementing effective ITGCs over IT system changes.

During the fourth quarter of the fiscal year ended December 31, 2019, we completed our testing of the operating effectiveness of the implemented controls and found them to be effective in remediating the material weaknesses. As a result, we have concluded the material weaknesses have been remediated as of December 31, 2019.

Changes in Internal Control Over Financial Reporting

We adopted ASU 2016-02 on January 1, 2019 and implemented new internal controls during the fiscal year ended December 31, 2019 to help ensure the proper identification, accounting, and reporting of material lease arrangements. Other than as disclosed above under "Remediation of Material Weaknesses," the new internal controls related to our adoption of ASU 2016-02, and certain new ITGCs and IT application controls added in connection with our implementation of a new human resources management system, there have been no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the fiscal year ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. Other Information

2019 Cash Bonus Determinations for Certain Executive Officers

On February 7, 2020, the Company's Chief Executive Officer determined cash bonus awards for the following executive officers of the Company in the amounts set forth opposite their respective names, in each case with respect to the executive's performance in 2019:

Timothy E. Lang	\$ 500,000
Senior Executive Vice President & Chief Technology Officer	
Phong Q. Le	\$ 650,000
Senior Executive Vice President & Chief Operating Officer	
W. Ming Shao	\$ 450,000
Senior Executive Vice President & General Counsel	

In January 2020, the Chief Executive Officer determined a cash bonus award for Lisa Mayr, the Company's Senior Executive Vice President & Chief Financial Officer, in the amount of \$100,000 with respect to her performance in 2019. The Chief Executive Officer determined the foregoing awards based on his subjective evaluation of the applicable executive's performance in the context of general economic and industry conditions and Company performance during 2019.

Ms. Mayr also received an advance bonus payment of \$300,000 in January 2020, which is recoverable by the Company if Ms. Mayr resigns from her employment with the Company, or is terminated with cause, within fourteen (14) months of the date of payment.

Salary Determinations for Certain Executive Officers

On February 7, 2020, the Company's Chief Executive Officer approved increases to the annual salaries of the following executive officers of the Company, resulting in the amounts set forth opposite their respective names, effective February 1, 2020:

Timothy E. Lang	\$ 550,000
Phong Q. Le	\$ 750,000
W. Ming Shao	\$ 550,000

When Ms. Mayr joined the Company in November 2019, the Chief Executive Officer established her annual salary at \$550,000 for the balance of 2019 and, on February 7, 2020, determined to leave her annual salary unchanged.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this Item is incorporated herein by reference to the information provided under the headings "Executive Officers of the Company," "Election of Directors – Nominees," and "Corporate Governance and the Board of Directors and its Committees" in our definitive proxy statement to be filed with the SEC not later than 120 days after the fiscal year ended December 31, 2019 (the "2020 Proxy Statement").

Item 11. Executive Compensation

The information required by this Item is incorporated herein by reference to the information provided under the headings "Executive and Director Compensation," "Compensation Committee Report," and "Corporate Governance and the Board of Directors and its Committees – Compensation Committee" in the 2020 Proxy Statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this Item is incorporated herein by reference to the information provided under the headings "Security Ownership of Certain Beneficial Owners and Management" and "Executive and Director Compensation" in the 2020 Proxy Statement.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is incorporated herein by reference to the information provided under the heading "Corporate Governance and the Board of Directors and its Committees" in the 2020 Proxy Statement.

Item 14. Principal Accountant Fees and Services

The information required by this Item is incorporated herein by reference to the information provided under the heading "Independent Registered Public Accounting Firm Fees and Services" in the 2020 Proxy Statement.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) The following documents are filed as part of this Annual Report:

1. Consolidated Financial Statements **Page** Reports of Independent Registered Public Accounting Firm..... 52 Consolidated Financial Statements: Balance Sheets 55 Statements of Operations..... 56 Statements of Comprehensive Income 57 Statements of Stockholders' Equity..... 58 Statements of Cash Flows..... 59 Notes to Consolidated Financial Statements 60 Exhibits..... 88 3. Consolidated Financial Statement Schedule Schedule II - Valuation and Qualifying Accounts 91 (b) **Exhibits**

(c) Financial Statement Schedule

The following financial statement schedule is filed herewith:

Schedule II—Valuation and Qualifying Accounts

All other items included in an Annual Report on Form 10-K are omitted because they are not applicable or the answers thereto are none.

We hereby file as part of this Annual Report the exhibits listed in the Index to Exhibits.

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors MicroStrategy Incorporated:

Opinion on Internal Control Over Financial Reporting

We have audited MicroStrategy Incorporated and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes and the financial statement schedule, Schedule II, Valuation and Qualifying Accounts, (collectively, the consolidated financial statements), and our report dated February 13, 2020 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ KPMG LLP

McLean, Virginia February 13, 2020

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors MicroStrategy Incorporated:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of MicroStrategy Incorporated and subsidiaries (the Company) as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes and the financial statement schedule, Schedule II, Valuation and Qualifying Accounts, (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 13, 2020 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 3 to the consolidated financial statements, the Company has changed its method of accounting for leases as of January 1, 2019 due to the adoption of Accounting Standards Update No. 2016-02, Leases (Topic 842) and its subsequent amendments ("ASU 2016-02").

Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the 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. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgment. The communication of a critical audit matter 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Evaluation of standalone selling price for standard product support

As discussed in note 2(k) to the consolidated financial statements, the Company typically sells its software licenses (product licenses) together with technical support services and rights to when-and-if available software upgrades (standard product support). Product license revenue is recognized at the point when control to the license is transferred to the customer while standard product support revenue is recognized ratably over the term of the product support period. The accounting for revenue from contracts with multiple performance obligations requires the contract price to be allocated to each distinct performance obligation based on relative standalone selling price (SSP). Because product licenses are not sold on a standalone basis and because pricing is highly variable, the Company establishes SSP of product licenses using a residual approach after first establishing the SSP of standard product support. Standard product support is sold on a standalone basis within a narrow range of the net license fee.

We identified the evaluation of the SSP for standard product support as a critical audit matter. Especially subjective auditor judgment is required in evaluating the range of prices used to establish the SSP for standard product support which directly affects the amount of product license revenue recognized using a residual approach. Changes to the product support fee range could have a significant impact on the determination of the SSP for standard product support, impacting the amount and timing of revenues recognized.

The primary procedures we performed to address this critical audit matter included the following. We tested certain internal controls over the Company's revenue process, including controls over the methodology used to determine the standard product support SSP and controls over the Company's validation of the underlying data used in the SSP analysis. We assessed the observable inputs the Company used to determine SSP of standard product support by comparing them to stated renewal rates negotiated when standard product support is initially sold with a product license and evaluating whether the standalone prices in recent periods were sufficiently clustered within a narrow range. We also assessed the observable inputs the Company used to determine that the pricing for product licenses was highly variable by comparing the gross product license fee in the contract to the license fee net of discounts in the contract and evaluating the application of the residual approach in determining the product license revenue for a sample of contracts.

/s/ KPMG LLP

We have served as the Company's auditor since 2013.

McLean, Virginia February 13, 2020

MICROSTRATEGY INCORPORATED CONSOLIDATED BALANCE SHEETS

(in thousands, except per share data)

	De	cember 31, 2019	De	ecember 31, 2018
Assets				
Current assets:				
Cash and cash equivalents	\$	456,727	\$	109,924
Restricted cash		1,089		862
Short-term investments		108,919		466,186
Accounts receivable, net		163,516		171,359
Prepaid expenses and other current assets		23,195		30,068
Total current assets		753,446		778,399
Property and equipment, net		50,154		51,919
Right-of-use assets		85,538		0
Deposits and other assets		8,024		8,134
Deferred tax assets, net		19,409		17,316
Total assets	\$	916,571	\$	855,768
Liabilities and Stockholders' Equity				
Current liabilities:				
Accounts payable, accrued expenses, and operating lease liabilities	\$	33,919	\$	33,684
Accrued compensation and employee benefits		48,792		48,045
Deferred revenue and advance payments		187,107		176,540
Total current liabilities		269,818		258,269
Deferred revenue and advance payments		4,344		6,469
Operating lease liabilities		103,424		0
Other long-term liabilities		30,400		61,262
Deferred tax liabilities		26		37
Total liabilities		408,012		326,037
Commitments and Contingencies			_	
Stockholders' Equity				
Preferred stock undesignated, \$0.001 par value; 5,000 shares authorized; no shares				
issued or outstanding		0		0
Class A common stock, \$0.001 par value; 330,000 shares authorized; 15,888				
shares issued and 8,081 shares outstanding, and 15,837 shares issued and 8,552				
shares outstanding, respectively		16		16
Class B convertible common stock, \$0.001 par value; 165,000 shares authorized;				
2,035 shares issued and outstanding, and 2,035 shares issued and outstanding,				
respectively		2		2
Additional paid-in capital		593,583		576,957
Treasury stock, at cost; 7,807 shares and 7,285 shares, respectively		(658,880)		(586,161)
Accumulated other comprehensive loss		(9,651)		(10,217)
Retained earnings		583,489		549,134
Total stockholders' equity		508,559		529,731
Total liabilities and stockholders' equity	\$	916,571	\$	855,768

MICROSTRATEGY INCORPORATED CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)

		Yea	rs En	ded December	31,	
		2019		2018	_	2017
					(2	as adjusted)
Revenues:						
Product licenses	\$	87,471	\$	88,057	\$	93,259
Subscription services		29,394		29,570	_	32,368
Total product licenses and subscription services		116,865		117,627		125,627
Product support		292,035		296,216		289,184
Other services		77,427		83,795		89,032
Total revenues		486,327		497,638		503,843
Cost of revenues:						
Product licenses		2,131		4,864		7,176
Subscription services		15,161		13,620		13,435
Total product licenses and subscription services		17,292		18,484		20,611
Product support		28,317		20,242		17,481
Other services		54,365		60,773		58,557
Total cost of revenues		99,974		99,499		96,649
Gross profit		386,353		398,139		407,194
Operating expenses:						
Sales and marketing		191,235		205,525		175,045
Research and development		109,423		102,499		78,766
General and administrative		86,697		86,134		80,161
Total operating expenses		387,355		394,158		333,972
(Loss) income from operations		(1,002)		3,981		73,222
Interest income, net		10,909		11,855		5,205
Other income (expense), net		28,356		4,646		(6,953)
Income before income taxes	-	38,263		20,482		71,474
Provision for (benefit from) income taxes		3,908		(2,019)		53,279
Net income		34,355		22,501		18,195
Basic earnings per share (1)	\$	3.35	\$	1.98	\$	1.59
Weighted average shares outstanding used in computing basic					_	
earnings per share		10,256		11,375	_	11,444
Diluted earnings per share (1)	\$	3.33	\$	1.97	\$	1.58
Weighted average shares outstanding used in computing diluted						
earnings per share		10,328	_	11,412	_	11,547

⁽¹⁾ Basic and fully diluted earnings per share for class A and class B common stock are the same.

MICROSTRATEGY INCORPORATED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (in thousands)

	 Yea	rs En	ded December	31,	
	 2019	_	2018	_	2017
				(;	as adjusted)
Net income	\$ 34,355	\$	22,501	\$	18,195
Other comprehensive income (loss), net of applicable taxes:					
Foreign currency translation adjustment	(11)		(4,128)		5,300
Unrealized gain (loss) on short-term investments	 577		(430)		(30)
Total other comprehensive income (loss)	566		(4,558)		5,270
Comprehensive income	\$ 34,921	\$	17,943	\$	23,465

MICROSTRATEGY INCORPORATED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (in thousands)

				Cla	Class B				Accumulated	
		Class A	s A	Conv	Convertible	Additional			Other	
		Common Stock	n Stock	Commo	Common Stock	Paid-in	Treasury Stock	y Stock	Comprehensive	Retained
	Total	Shares	Amount	Shares	Amount	Capital	Shares	Amount	Income (Loss)	Earnings
Balance at January 1, 2017 (as adjusted)	\$ 566,317	15,805	\$ 16	2,035	\$ 2	\$ 543,974	(6,405)	\$ (475,184)	\$ (10,929)	\$ 508,438
Net income (as adjusted)	18,195	0	0	0	0	0	0	0	0	18,195
Other comprehensive income (as adjusted)	5,270	0	0	0	0	0	0	0	5,270	0
Issuance of class A common stock under stock option										
plans	1,677	12	0	0	0	1,677	0	0	0	0
Share-based compensation expense	14,267	0	0	0	0	14,267	0	0	0	0
Balance at December 31, 2017 (as adjusted)	\$ 605,726	15,817	\$ 16	2,035	\$ 2	\$ 559,918	(6,405)	\$ (475,184)	\$ (5,659)	\$ 526,633
Net income	22,501	0	0	0	0	0	0	0	0	22,501
Other comprehensive loss	(4,558)	0	0	0	0	0	0	0	(4,558)	0
Issuance of class A common stock under stock option										
plans	2,471	20	0	0	0	2,471	0	0	0	0
Purchases of treasury stock	(110,977)	0	0	0	0	0	(880)	(110,977)	0	0
Share-based compensation expense	14,568	0	0	0	0	14,568	0	0	0	0
Balance at December 31, 2018	\$ 529,731	15,837	\$ 16	2,035	\$ 2	\$ 576,957	(7,285)	\$ (586,161)	\$ (10,217)	\$ 549,134
Net income	34,355	0	0	0	0	0	0	0	0	34,355
Other comprehensive income	999	0	0	0	0	0	0	0	999	0
Issuance of class A common stock under stock option	1	ì	•	(C	1	C	ć	(¢
plans	6,569	51	0	0	0	6,569	0	0	0	0
Purchases of treasury stock	(72,719)	0	0	0	0	0	(522)	(72,719)	0	0
Share-based compensation expense	10,057	0	0	0	0	10,057	0	0	0	0
Balance at December 31, 2019	\$ 508,559	15,888	\$ 16	2,035	\$	\$ 593,583	(7,807)	\$ (658,880)	\$ (9,651)	\$ 583,489

The accompanying notes are an integral part of these Consolidated Financial Statements.

MICROSTRATEGY INCORPORATED CONSOLIDATED STATEMENTS OF CASH FLOWS (in thousands)

		Years Ended December 3				31,		
		2019		2018		2017		
					(;	as adjusted)		
Operating activities:								
Net income	\$	34,355	\$	22,501	\$	18,195		
Adjustments to reconcile net income to net cash provided by operating activities:								
Depreciation and amortization		16,699		3,701		15,532		
Sales allowances and bad debt		124		1,912		2,269		
Net realized loss on short-term investments		41		153		0		
Deferred taxes		(2,614)		(8,274)		(3,605)		
Release of liabilities for unrecognized tax benefits		(2,837)		0		0		
Share-based compensation expense		10,209		14,636		14,267		
Changes in operating assets and liabilities:								
Accounts receivable		(3,672)		(8,357)		15,348		
Prepaid expenses and other current assets		6,415		(6,561)		(4,739)		
Deposits and other assets		761		(1,201)		3,029		
Accounts payable and accrued expenses		(7,321)		3,378		(9,093)		
Accrued compensation and employee benefits		(2,658)		5,116		(6,209)		
Deferred revenue and advance payments		20,836		(22,126)		(589)		
Operating lease liabilities		(8,620)		0		0		
Other long-term liabilities		(851)		5,749		33,917		
Net cash provided by operating activities		60,867		10,627		78,322		
Investing activities:								
Proceeds from redemption of short-term investments		684,356		491,800		390,720		
Purchases of property and equipment		(10,182)		(6,846)		(3,982)		
Purchases of short-term investments		(320,487)		(694,018)		(456,468)		
Net cash provided by (used in) investing activities		353,687		(209,064)		(69,730)		
Financing activities:								
Proceeds from sale of class A common stock under exercise of employee stock								
options		6,569		2,471		1,677		
Purchases of treasury stock		(72,719)		(110,977)		0		
Payments on capital lease obligations and other financing arrangements prior to								
the adoption of ASU 2016-02		0		(9)		(21)		
Net cash (used in) provided by financing activities		(66,150)		(108,515)		1,656		
Effect of foreign exchange rate changes on cash, cash equivalents, and								
restricted cash	_	(1,374)	_	(3,444)	_	8,222		
Net increase (decrease) in cash, cash equivalents, and restricted cash		347,030		(310,396)		18,470		
Cash, cash equivalents, and restricted cash, beginning of year		110,786		421,182		402,712		
Cash, cash equivalents, and restricted cash, end of year	\$	457,816	\$	110,786	\$	421,182		
Supplemental disclosure of cash flow information:								
Cash paid during the year for income taxes, net of tax refunds	\$	5,911	\$	13,214	\$	29,279		

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(1) Organization

MicroStrategy is a global provider of enterprise analytics software and services. The Company's vision is to enable Intelligence Everywhere by delivering world-class software and services that empower enterprise users with actionable intelligence.

(2) Summary of Significant Accounting Policies

(a) Basis of Presentation

The accompanying Consolidated Financial Statements include the accounts of the Company and its subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation. The Company is not aware of any material subsequent event that would require recognition or disclosure.

As discussed in Note 3, Recent Accounting Standards, to the Consolidated Financial Statements, the Company adopted Accounting Standards Update No. 2016-02, Leases (Topic 842) and its subsequent amendments ("ASU 2016-02") effective January 1, 2019. Comparative prior period Consolidated Financial Statements have not been restated for the adoption of ASU 2016-02 and are not directly comparable to the current period.

In addition, the Company previously adopted Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* and its subsequent amendments ("ASU 2014-09") effective January 1, 2018. Certain amounts for the year ended December 31, 2017 were adjusted in the previously issued Consolidated Financial Statements to reflect the adoption of ASU 2014-09. No further adjustments for the year ended December 31, 2017 have been made in these Consolidated Financial Statements.

(b) Use of Estimates

The preparation of the Consolidated Financial Statements, in conformity with GAAP, requires management to make estimates and judgments that affect the amounts reported in the Consolidated Financial Statements and accompanying notes. On an on-going basis, the Company evaluates its estimates, including, but not limited to, those related to revenue recognition, allowance for doubtful accounts, investments, fixed assets, leases, share-based compensation, income taxes, including the carrying value of deferred tax assets, and litigation and contingencies, including liabilities that the Company deems not probable of assertion. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets, liabilities, and equity that are not readily apparent from other sources. Actual results and outcomes could differ from these estimates and assumptions.

(c) Fair Value Measurements

The Company measures certain assets and liabilities at fair value on a recurring basis. Fair value is defined as the price that is expected to be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company uses a three-level hierarchy that prioritizes fair value measurements based on the types of inputs used for the various valuation techniques. The three levels of the fair value hierarchy are described below:

- Level 1: Quoted (unadjusted) prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.
- Level 2: Inputs other than quoted prices that are either directly or indirectly observable, such as quoted prices in active markets for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3: Inputs that are generally unobservable, supported by little or no market activity, and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The categorization of an asset or liability within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. The valuation techniques used by the Company when measuring fair value maximize the use of observable inputs and minimize the use of unobservable inputs.

The Company also estimates the fair value of cash and cash equivalents, restricted cash, accounts receivable, accounts payable and accrued expenses, and accrued compensation and employee benefits. The Company considers the carrying value of these instruments in the Consolidated Financial Statements to approximate fair value due to their short maturities.

(d) Cash and Cash Equivalents and Restricted Cash

Cash equivalents include bank demand deposits, money market instruments, certificates of deposit, U.S. Treasury securities, and equivalent funds. The Company generally considers all highly liquid investments with an original maturity of three months or less to be cash equivalents. Restricted cash consists of cash balances restricted in use by contractual obligations with third parties.

(e) Short-term Investments

The Company periodically invests a portion of its excess cash in short-term investment instruments. All highly liquid investments with stated maturity dates between three months and one year from the purchase date are classified as short-term investments. The Company determines the appropriate classification of its short-term investments at the time of purchase and reassesses the appropriateness of the classification at each reporting date.

All of the Company's short-term investments are in U.S. Treasury securities. All short-term investments have been classified as available-for-sale and are reported at fair value, with unrealized holding gains and losses reported in other comprehensive income (loss) until realized, subject to impairment. Premiums and discounts related to the Company's short-term investments are amortized over the life of the investment and recorded in earnings. Unrealized holding gains and losses are determined by comparing the fair value to the amortized cost.

Each reporting period, the Company determines whether a decline in fair value below the amortized cost basis for each individual security is other-than-temporary and if it would be required to sell the security before recovery of its amortized cost basis. Upon recognition of an other-than-temporary impairment, the previous amortized cost basis less the portion of the other-than-temporary impairment recognized in earnings becomes the new amortized cost basis of the investment.

(f) Property and Equipment

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, as follows: three years for computer equipment and purchased software; five years for office equipment; 10 years for office furniture; and 19 years for the Company's corporate aircraft, which has an estimated salvage value of 21%. Leasehold improvements are amortized using the straight-line method over the estimated useful lives of the improvements or the term of the lease, whichever is shorter. The Company periodically evaluates the appropriateness of the estimated useful lives and salvage value of all property and equipment. Any change in the estimated useful life or salvage value is treated as a change in estimate and accounted for prospectively in the period of change.

Expenditures for maintenance and repairs are charged to expense as incurred, except for certain costs related to the aircraft. The costs of normal, recurring, or periodic repairs and maintenance activities related to the aircraft are expensed as incurred. The cost of planned major maintenance activities ("PMMA") may be treated differently because those activities may involve the acquisition of additional aircraft components or the replacement of existing aircraft components. PMMA are performed periodically based on passage of time and the use of the aircraft. The classification of a maintenance activity as part of PMMA requires judgment and can affect the amount of expense recognized in any particular period. The cost of each PMMA is expected to be capitalized and amortized over the period until the next scheduled PMMA. There have been no PMMA to date.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

When assets are retired or sold, the capitalized cost and related accumulated depreciation are removed from the property and equipment accounts and any resulting gain or loss is recognized in the results of operations.

Eligible internal-use software development costs are capitalized subsequent to the completion of the preliminary project stage. Such costs include external direct material and service costs, employee payroll, and payroll-related costs. After all substantial testing and deployment is completed and the software is ready for its intended use, capitalization ceases and internal-use software development costs are amortized using the straight-line method over the estimated useful life of the software, generally three years.

The Company reviews long-lived assets for impairment whenever events or changes in business circumstances indicate that the carrying value of the assets may not be fully recoverable or that the useful lives of these assets are no longer appropriate. Each impairment test is based on a comparison of the undiscounted cash flows to the recorded value of the asset. If an asset is impaired, the asset is written down by the amount by which the carrying value of the asset exceeds the related fair value of the asset.

(g) Leases

The Company adopted ASU 2016-02 effective as of January 1, 2019. Under ASU 2016-02, a lease is a contract, or part of a contract, that conveys the right to both (i) obtain economic benefits from and (ii) direct the use of an identified asset for a period of time in exchange for consideration. The Company evaluates its contracts to determine if they contain a lease and classifies any lease components identified as an operating or finance lease. For each lease component, the Company recognizes a right-of-use ("ROU") asset and a lease liability. ROU assets and lease liabilities are presented separately for operating and finance leases; however, the Company currently has no material finance leases. The Company's operating leases are primarily related to office space in the United States and foreign locations.

In a contract that contains a lease, a component is an item or activity that transfers a good or service to the lessee. Such contracts may be comprised of lease components, non-lease components, and elements that are not components. Each lease component represents a lessee's right to use an underlying asset in the contract if the lessee can benefit from the right of use of the asset either on its own or together with other readily available resources and if the right of use is neither highly dependent nor highly interrelated with other rights of use. Non-lease components include items such as common area maintenance and utilities provided by the lessor. The Company has elected the practical expedient to not separate lease components from non-lease components for office space, which is the Company's only material underlying asset class. For each lease within this asset class, the non-lease components and related lease components are accounted for as a single lease component. Items or activities that do not transfer goods or services to the lessee, such as administrative tasks to set up the contract and reimbursement or payment of lessor costs, are not components of the contract and therefore no contract consideration is allocated to such items or activities.

Consideration in the contract is comprised of any fixed payments and variable payments that depend on an index or rate. Payments in the Company's operating lease arrangements are typically comprised of base office rent and parking fees. Costs related to the Company's non-lease components, as described above, are generally variable and do not depend on an index or rate and are therefore excluded from the contract consideration allocated to the lease components. The Company's operating lease arrangements generally do not contain any payments related to items or activities that are not components.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Operating lease liabilities are initially and subsequently measured at the present value of unpaid lease payments, discounted at the discount rate of the lease. Operating lease ROU assets are initially measured as the sum of the initial lease liability, any initial direct costs incurred, and any prepaid lease payments, less any lease incentives received. The ROU asset is amortized over the term of the lease. The amortization of operating lease ROU assets is included in "Depreciation and amortization" within the operating activities section of the Consolidated Statements of Cash Flows. A single lease expense is recorded within operating expenses in the Consolidated Statements of Operations on a straight-line basis over the lease term. Variable lease payments that are not included in the measurement of the lease liability are recognized in the period when the obligations for those payments are incurred. In the Company's lease agreements, these variable payments typically include certain taxes, utilities, and maintenance costs, and other fees.

The Company uses its incremental borrowing rate as the discount rate for all of its leases, as the rate implicit in the lease is not readily determinable in any of its lease contracts. As the Company has no history of publicly-traded debt, in order to estimate a collateralized borrowing rate curve, the Company first estimates a synthetic credit rating and then applies modeling methodologies to an unsecured borrowing rate curve. In determining the incremental borrowing rate of each lease, the Company uses a centralized treasury approach and considers the currency of the contract, the economic environment in which the lease exists, and the term of the lease.

The Company does not recognize lease liabilities or ROU assets for any short-term leases with a non-cancellable lease term of 12 months or less. Instead, the lease payments for these short-term leases are expensed on a straight-line basis over the lease term, and any variable payments are recognized in the period when the obligations for those payments are incurred. The Company believes that, using this methodology, the expense recorded reasonably reflects the Company's short-term lease commitments.

Prior to the adoption of ASU 2016-02, the Company did not recognize any operating lease liabilities or ROU assets on its Consolidated Balance Sheet. Rent expense was previously recognized on a straight-line basis with deferred rent included in "Other long-term liabilities" or current accrued expenses.

(h) Software Development Costs

The Company did not capitalize any software development costs during the years ended December 31, 2019, 2018, and 2017. Due to the pace of the Company's software development efforts and frequency of its software releases, the Company's software development costs are expensed as incurred within "Research and development" in the Consolidated Statements of Operations. Amortization expenses related to previously capitalized software development costs were \$2.5 million and \$6.0 million for the years ended December 31, 2018 and 2017, respectively. No amortization expense was recorded for the year ended December 31, 2019, as all previously capitalized software development costs were fully amortized.

In previous periods, software development costs were expensed as incurred until technological feasibility had been established, at which time such costs were capitalized until the software was available for general release to customers. Capitalized software development costs include direct labor costs and fringe benefit costs attributed to programmers, software engineers, and quality control and field certifiers working on the software after it reaches technological feasibility, but before it is generally available to customers for sale. Technological feasibility is considered to be achieved when a software design and working model of the software have been completed. Capitalized software development costs are typically amortized on a straight-line basis over the estimated software life of three years. The amortization expense is recorded within cost of product licenses revenues in the Consolidated Statements of Operations.

(i) Loss Contingencies and Legal Costs

The Company accrues loss contingencies that are believed to be probable and can be reasonably estimated. As events evolve during the administration and litigation process and additional information becomes known, the Company reassesses its estimates related to loss contingencies. Legal costs are expensed in the period in which the costs are incurred.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(j) Deferred Revenue and Advance Payments

Deferred revenue and advance payments represent amounts received or due from customers in advance of the Company transferring its software or services to the customer. In the case of multi-year service contracts, the Company generally does not invoice more than one year in advance of services and does not record any deferred revenue for amounts that have not been invoiced. Revenue is subsequently recognized in the period(s) in which control of the software or services is transferred to the customer. Deferred revenue is comprised of deferred product licenses and subscription services, product support, or other services revenue based on the transaction price allocated to the specific performance obligation in the contract with the customer.

(k) Revenue Recognition

The Company recognizes revenue using a five-step model:

- (i) Identifying the contract(s) with a customer,
- (ii) Identifying the performance obligation(s),
- (iii) Determining the transaction price,
- (iv) Allocating the transaction price to the performance obligations in the contract, and
- (v) Recognizing revenue when, or as, the Company satisfies a performance obligation.

The Company has elected to exclude taxes assessed by government authorities in determining the transaction price, and therefore revenue is recognized net of taxes collected from customers.

<u>Performance Obligations and Timing of Revenue Recognition</u>

The Company primarily sells goods and services that fall into the categories discussed below. Each category contains one or more performance obligations that are either (i) capable of being distinct (i.e., the customer can benefit from the good or service on its own or together with readily available resources, including those purchased separately from the Company) and distinct within the context of the contract (i.e., separately identifiable from other promises in the contract) or (ii) a series of distinct goods or services that are substantially the same and have the same pattern of transfer to the customer. Aside from the Company's term and perpetual product licenses, which are delivered at a point in time, the majority of the Company's services are delivered over time.

Product Licenses

The Company sells different types of business intelligence software, licensed on a term or perpetual basis and installed either on premises or on a public cloud that is procured and managed by the customer. Although product licenses are sold with product support, the software is fully functional at the outset of the arrangement and is considered a distinct performance obligation. Revenue from product license sales is recognized when control of the license is transferred to the customer, which is the later of delivery or commencement of the license term. The Company may also sell through resellers and OEMs who purchase the Company's software for resale. In reseller arrangements, revenue is recognized when control of the license is transferred to the end user. In OEM arrangements, revenue is recognized upon delivery of the license to the OEM.

Subscription Services

The Company also sells access to its software through MCE, a cloud subscription service, wherein customers access the software through a cloud environment that the Company manages on behalf of the customer. Control of the software itself does not transfer to the customer under this arrangement and is not considered a separate performance obligation. Cloud subscriptions are regularly sold on a standalone basis and include telephone support, monitoring, backups, updates, and quarterly service reviews. Revenue related to cloud subscriptions is recognized on a straightline basis over the contract period, which is the period over which the customer has continuous access to the software.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Product Support

In all product license transactions, customers are required to purchase a standard product support package and may also purchase a premium product support package for a fixed annual fee. All product support packages include both technical support and when-and-if-available software upgrades, which are treated as a single performance obligation as they are considered a series of distinct services that are substantially the same and have the same duration and measure of progress. Revenue from product support is recognized on a straight-line basis over the contract period, which is the period over which the customer has continuous access to product support.

Consulting Services

The Company sells consulting services to help customers plan and execute deployment of the Company's software. Customers are not required to use consulting services to fully benefit from the software. Consulting services are regularly sold on a standalone basis and either (i) prepaid upfront or (ii) sold on a time and materials basis. Consulting arrangements are each considered separate performance obligations because they do not integrate with each other or with other offerings to deliver a combined output to the customer, do not modify or customize (or are not modified or customized by) each other or other offerings, and do not affect the customer's ability to use the other consulting services or the Company's other offerings. Revenue under consulting arrangements is recognized over time as services are delivered. For time and materials-based consulting arrangements, the Company has elected the practical expedient of recognizing revenue upon invoicing since the invoiced amount corresponds directly to the value of the Company's service to date.

Education Services

The Company sells various education and training services to its customers. Education services are sold on a standalone basis under three different arrangements: (i) prepaid bulk training units that may be redeemed on training courses based on standard redemption rates, (ii) an annual subscription to unlimited training courses, and (iii) individual courses purchased a la carte. Education arrangements are each considered separate performance obligations because they do not integrate with each other or with other offerings to deliver a combined output to the customer, do not modify or customize (or are not modified or customized by) each other or other offerings, and do not affect the customer's ability to use the other education services or the Company's other offerings. Revenue on prepaid bulk training units and individual course purchases are recognized when the courses are delivered. Revenue on the annual subscription is recognized on a straight-line basis over the contract period, which is the period over which the customer has continuous access to unlimited training courses.

See Note 14, Segment Information, to the Consolidated Financial Statements for information regarding total revenues by geographic region.

Estimates and Judgments

The Company makes estimates and judgments to allocate the transaction price based on an observable or estimated SSP. The Company also makes estimates and judgements with respect to capitalizing incremental costs to obtain a customer contract and determining the subsequent amortization period. These estimates and judgments are discussed further below.

Determining the Transaction Price

The transaction price includes both fixed and variable consideration. Variable consideration is included in the transaction price to the extent it is probable that a significant reversal will not occur. The amount of variable consideration excluded from the transaction price was not material for the years ended December 31, 2019, 2018, and 2017. The Company's estimates of variable consideration are also subject to subsequent true-up adjustments and may result in changes to its transaction prices. Such true-up adjustments have not been and are not expected to be material. The Company has the following sources of variable consideration:

(i) Performance penalties – Subscription services and product support arrangements generally contain performance response time guarantees. For subscription services arrangements, the Company estimates

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

variable consideration using a portfolio approach because performance penalties are tied to standard uptime requirements. For product support arrangements, the Company estimates variable consideration on a contract basis because such arrangements are customer-specific. For both subscription services and product support arrangements, the Company uses an expected value approach to estimate variable consideration based on historical business practices and current and future performance expectations to determine the likelihood of incurring penalties.

- (ii) Extended payment terms The Company's standard payment terms are generally within 180 days of invoicing. If extended payment terms are granted to customers, those terms generally do not exceed one year. For contracts with extended payment terms, the Company estimates variable consideration on a contract basis because such estimates are customer-specific and uses an expected value approach to analyze historical business experience on a customer-by-customer basis to determine the likelihood that extended payment terms lead to an implied price concession.
- (iii) Sales and usage-based royalties Certain product license arrangements include sales or usage-based royalties, covering both product license and product support. In these arrangements, the Company uses an expected value approach to estimate and recognize revenue for royalty sales each period, utilizing historical data on a contract-by-contract basis. True-up adjustments are recorded in subsequent periods when royalty reporting is received from the OEMs.

The Company provides a standard software assurance warranty to repair, replace, or refund software that does not perform in accordance with documentation. The standard software assurance warranty period is generally less than one year. Assurance warranty claims were not material for the years ended December 31, 2019, 2018, and 2017.

The Company does not adjust the transaction price for significant financing components where the time period between cash payment and performance is one year or less. However, there are circumstances where the timing between cash payment and performance may exceed one year. These circumstances generally involve prepaid multi-year product support and subscription services arrangements where the customer determines when the service is utilized (e.g., when to request on-call support services or when to use and access the software in the cloud). In these circumstances, the Company has determined no significant financing component exists because the customer controls when to utilize the service and because there are significant business purposes behind the timing difference between payment and performance (e.g., maximizing profit in the case of product support services and ensuring collectability in the case of subscription services).

Allocating the Transaction Price Based on Standalone Selling Prices (SSP)

The Company allocates the transaction price to each performance obligation in a contract based on its relative SSP. The SSP is the price, or estimated price, of the software or service when sold on a standalone basis at contract inception. In circumstances where SSP is not directly observable, the Company estimates SSP using the following methodologies:

- (i) Product licenses Product licenses are not sold on a standalone basis and pricing is highly variable. The Company establishes SSP of product licenses using a residual approach after first establishing the SSP of standard product support. Standard product support is sold on a standalone basis within a narrow range of the net license fee, and because an economic relationship exists between product licenses and standard product support, the Company has concluded that the residual method to estimate SSP of product licenses sold on both a perpetual and term basis is a fair allocation of the transaction price.
- (ii) Subscription services Given the highly variable selling price of subscription services, the Company establishes the SSP of its subscription services arrangements using a similar residual approach after first establishing the SSP of consulting and education services to the extent they are included in the arrangement. The Company has concluded that the residual method to estimate SSP of its subscription services is a fair allocation of the transaction price.
- (iii) Standard product support The Company establishes SSP of standard product support as a percentage of the stated net license fee, given such pricing is consistent with its normal pricing practices and there exists sufficient history of customers renewing standard product support on a standalone basis at similar percentages. Each quarter, the Company tracks renewal rates negotiated when standard product support is

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

initially sold with a perpetual license in order to determine the SSP of standard product support within each geographic region for the upcoming quarter. If the stated standard product support fee falls within the SSP range, the specific rate in the contract will be used to estimate SSP. If the stated fee is above or below SSP, the highest or lowest end of the range, respectively, will generally be used to estimate SSP of standard product support.

(iv) Premium product support, consulting services, and education services –SSP of premium product support, consulting services, and education services is established by using a bell-shaped curve approach to define a narrow range within each geographic region in which the services are discounted off of the list price on a standalone basis.

The Company often provides options to purchase future offerings at a discount. The Company analyzes the option price against the previously established SSP of the goods or services to determine if the options represent material rights that should be accounted for as separate performance obligations. In general, an option sold at or above SSP is not considered a material right because the customer could have received that right without entering into the contract. If a material right exists, revenue associated with the option is deferred and recognized when the future goods or services are transferred, or when the option expires. During the years ended December 31, 2019, 2018, and 2017, separate performance obligations arising from future purchase options have not been material.

Incremental Costs to Obtain Customer Contracts

Incremental costs incurred to obtain contracts with customers include certain variable compensation (e.g., commissions and bonuses) paid to the Company's sales team. Although the Company may bundle its goods and services into one contract, commissions are individually determined on each distinct good or service in the contract. The Company expenses as incurred those amounts earned on consulting and education services, which are generally performed within a one-year period and primarily sold on a standalone basis. The Company also expenses as incurred those amounts earned on product license sales, since the amount is earned when the license is delivered. The Company capitalizes those amounts earned on product support and initial-year cloud subscriptions and amortizes the costs over a period of time that is consistent with the pattern of transfer to the customer, which the Company has determined to be a period of three years. Although the Company typically sells product support and cloud subscriptions for a period of one year, a majority of customers renew their product support and cloud subscription arrangements. Three years is generally the period after which platforms are no longer supported by the Company's support team and when customers generally choose to upgrade their software platform. Although the Company pays variable compensation on cloud subscription renewals, commissions paid on cloud subscription renewals are not considered commensurate with the initial contract year. The Company expenses as incurred those amounts earned on all cloud subscription renewals as the renewal periods are generally for one year and the variable compensation on these renewals are commensurate with each other. The Company does not pay variable compensation on product support renewals. As of December 31, 2019 and 2018, capitalized costs to obtain customer contracts, net of accumulated amortization, were \$4.8 million and \$4.2 million, respectively, and are presented within "Deposits and other assets" in the Consolidated Balance Sheets. During the years ended December 31, 2019, 2018, and 2017, amortization expenses related to these capitalized costs were \$2.9 million, \$2.3 million, and \$3.0 million, respectively, and are reflected within "Sales and marketing" in the Consolidated Statements of Operations.

(l) Advertising Costs

Advertising costs include production costs, which are expensed the first time the advertisement takes place, and media placement costs, which are expensed in the month the advertising appears. Total advertising costs were \$0.9 million, \$7.1 million, and \$5.7 million for the years ended December 31, 2019, 2018, and 2017, respectively. As of December 31, 2019 and 2018, the Company had no prepaid advertising costs.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(m) Share-based Compensation

The Company maintains the 2013 Equity Plan, under which the Company's employees, officers, directors, and other eligible participants may be awarded various types of share-based compensation, including options to purchase shares of the Company's class A common stock and other stock-based awards. The Company recognizes share-based compensation expense associated with such stock options and stock-based awards on a straight-line basis over the award's requisite service period (generally, the vesting period). The share-based compensation expense is based on the fair value of such awards on the date of grant, as estimated using the Black-Scholes option pricing model. See Note 10, Share-based Compensation, to the Consolidated Financial Statements for further information regarding the 2013 Equity Plan, related share-based compensation expense, and assumptions used in the Black-Scholes option pricing model.

(n) Income Taxes

The Company is subject to federal, state, and local income taxes in the United States and many foreign countries. Deferred income taxes are provided based on enacted tax laws and rates applicable to the periods in which the taxes become payable. For uncertain income tax positions, the Company uses a more-likely-than-not recognition threshold based on the technical merits of the income tax position taken. Income tax positions that meet the more-likely-than-not recognition threshold are measured in order to determine the tax benefit recognized in the financial statements. The Company recognizes accrued interest related to unrecognized tax benefits as part of income tax expense. Penalties, if incurred, are recognized as a component of income tax expense.

The Company provides a valuation allowance to reduce deferred tax assets to their estimated realizable value, when appropriate.

(o) Basic and Diluted Earnings Per Share

Basic earnings per share is determined by dividing the net income attributable to common stockholders by the weighted average number of common shares and participating securities outstanding during the period. Participating securities are included in the basic earnings per share calculation when dilutive. Diluted earnings per share is determined by dividing the net income attributable to common stockholders by the weighted average number of common shares and potential common shares outstanding during the period. Potential common shares are included in the diluted earnings per share calculation when dilutive. Potential common shares consisting of common stock issuable upon exercise of outstanding employee stock options are computed using the treasury stock method.

The Company has two classes of common stock: class A common stock and class B common stock. Holders of class A common stock generally have the same rights, including rights to dividends, as holders of class B common stock, except that holders of class A common stock have one vote per share while holders of class B common stock have ten votes per share. Each share of class B common stock is convertible at any time, at the option of the holder, into one share of class A common stock. As such, basic and fully diluted earnings per share for class A and class B common stock are the same. The Company has never declared or paid any cash dividends on either class A or class B common stock. As of December 31, 2019 and 2018, there were no shares of preferred stock outstanding.

(p) Foreign Currency Translation

The functional currency of the Company's international operations is generally the local currency. Accordingly, all assets and liabilities of international subsidiaries are translated using exchange rates in effect at the end of the period, and revenue and expenses are translated using average monthly exchange rates for the period in which the transactions occur. The related translation adjustments are reported in "Accumulated other comprehensive income (loss)" in stockholders' equity. In general, upon complete or substantially complete liquidation of an investment in an international subsidiary, the amount of accumulated translation adjustments attributable to that subsidiary is reclassified from stockholders' equity to the statement of operations. Transaction gains and losses arising from transactions denominated in a currency other than the functional currency of the entity involved are included in the results of operations.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

As of December 31, 2019, 2018, and 2017, the cumulative foreign currency translation balances were \$(9.8) million, \$(9.8) million, and \$(5.7) million, respectively. No taxes were recognized on the temporary differences resulting from foreign currency translation adjustments for the years ended December 31, 2019, 2018, and 2017.

Transaction gains and losses arising from transactions denominated in foreign currencies resulted in net losses of \$1.0 million and \$7.0 million in 2019 and 2017, respectively, and a net gain of \$4.7 million in 2018, and are included in "Other income (expense), net" in the Consolidated Statements of Operations.

(q) Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents, restricted cash, short-term investments, and accounts receivable. The Company places its cash equivalents with high credit-quality financial institutions and invests its excess cash primarily in short-term investments. The Company has established guidelines relative to credit ratings and maturities that seek to maintain safety and liquidity.

The Company sells its offerings to various companies across several industries throughout the world in the ordinary course of business. The Company routinely assesses the financial strength of its customers and maintains allowances for anticipated losses. As of December 31, 2019 and 2018, no individual customer accounted for 10% or more of net accounts receivable, and for the years ended December 31, 2019, 2018, and 2017, no individual customer accounted for 10% or more of revenue.

(3) Recent Accounting Standards

Lease accounting

The Company adopted ASU 2016-02 effective as of January 1, 2019 and elected the transition option to apply the new lease requirements as of the adoption date without restating comparative periods presented in its Consolidated Financial Statements. Additionally, the Company elected the package of practical expedients described in ASU 2016-02, which includes not reassessing the following: (i) lease classification of existing leases, (ii) whether expired or existing contracts contain leases, and (iii) initial direct costs for existing leases.

Upon adoption of ASU 2016-02, the Company recognized ROU assets of \$88.8 million, total lease liabilities of \$116.9 million, reductions in total deferred rent of \$28.5 million, and reductions in prepaid expenses of \$0.4 million in its 2019 beginning balances. All adjustments relate to the Company's operating leases; the Company does not have any material leases that are classified as finance leases. There was no cumulative effect adjustment to the Company's 2019 beginning retained earnings balance as the Company did not have material unamortized initial direct costs. Beginning in 2019, the Company presents the amortization of its operating ROU assets and the change in its operating lease liabilities within the operating activities section of its Consolidated Statements of Cash Flows. The adoption of ASU 2016-02 did not have a material impact on the Company's Consolidated Statements of Operations.

Revenue from contracts with customers

The Company adopted ASU 2014-09 effective as of January 1, 2018, using the full retrospective method. In adopting ASU 2014-09, the Company has made the following significant changes in accounting principles:

(i) Timing of revenue recognition for term license sales. Under ASU 2014-09, the Company recognizes product licenses revenue from term licenses upon delivery of the software. Previously, this revenue was recognized over the term of the arrangement.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

- (ii) Timing of revenue recognition for sales to channel partners. Under ASU 2014-09, the Company recognizes revenue from sales made to OEMs when control of the license transfers to the OEM, less adjustments for returns or price protection. Previously, this revenue was not recognized until the license was sold by the OEM to the end user. Revenue from sales made to resellers continues to be recognized when control of the license is transferred to the end user.
- (iii) Allocating the transaction price to the performance obligations in the contract. Under ASU 2014-09, the Company allocates the transaction price to the various performance obligations in the contract based on their relative SSP. Except for SSP of product support, the Company's methodologies for estimating SSP of its various performance obligations are generally consistent with the Company's previous methodologies used to establish vendor specific objective evidence ("VSOE") of fair value on multiple element arrangements. Whereas VSOE of product support was previously based on the optional stated renewal fee within the contract, SSP of product support under ASU 2014-09 is established as a range within each geographic region as discussed in Note 2, Summary of Significant Accounting Policies, to the Consolidated Financial Statements. The impact from SSP-based allocations was not material to the Company's prior or current period Consolidated Financial Statements and is not expected to be material in future periods.
- (iv) Material rights. The Company's contracts with customers may include options to acquire additional goods and services at a discount. Under ASU 2014-09, certain of these options may be considered material rights if the optional goods and services can be purchased at prices below SSP and would be treated as separate performance obligations and included in the allocation of the transaction price. Previously, none of the Company's options were considered material rights. The impact from material rights was not material to the Company's prior or current period Consolidated Financial Statements and is not expected to be material in future periods.
- (v) Presentation of accounts receivable, contract assets, and contract liabilities (deferred revenue). Under ASU 2014-09, the Company's rights to consideration are presented separately depending on whether those rights are conditional ("contract assets") or unconditional ("accounts receivable"). See Note 5, Contract Balances, to the Consolidated Financial Statements for further discussion on Balance Sheet presentation. Under ASU 2014-09, the Company cannot net accounts receivable with contract liabilities ("deferred revenue") and the Company no longer offsets its accounts receivable and deferred revenue balances for unpaid items that are included in the deferred revenue balance and for which there is an enforceable right for payment. Previously, this offsetting of accounts receivable and deferred revenue balances for unpaid amounts was applied in the Company's prior period Consolidated Financial Statements.
- (vi) Deferral of incremental direct costs to obtaining a contract with a customer. Under ASU 2014-09, the Company capitalizes certain variable compensation payable to its sales force and subsequently amortizes the capitalized costs over a period of time that is consistent with the transfer of the related good or service to the customer, which the Company has determined to be three years. Previously, the Company elected to expense these incremental direct costs as incurred.

The following line items for the year ended December 31, 2017 were adjusted in the Company's previously issued Consolidated Financial Statements to reflect the full retrospective adoption of ASU 2014-09. No further adjustments for the year ended December 31, 2017 have been made in these Consolidated Financial Statements.

	Year Ended December 31, 2017							
	Effect of the							
Consolidated Statement of Operations:		. D 4 . 1		tion of ASU		A A 32		
•	A	s Reported		014-09	_	As Adjusted		
Product licenses revenue	\$	93,969	\$	(710)	\$	93,259		
Product support revenues		289,174		10		289,184		
Sales and marketing expenses		174,612		433		175,045		
Provision for income taxes		54,964		(1,685)		53,279		
Net income		17,643		552		18,195		
Diluted earnings per share		1.53		0.05		1.58		

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

_	Year Ended December 31, 2017								
	Effect of the Adoption of ASU								
Consolidated Statement of Comprehensive Income:	As Reported	2014-09		As Adjusted					
Net income \$	17,643	\$ 552	\$	18,195					
Foreign currency translation adjustment	4,805	495		5,300					
Comprehensive income	22,418	1,047		23,465					

	Year Ended December 31, 2017									
Consolidated Statement of Cash Flows:		s Reported	Effect of the Adoption of ASU 2014-09		As Adjusted					
Net income	\$	17,643	\$ 552	\$	18,195					
Adjustments to reconcile net income to net cash provided by operating activities:										
Depreciation and amortization		12,572	2,960		15,532					
Deferred taxes		(2,011)	(1,594)		(3,605)					
Changes in operating assets and liabilities:										
Prepaid expenses and other current assets		(4,279)	(460)		(4,739)					
Deposits and other assets		2,981	48		3,029					
Accrued compensation and employee benefits		(3,683)	(2,526)		(6,209)					
Deferred revenue and advance payments		(1,609)	1,020		(589)					

Intra-entity asset transfers

In October 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update No. 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory* ("ASU 2016-16"), to improve the accounting for income tax effects of intra-entity transfers of assets other than inventory. Under ASU 2016-16, the deferral of the income tax consequences of intra-entity transfers of assets other than inventory is eliminated. Entities will be required to recognize the income tax consequences of intra-entity transfers of assets other than inventory when the transfers occur. The standard requires a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption using a modified retrospective approach. The Company adopted this guidance effective as of January 1, 2018. The adoption of this guidance did not have a material impact on the Company's consolidated financial position, results of operations, or cash flows. No cumulative-effect adjustment to retained earnings was made.

Cloud computing arrangements

In August 2018, the FASB issued Accounting Standards Update No. 2018-15, Intangibles – Goodwill and Other – Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract ("ASU 2018-15"). ASU 2018-15 requires customers in a hosting arrangement that is a service contract to follow existing internal-use software guidance to determine which implementation costs to capitalize and which costs to expense. Under this model, customers would need to determine the nature of the implementation costs and the project stage in which they are incurred to determine which costs to capitalize or expense. Customers would be required to amortize the capitalized implementation costs over the term of the hosting arrangement, which might extend beyond the noncancelable period if there are options to extend or terminate.

Financial statement presentation under ASU 2018-15 requires: (i) capitalized implementation costs be classified in the same Balance Sheet line item as the amounts prepaid for the related hosting arrangement; (ii) amortization of capitalized implementation costs be presented in the same income statement line item as the service fees for the related hosting arrangement; and (iii) cash flows related to capitalized implementation costs be presented within the same category of cash flow activity as the cash flows for the related hosting arrangement (i.e. operating activity). ASU 2018-15 also requires disclosures for material capitalized implementation costs, including the nature of the hosting arrangement and additional disclosures similar to those required for major classes of depreciable assets.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Company will apply this guidance prospectively to eligible costs incurred on or after January 1, 2020 and is in the process of implementing processes and internal controls to properly identify cloud computing arrangements within the scope of ASU 2018-15, track and approve capitalizable implementation costs, and determine appropriate amortization methods and periods. The adoption of ASU 2018-15 will not result in the adjustment of any prior period Consolidated Financial Statements, nor will it result in any adjustment to the 2020 opening retained earnings balance.

Credit losses

In June 2016, the FASB issued Accounting Standards Update No. 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"), which requires the application of a current expected credit loss ("CECL") impairment model to financial assets measured at amortized cost (including trade accounts receivable), net investments in leases, and certain off-balance-sheet credit exposures. Under the CECL model, lifetime expected credit losses on such financial assets are measured and recognized at each reporting date based on historical, current, and forecasted information. Furthermore, the CECL model requires financial assets with similar risk characteristics to be analyzed on a collective (pooled) basis. ASU 2016-13 also changes the impairment accounting for available-for-sale debt securities, requiring credit losses to be recorded through an allowance for credit losses rather than as a reduction in the amortized cost basis of the securities. Impairment due to factors other than credit loss will continue to be recorded through other comprehensive income (loss).

The Company will adopt this guidance and its subsequent amendments effective January 1, 2020 using a modified retrospective approach, which requires a cumulative-effect adjustment to the 2020 opening retained earnings balance. As of December 31, 2019, the Company's material financial assets measured at amortized cost include trade accounts receivable, and the Company does not have any net investment in leases or off-balance-sheet credit exposures. All of the Company's available-for-sale debt securities are in U.S. Treasury securities with stated maturity dates between three months and one year from the purchase date and any impairments are not expected to result from credit losses. Although classified as available-for-sale, the Company does not generally intend to sell these investments prior to their maturity dates, nor is it likely the Company would be required to sell these investments prior to recovery of any impairment. The Company does not currently expect the cumulative-effect adjustment to its 2020 opening retained earnings balance to be material and does not anticipate that the adoption of this guidance will have a material impact on its consolidated financial position, results of operations, or cash flows. The Company is currently in the process of implementing improved processes and internal controls to reassess the pooling and calculation of expected credit losses of its trade accounts receivable each reporting period. The Company will also provide appropriate disclosures to satisfy the requirements set forth in ASU 2016-13 once it adopts this guidance.

Accounting for Income Taxes

In December 2019, the FASB issued Accounting Standards Update No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* ("ASU 2019-12"). ASU 2019-12 simplifies the accounting for income taxes by eliminating certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period, and the recognition of deferred tax liabilities related to outside basis differences. The standard is effective for interim and annual periods beginning January 1, 2021, with certain amendments applied prospectively and others requiring retrospective application. Early adoption is permitted, with any adjustments reflected as of the beginning of the fiscal year of adoption. If early adoption is elected, all changes as a result of the standard must be adopted in the same period. The Company is currently evaluating the impact of this guidance on its consolidated financial position, results of operations, and cash flows.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(4) Short-term Investments

The Company periodically invests a portion of its excess cash in short-term investment instruments. All of the Company's short-term investments are in U.S. Treasury securities and all short-term investments have stated maturity dates between three months and one year from the purchase date. All short-term investments are classified as available-for-sale and reported at fair value within "Short-term investments" on the accompanying Consolidated Balance Sheets. The fair value of the Company's short-term investments is determined based on quoted market prices in active markets for identical securities (Level 1 inputs).

The amortized cost and fair value of available-for-sale investments at December 31, 2019 were \$108.8 million and \$108.9 million, respectively. The amortized cost and fair value of available-for-sale investments at December 31, 2018 were \$466.6 million and \$466.2 million, respectively. The gross unrecognized holding losses accumulated in other comprehensive loss were not material as of December 31, 2019 and 2018. The gross unrecognized holding gains accumulated in other comprehensive loss were not material as of December 31, 2019 and 2018. No other-than-temporary impairments related to these available-for-sale investments have been recognized as of December 31, 2019 and 2018.

(5) Contract Balances

The Company invoices its customers in accordance with billing schedules established in each contract. The Company's rights to consideration from customers are presented separately in the Company's Consolidated Balance Sheets depending on whether those rights are conditional or unconditional.

The Company presents unconditional rights to consideration from customers within "Accounts receivable, net" in its Consolidated Balance Sheets. All of the Company's contracts are generally non-cancellable and/or non-refundable, and therefore an unconditional right generally exists when the customer is billed or amounts are billable per the contract.

Accounts receivable (in thousands) consisted of the following, as of:

	 December 31,				
	2019		2018		
Billed and billable	\$ 165,153	\$	176,848		
Less: allowance for doubtful accounts	(1,637)		(5,489)		
Accounts receivable, net	\$ 163,516	\$	171,359		

The Company maintains an allowance for doubtful accounts, which represents its best estimate of sales allowances and probable credit losses. When evaluating the adequacy of its allowance for doubtful accounts, the Company factors in the aging of receivable balances, historical experience, and current information. For the years ended December 31, 2019, 2018, and 2017, the Company's sales allowances and bad debt expense totaled \$0.1 million, \$1.9 million, and \$2.3 million, respectively.

In contrast, rights to consideration that are subject to a condition other than the passage of time are considered contract assets and presented within "Prepaid expenses and other current assets" in the Consolidated Balance Sheets since the rights to consideration are expected to become unconditional and transfer to accounts receivable within one year. Contract assets generally consist of accrued sales and usage-based royalty revenue. In these arrangements, consideration is not billed or billable until the royalty reporting is received, generally in the subsequent quarter, at which time the contract asset transfers to accounts receivable and a true-up adjustment is recorded to revenue. These true-up adjustments are generally not material. During the years ended December 31, 2019, 2018, and 2017, there were no significant impairments to the Company's contract assets, nor were there any significant changes in the timing of the Company's contract assets being reclassified to accounts receivable. Contract assets included in "Prepaid expenses and other current assets" in the Consolidated Balance Sheets consisted of \$1.2 million and \$0.8 million in accrued sales and usage-based royalty revenue as of December 31, 2019 and 2018, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Contract liabilities are amounts received or due from customers in advance of the Company transferring the software or services to the customer. Revenue is subsequently recognized in the period(s) in which control of the software or services is transferred to the customer. The Company's contract liabilities are presented as either current or non-current "Deferred revenue and advance payments" in the Consolidated Balance Sheets, depending on whether the software or services are expected to be transferred to the customer within the next year.

The Company's "Accounts receivable, net" and "Deferred revenue and advance payments" balances in the Consolidated Balance Sheets include unpaid amounts related to contracts under which the Company has an enforceable right to invoice the customer for non-cancellable and/or non-refundable software and services. Changes in accounts receivable and changes in deferred revenue and advance payments are presented net of these unpaid amounts in "Operating activities" in the Consolidated Statements of Cash Flows.

Deferred revenue and advance payments (in thousands) from customers consisted of the following, as of:

	December 31,			
		2019		2018
Current:				
Deferred product licenses revenue	\$	481	\$	1,768
Deferred subscription services revenue		16,561		13,508
Deferred product support revenue		161,670		152,501
Deferred other services revenue		8,395		8,763
Total current deferred revenue and advance				
payments	\$	187,107	\$	176,540
			_	
Non-current:				
Deferred product licenses revenue	\$	293	\$	542
Deferred subscription services revenue		97		2,384
Deferred product support revenue		3,417		3,091
Deferred other services revenue		537		452
Total non-current deferred revenue and advance				
payments	\$	4,344	\$	6,469

During the years ended December 31, 2019, 2018, and 2017, the Company recognized revenues of \$174.7 million, \$194.6 million, and \$196.7 million, respectively, from amounts included in the total deferred revenue and advance payments balances at the beginning of the respective year. For the years ended December 31, 2019, 2018, and 2017, there were no significant changes in the timing of revenue recognition on the Company's deferred balances.

As of December 31, 2019, the Company had an aggregate transaction price of \$191.5 million allocated to unsatisfied performance obligations related to product support, subscription services, other services, and, in limited cases, product licenses contracts. The Company expects to recognize \$187.1 million within the next 12 months and \$4.3 million thereafter.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(6) Property and Equipment

Property and equipment (in thousands) consisted of the following, as of:

	December 31,					
		2019		2018		
Transportation equipment	\$	48,645	\$	48,645		
Computer equipment and purchased software		58,920		56,933		
Furniture and equipment		10,464		10,709		
Leasehold improvements		31,023		29,733		
Internally developed software		9,849		9,643		
Property and equipment, gross		158,901		155,663		
Less: accumulated depreciation and amortization		(108,747)		(103,744)		
Property and equipment, net	\$	50,154	\$	51,919		

Included in transportation equipment is the Company's corporate aircraft, including capitalizable costs related to the repairs to the aircraft, and aircraft-related equipment. As of December 31, 2019, the net carrying value of the aircraft and aircraft-related equipment was \$32.6 million, net of \$16.0 million of accumulated depreciation. As of December 31, 2018, the net carrying value of the aircraft and aircraft-related equipment was \$35.2 million, net of \$13.4 million of accumulated depreciation.

Depreciation and amortization expenses related to property and equipment were \$11.7 million, \$8.3 million, and \$8.4 million for the years ended December 31, 2019, 2018, and 2017, respectively.

(7) Leases

The Company leases office space in the United States and foreign locations under operating lease agreements. Office space is the Company's only material underlying asset class under operating lease agreements. The Company has no material finance leases.

Under the Company's office space lease agreements, fixed payments and variable payments that depend on an index or rate are typically comprised of base rent and parking fees. Additionally, under these agreements the Company is generally responsible for certain variable payments that typically include certain taxes, utilities and maintenance costs, and other fees. These variable lease payments are generally based on the Company's occupation or usage percentages and are subject to adjustments by the lessor.

As of December 31, 2019, the Company's ROU asset and total lease liability balances were \$71.0 million and \$97.5 million, respectively, for leases in the United States and \$14.5 million and \$15.5 million, respectively, for foreign leases. The Company's most significant lease is for its corporate headquarters, in which it leases approximately 214,000 square feet of office space at a location in Northern Virginia. The ROU asset and total lease liability balances related to the Company's corporate headquarters lease were \$66.9 million and \$93.3 million, respectively, as of December 31, 2019. The lease agreement for the Company's corporate headquarters location is set to expire in December 2030, with an option for the Company to extend the term for an additional five or 10 consecutive years. The Company is currently not reasonably certain it will exercise this renewal option and therefore has not included the renewal option in the lease term. Several of the Company's remaining leases also contain options for renewal or options to terminate all or a portion of the leased space. The Company continually assesses the likelihood of exercising these options and recognizes an option as part of its ROU assets and lease liabilities if and when it is reasonably certain that it will exercise the option.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The following table presents the Company's total lease cost and other lease details for the year ended December 31, 2019 (in thousands, except years and discount rates):

	Year End	led December 31,
		2019
Lease cost:		
Operating lease cost	\$	15,020
Short-term lease cost		2,015
Variable lease cost		1,175
Total lease cost	\$	18,210
Other information:		
Cash paid for amounts included in the measurement of operating lease liabilities	\$	15,614
ROU assets obtained in exchange for new operating lease liabilities	\$	5,016
Weighted average remaining lease term in years – operating leases		10.0
Weighted average discount rate – operating leases		6.0%

The following table presents the maturities of the Company's operating lease liabilities as of December 31, 2019 (in thousands):

For the year ended December 31,	
2020	\$ 16,050
2021	15,722
2022	15,216
2023	15,235
2024	13,487
Thereafter	 75,872
Total lease payments	151,582
Less: imputed interest	 (38,556)
Total	\$ 113,026
Reported as:	
Current operating lease liabilities	\$ 9,602
Non-current operating lease liabilities	 103,424
Total	\$ 113,026

The following table shows future minimum payments under noncancellable operating leases and purchase agreements with initial terms of greater than one year, based on the expected due dates of the various installments as of December 31, 2018 (in thousands), as previously reported in the Company's Annual Report on Form 10-K for the year ended December 31, 2018, prior to the adoption of ASU 2016-02:

Year	Oper	ating Leases
2019	\$	27,768
2020		25,583
2021		18,573
2022		15,694 15,607
2023		15,607
Thereafter		92,347
	\$	195,572

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

As previously reported in the Company's Annual Report on Form 10-K for the year ended December 31, 2018, prior to the adoption of ASU 2016-02, total rental expenses under operating lease agreements for the years ended December 31, 2018 and 2017 were \$18.9 million and \$19.8 million, respectively.

(8) Commitments and Contingencies

(a) Commitments

From time to time, the Company enters into certain types of contracts that require it to indemnify parties against third-party claims. These contracts primarily relate to agreements under which the Company assumes indemnity obligations for intellectual property infringement, as well as other obligations from time to time depending on arrangements negotiated with customers and other third parties. The conditions of these obligations vary. Thus, the overall maximum amount of the Company's indemnification obligations cannot be reasonably estimated. Historically, the Company has not been obligated to make significant payments for these obligations and does not currently expect to incur any material obligations in the future. Accordingly, the Company has not recorded an indemnification liability on its Balance Sheets as of December 31, 2019 or December 31, 2018.

As a result of the Tax Act, the Company recorded a final tax expense of \$37.2 million related to the Transition Tax, comprised of a provisional Transition Tax obligation of \$40.3 million in 2017 and a subsequent \$(3.1) million measurement-period adjustment in 2018. As of December 31, 2019, \$28.9 million of the Transition Tax was unpaid, of which \$28.0 million is included in "Other long-term liabilities" and \$0.9 million is included in "Accounts payable, accrued expenses, and operating lease liabilities" in the Company's Consolidated Balance Sheets.

The following table shows future minimum payments under noncancellable purchase agreements with initial terms of greater than one year and anticipated payments related to the Transition Tax resulting from the Tax Act, based on the expected due dates of the various installments as of December 31, 2019 (in thousands):

Year	Purcha Obligati		Transition Tax		
2020	\$ 1	2,004	\$	896	
2021		4,969		2,952	
2022		685		2,951	
2023		671		5,534	
2024		676		7,379	
Thereafter		1,392		9,223	
	\$ 2	0,397	\$	28,935	

See Note 7, Leases, to the Consolidated Financial Statements for information regarding the Company's commitments that are related to lease agreements.

(b) Contingencies

Following an internal review initiated in 2018, the Company believes that its Brazilian subsidiary failed or likely failed to comply with local procurement regulations in conducting business with certain Brazilian government entities.

On February 6, 2020, the Company learned that a Brazilian court has authorized the Brazilian Federal Police to use certain investigative measures in its investigation into alleged corruption and procurement fraud involving certain government officials, pertaining to a particular transaction. Pursuant to this court authorization, numerous entities and individuals across Brazil, which are unaffiliated with the Company, have been subject to the freezing of assets and other measures, including a reseller and a former employee of the Company's Brazilian subsidiary. On February 6, 2020, the bank accounts of the Company's Brazilian subsidiary were also frozen up to an amount of BRL 10.0 million, or approximately \$2.3 million. The transaction at issue is part of the basis of the previously reported failure or likely failure of the Brazilian subsidiary to comply with local procurement regulations. The

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Company is not a subject of the investigation, and the Company is not aware of any allegations that the former employee or the Company made any payments to Brazilian government officials.

While the Company believes that it is probable that the resolution of these Brazilian matters will result in a loss, the amount or range of loss is not reasonably estimable at this time. Given the stage of these matters, the outcome may result in a material impact on the Company's earnings and financial results for the period in which any such liability is accrued. However, the Company believes that the outcome of these matters will not have a material effect on the Company's financial position.

The Company is also involved in various legal proceedings arising in the normal course of business. Although the outcomes of these legal proceedings are inherently difficult to predict, management does not expect the resolution of these legal proceedings to have a material adverse effect on the Company's financial position, results of operations, or cash flows.

The Company has contingent liabilities that, in management's judgment, are not probable of assertion. If such unasserted contingent liabilities were to be asserted, or become probable of assertion, the Company may be required to record significant expenses and liabilities in the period in which these liabilities are asserted or become probable of assertion.

(9) Income Taxes

U.S. and international components of income before income taxes (in thousands) were comprised of the following for the periods indicated:

	Years Ended December 31,							
		2019		2018		2018		2017
					(as	adjusted)		
U.S.	\$	9,944	\$	(18,295)	\$	18,814		
Foreign		28,319		38,777		52,660		
Total	\$	38,263	\$	20,482	\$	71,474		

The provision for (benefit from) income taxes (in thousands) consisted of the following for the periods indicated:

	 Years Ended December 31,					
	 2019	2018		2017		
				(as	adjusted)	
Current:						
Federal	\$ 1,256	\$	(1,916)	\$	48,794	
State	143		1,656		4,077	
Foreign	 5,135		6,460		4,074	
	\$ 6,534	\$	6,200	\$	56,945	
Deferred:						
Federal	\$ (749)	\$	(6,071)	\$	(1,649)	
State	(480)		(2,047)		(1,260)	
Foreign	 (1,397)		(101)		(757)	
	\$ (2,626)	\$	(8,219)	\$	(3,666)	
Total provision (benefit)	\$ 3,908	\$	(2,019)	\$	53,279	

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The provision for (benefit from) income taxes differs from the amount computed by applying the federal statutory income tax rate to the Company's income before income taxes as follows for the periods indicated:

	Years Ended December 31,			
	2019	2018	2017	
			(as adjusted)	
Income tax expense at federal statutory rate	21.0%	21.0%	35.0%	
State taxes, net of federal tax effect	(1.7)%	(1.3)%	2.5%	
Foreign earnings taxed at different rates	(6.1)%	(20.5)%	(24.2)%	
Book tax difference in amortization of intangible				
property	(4.6)%	0.0%	0.0%	
Withholding tax	3.1%	5.5%	1.9%	
Foreign tax credit	(3.0)%	(5.2)%	(1.1)%	
Other international components	0.2%	0.3%	0.0%	
Change in valuation allowance	1.6%	2.5%	0.2%	
Deferred tax adjustments and rate changes	1.0%	(1.7)%	4.0%	
Meals and entertainment	1.3%	2.6%	0.7%	
Non-deductible officers compensation	1.4%	2.1%	0.0%	
Section 199 deduction	0.0%	0.0%	(1.4)%	
Subpart F income	3.2%	7.0%	1.5%	
Research and development tax credit	(9.3)%	(11.8)%	(1.1)%	
Stock compensation	1.8%	5.8%	0.6%	
GILTI, net of foreign tax credit	0.9%	0.5%	0.0%	
FDII	(1.9)%	(4.5)%	0.0%	
Transition Tax	0.0%	(15.2)%	55.4%	
Other permanent differences	1.3%	3.0%	0.5%	
Total	10.2%	(9.9)%	74.5%	

The Company's U.S. and foreign effective tax rates for income before income taxes were as follows for the periods indicated:

	Years	Years Ended December 31,				
	2019	2019 2018				
			(as adjusted)			
U.S.	1.7%	45.8%	265.6%			
Foreign	13.2%	16.4%	6.3%			
Combined	10.2%	(9.9)%	74.5%			

The change in the Company's effective tax rate in 2019, as compared to the prior year, was primarily due to the change in the proportion of U.S. versus foreign income and the benefit from the \$3.1 million measurement-period adjustment discussed below.

The Tax Act imposed a Transition Tax on previously untaxed accumulated and current earnings and profits of certain of the Company's foreign subsidiaries. The Company recorded a final tax expense of \$37.2 million related to the Transition Tax, comprised of a provisional Transition Tax obligation of \$40.3 million in 2017 and a subsequent \$(3.1) million measurement-period adjustment in 2018. As of December 31, 2019, \$28.9 million of the Transition Tax was unpaid, of which \$28.0 million is included in "Other long-term liabilities" and \$0.9 million is included in "Accounts payable, accrued expenses, and operating lease liabilities" in the Company's Consolidated Balance Sheets.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Tax Act also reduced the U.S. corporate tax rate from 35% to 21%, effective January 1, 2018. Consequently, the Company recorded a decrease related to its U.S. deferred tax assets and liabilities, with a corresponding net deferred income tax expense of \$3.7 million for the year ended December 31, 2017 as a result of re-measuring net deferred tax assets at the new lower corporate tax rate of 21%.

Additionally, the Tax Act requires certain Global Intangible Low Income ("GILTI") earned by a controlled foreign corporation ("CFC") to be included in the gross income of the CFC's U.S. shareholder. The Company has elected the "period cost method" and treats taxes due on future U.S. inclusions in taxable income related to GILTI as a current-period expense when incurred. The Tax Act allows a U.S. corporation a deduction equal to a certain percentage of its foreign-derived intangible income ("FDII"). The Company estimated the impact of the GILTI tax and FDII deduction in determining its 2019 annual effective tax rate that is reflected in its provision for income taxes for the year ended December 31, 2019.

As of December 31, 2019 and 2018, the amount of cash and cash equivalents and short-term investments held by the Company's U.S. entities was \$289.4 million and \$173.6 million, respectively, and by the Company's non-U.S. entities was \$276.2 million and \$402.5 million, respectively. The Company earns a significant amount of its revenues outside the United States and its accumulated foreign earnings and profits as of December 31, 2019 and 2018 were \$431.2 million and \$397.4 million, respectively. As of December 31, 2019, the Company intends to indefinitely reinvest \$231.2 million of its undistributed foreign earnings. This amount takes into consideration a repatriation the Company made during 2019. After taking into account the Transition Tax, the Company estimates such repatriation generated only an immaterial U.S. tax expense related to U.S. state income taxes.

Deferred income taxes reflect the net tax effects of the temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets and liabilities (in thousands) were as follows for the periods indicated:

	December 31,			31,
		2019		2018
Deferred tax assets, net:				
Net operating loss carryforwards	\$	874	\$	841
Tax credits		2,553		1,839
Intangible assets		1,878		0
Deferred revenue adjustment		423		543
Accrued compensation		6,257		6,519
Share-based compensation expense		14,182		12,987
Deferred rent		1,330		1,764
Other		1,453		2,115
Deferred tax assets before valuation allowance		28,950		26,608
Valuation allowance		(2,130)		(1,507)
Deferred tax assets, net of valuation allowance		26,820		25,101
Deferred tax liabilities:				
Prepaid expenses and other		1,693		1,049
Property and equipment		5,092		5,841
Method change		652		932
Total deferred tax liabilities		7,437		7,822
Total net deferred tax asset	\$	19,383	\$	17,279
Reported as:				
Non-current deferred tax assets, net		19,409		17,316
Non-current deferred tax liabilities		(26)		(37)
Total net deferred tax asset	\$	19,383	\$	17,279

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

As of December 31, 2019, the Company had unrecognized income tax benefits of \$1.7 million, recorded in "Other long-term liabilities" in the Company's Consolidated Balance Sheets. The change in unrecognized income tax benefits (in thousands) is presented in the table below:

Unrecognized income tax benefits at January 1, 2019	\$ 4,059
Increase related to positions taken in prior period	26
Increase related to positions taken in current period	315
Decrease related to expiration of statute of limitations	(2,837)
Unrecognized income tax benefits at December 31,	
2019	1,563
Accrued interest	163
Unrecognized income tax benefits recorded in other	
long-term liabilities at December 31, 2019	\$ 1,726

If recognized, \$1.6 million of the gross unrecognized income tax benefits would impact the Company's effective tax rate. Over the next 12 months, the amount of the Company's liability for unrecognized income tax benefits shown above is not expected to change materially. The Company recognizes estimated accrued interest related to unrecognized income tax benefits in the provision for (benefit from) income taxes. During the years ended December 31, 2019, 2018, and 2017, the Company released or recognized an immaterial amount of accrued interest. The amount of accrued interest related to the above unrecognized income tax benefits was approximately \$0.2 million and \$0.7 million as of December 31, 2019 and 2018, respectively.

The Company files tax returns in numerous foreign countries as well as the United States and its tax returns may be subject to audit by tax authorities in all countries in which it files. Each country has its own statute of limitations for making assessment of additional tax liabilities. In 2018, the Company settled the tax examination in China for tax years 2008 to 2016 without any material audit assessments. In 2019, the Company settled the tax examination in Italy for tax years 2013 to 2015 without any material audit assessments. The Company's U.S. tax returns for tax years from 2016 and forward are subject to potential examination by the Internal Revenue Service. However, due to the Company's use of state NOL carryovers in the United States, state tax authorities may attempt to reduce or fully offset the amount of state NOL carryovers from tax years ended 2011 and forward that the Company used in later tax years. The Company's major foreign tax jurisdictions and the tax years that remain subject to potential examination are Poland for tax years 2015 and forward; Spain, Germany, and Italy for tax years 2016 and forward, and the United Kingdom for tax years 2018 and forward. To date there have been no material audit assessments related to audits in the United States or any of the applicable foreign jurisdictions.

The Company had no U.S. NOL carryforwards as of December 31, 2019 and 2018. The Company had \$4.1 million and \$3.6 million of foreign NOL carryforwards as of December 31, 2019 and 2018, respectively.

The Company's valuation allowances of \$2.1 million and \$1.5 million at December 31, 2019 and 2018, respectively, primarily relate to certain foreign tax credit carryforward tax assets that, in the Company's present estimation, more likely than not will not be realized.

In determining the Company's provision for (benefit from) income taxes, net deferred tax assets, liabilities, and valuation allowances, management is required to make estimates and judgments related to projections of domestic and foreign profitability, the timing and extent of the utilization of NOL carryforwards, applicable tax rates, transfer pricing methods, and prudent and feasible tax planning strategies. As a multinational company, the Company is required to calculate and provide for estimated income tax liabilities for each of the tax jurisdictions in which it operates. This process involves estimating current tax obligations and exposures in each jurisdiction, as well as making judgments regarding the future recoverability of deferred tax assets. Changes in the estimated level of annual pre-tax income, changes in tax laws, particularly changes related to the utilization of NOLs in various jurisdictions, and changes resulting from tax audits can all affect the overall effective income tax rate which, in turn, impacts the overall level of income tax expense or benefit and net income.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Estimates and judgments related to the Company's projections and assumptions are inherently uncertain. Therefore, actual results could differ materially from projections. Currently, the Company expects to use its deferred tax assets, subject to Internal Revenue Code limitations, within the carryforward periods. Valuation allowances have been established where the Company has concluded that it is more likely than not that such deferred tax assets are not realizable. If the Company is unable to sustain or increase profitability in future periods, it may be required to increase the valuation allowance against the deferred tax assets, which could result in a charge that would materially adversely affect net income in the period in which the charge is incurred.

(10) Share-based Compensation

The 2013 Equity Plan authorizes the issuance of various types of share-based awards to the Company's employees, officers, directors, and other eligible participants. As of December 31, 2019, a total of 2,300,000 shares of the Company's class A common stock were authorized for issuance under the 2013 Equity Plan. As of December 31, 2019, there were 360,625 shares of class A common stock reserved and available for future issuance under the 2013 Equity Plan.

Stock option awards

During 2019, stock options to purchase an aggregate of 470,000 shares of class A common stock were granted pursuant to the 2013 Equity Plan. As of December 31, 2019, there were options to purchase 1,634,358 shares of class A common stock outstanding under the 2013 Equity Plan.

Shares issued under the 2013 Equity Plan may consist in whole or in part of authorized but unissued shares or treasury shares. No awards may be issued more than 10 years after the 2013 Equity Plan's effective date. Stock options that are granted under the 2013 Equity Plan must have an exercise price equal to at least the fair market value of the Company's class A common stock on the date of grant, become exercisable as established by the Board of Directors or the Compensation Committee, and expire no later than 10 years following the date of grant. The Company recognizes share-based compensation expense associated with such stock option awards on a straight-line basis over the award's requisite service period (generally, the vesting period). The stock option awards granted to date vest in equal annual installments over an approximately four-year vesting period (unless accelerated in connection with a change in control event under specified conditions as set forth in the applicable option agreement or otherwise in accordance with provisions of the 2013 Equity Plan or applicable option agreement). The Company has made an accounting policy election to account for forfeitures of stock options as they occur and therefore share-based compensation expense has not been adjusted for any estimated forfeitures.

Share-based compensation expense is based on the fair value of the stock option awards on the date of grant, as estimated using the Black-Scholes option pricing model. The Black-Scholes option pricing model requires the input of certain management assumptions, including the expected term, expected stock price volatility, risk-free interest rate, and expected dividend yield. The Company estimates the term over which option holders are expected to hold their stock options by using the simplified method for "plain-vanilla" stock option awards because the Company's stock option exercise history does not provide a reasonable basis to compute the expected term for stock options granted under the 2013 Equity Plan. The Company relies exclusively on its historical stock price volatility to estimate the expected stock price volatility over the expected term because the Company believes future volatility is unlikely to differ from the past. In estimating the expected stock price volatility, the Company uses a simple average calculation method. The risk-free interest rate is based on U.S. Treasury securities with terms that approximate the expected term of the stock options. The expected dividend yield is based on the Company's past cash dividend history and anticipated future cash dividend payments. The expected dividend yield is zero, as the Company has not previously declared cash dividends and does not currently intend to declare cash dividends in the foreseeable future. These assumptions are based on management's best judgment, and changes to these assumptions could materially affect the fair value estimates and amount of share-based compensation expense recognized.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The following table summarizes the Company's stock option activity (in thousands, except per share data and years) for the periods indicated:

	Stock Options Outstanding					
			ghted Average	Aggregate	Weighted Average	
	Shares	E	xercise Price Per Share	Intrinsic Value	Remaining Contractual Term (Years)	
Dalamas as of January 1, 2017		Φ.		value	Term (Tears)	
Balance as of January 1, 2017	886	Э	143.89			
Granted	175		169.04			
Exercised	(12))	143.35 \$	541		
Forfeited/Expired	(57))	196.52			
Balance as of December 31, 2017	992		145.28			
Granted	710		130.27			
Exercised	(21))	121.13 \$	196		
Forfeited/Expired	(201))	154.49			
Balance as of December 31, 2018	1,480		137.16			
Granted	470		150.88			
Exercised	(51))	128.17 \$	799		
Forfeited/Expired	(265))	135.88			
Balance as of December 31, 2019	1,634	\$	141.60			
Exercisable as of December 31, 2019	847	\$	137.97 \$	12,251	5.0	
Expected to vest as of December 31, 2019	787	\$	145.50 _	3,826	9.0	
Total	1,634	\$	141.60 \$	16,077	6.9	

Stock options outstanding as of December 31, 2019 are comprised of the following range of exercise prices per share (in thousands, except per share data and years):

	Stock Options Outstanding at December 31, 2019					
		W	eighted Average	Weighted Average		
]	Exercise Price	Remaining Contractual		
Range of Exercise Prices per Share	Shares		Per Share	Term (Years)		
\$119.02 - \$140.00	951	\$	125.73	5.9		
\$140.01 - \$160.00	417	\$	152.20	9.9		
\$160.01 - \$180.00	113	\$	167.75	5.2		
\$180.01 - \$201.25	153	\$	192.11	6.5		
Total	1,634	\$	141.60	6.9		

An aggregate of 216,250, 251,250, and 215,000 stock options with an aggregate fair value of \$12.6 million, \$15.5 million, and \$13.0 million vested during the years ended December 31, 2019, 2018, and 2017, respectively.

The weighted average grant date fair value of stock option awards using the Black-Scholes option pricing model was \$54.36, \$51.68, and \$68.67 for each share subject to a stock option granted during the years ended December 31, 2019, 2018, and 2017, respectively, based on the following assumptions:

	Years Ended December 31,				
	2019	2018	2017		
Expected term of options in years	6.3	6.3	6.3		
Expected volatility	33.2% - 33.4%	33.7% - 35.5%	37.4% - 37.8%		
Risk-free interest rate	1.7% - 2.5%	2.7% - 2.9%	1.9% - 2.3%		
Expected dividend yield	0.0%	0.0%	0.0%		

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Company recognized approximately \$10.1 million, \$14.6 million, and \$14.3 million in share-based compensation expense for the years ended December 31, 2019, 2018, and 2017, respectively, from stock options granted under the 2013 Equity Plan. As of December 31, 2019, there was approximately \$36.4 million of total unrecognized share-based compensation expense related to unvested stock options. As of December 31, 2019, the Company expects to recognize this remaining share-based compensation expense over a weighted average vesting period of approximately 3.2 years.

Other stock-based awards

During 2018, the Company granted certain awards characterized as "other stock-based awards" under the 2013 Equity Plan. These other stock-based awards are similar to stock options, except these awards are settled in cash only and not in shares of the Company's class A common stock. These awards are classified as liabilities in the Company's Consolidated Balance Sheets due to the required cash settlement feature and the fair value of the awards is remeasured each quarterly reporting period. Other stock-based awards were not granted in 2019.

For the years ended December 31, 2019 and 2018, the Company did not recognize a material amount in share-based compensation expense from other stock-based awards. As of December 31, 2019, there was approximately \$0.3 million of total unrecognized share-based compensation expense related to other stock-based awards. The Company expects to recognize this remaining share-based compensation expense over a weighted average vesting period of approximately 2.4 years, subject to additional fair value adjustments through the earlier of settlement or expiration.

(11) Basic and Diluted Earnings per Share

Potential shares of common stock are included in the diluted earnings per share calculation when dilutive. Potential shares of common stock, consisting of common stock issuable upon exercise of outstanding stock options, are calculated using the treasury stock method.

The following table sets forth the computation of basic and diluted earnings per share (in thousands, except per share data) for the periods indicated:

	Years Ended December 31,					
	2019		2018			2017
					(as	adjusted)
Numerator:						
Net income	\$	34,355	\$	22,501	\$	18,195
			-			
Denominator:						
Weighted average common shares of class A common stock		8,221		9,340		9,409
Weighted average common shares of class B common stock		2,035		2,035		2,035
Total weighted average common stock shares outstanding		10,256		11,375		11,444
Effect of dilutive securities:						
Employee stock options		72		37		103
Adjusted weighted average shares		10,328		11,412		11,547
Earnings per share:						
Basic earnings per share	\$	3.35	\$	1.98	\$	1.59
Diluted earnings per share	\$	3.33	\$	1.97	\$	1.58

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2019, 2018, and 2017, stock options issued under the 2013 Equity Plan to purchase a weighted average of approximately 933,000, 896,000, and 398,000 shares of class A common stock, respectively, were excluded from the diluted earnings per share calculation because their impact would have been anti-dilutive.

(12) Treasury Stock

The Board of Directors has authorized the Company's repurchase of up to an aggregate of \$800.0 million of its class A common stock from time to time on the open market through April 29, 2023 under the Share Repurchase Program, although the program may be suspended or discontinued by the Company at any time. The timing and amount of any shares repurchased will be determined by the Company's management based on its evaluation of market conditions and other factors. The Share Repurchase Program may be funded using the Company's working capital, as well as proceeds from any other funding arrangements that the Company may enter into in the future. During 2019, the Company repurchased an aggregate of 521,843 shares of its class A common stock at an average price per share of \$139.35 and an aggregate cost of \$72.7 million pursuant to the Share Repurchase Program. During 2018, the Company repurchased an aggregate of 880,667 shares of its class A common stock at an average price per share of \$126.02 and an aggregate cost of \$111.0 million pursuant to the Share Repurchase Program. During 2017, the Company did not repurchase any shares of its class A common stock pursuant to the Share Repurchase Program. As of December 31, 2019, the Company had repurchased an aggregate of 5,229,457 shares of its class A common stock at an average price per share of \$101.16 and an aggregate cost of \$529.0 million pursuant to the Share Repurchase Program. As of December 31, 2019, \$271.0 million of the Company's class A common stock remained available for repurchase pursuant to the Share Repurchase Program. The average price per share and aggregate cost amounts disclosed above include broker commissions. As of February 13, 2020, the Company's repurchase of shares in the first quarter of 2020 did not have a material impact on the Company's outstanding shares of its class A common stock.

(13) Employee Benefit Plan

The Company sponsors a benefit plan to provide retirement benefits for its employees, known as the MicroStrategy 401(k) Savings Plan (the "401(k) Plan"). Participants may make voluntary contributions to the 401(k) Plan of up to 50% of their annual base pre-tax compensation, cash bonuses, and commissions not to exceed the federally determined maximum allowable contribution amounts. Participants may designate all or a portion of the 401(k) Plan elective deferral contributions as Roth elective deferral contributions instead of pre-tax elective deferral contributions. The 401(k) Plan permits for discretionary Company contributions.

The Company currently makes a matching contribution to each 401(k) Plan participant in the amount of 50% of the first 12% of a participant's contributions, up to a maximum of \$5,000 per year. Further, all active participants become fully vested in the Company's matching contributions after completing four years of employment, vesting in increments based on the participant's years of employment with the Company. Prior to 2019, the Company made matching contributions in the amount of 50% of the first 6% of a participant's contributions, up to a maximum of \$3,000 per year, and participants became fully vested in the Company's matching contributions after completing six years of employment, vesting in increments based on the participant's years of employment with the Company.

The Company made contributions to the 401(k) Plan totaling \$4.1 million, \$2.4 million, and \$2.1 million during the years ended December 31, 2019, 2018, and 2017, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(14) Segment Information

The Company manages its business in one reportable operating segment. The Company's one reportable operating segment is engaged in the design, development, marketing, and sales of its software platform through licensing arrangements and cloud subscriptions and related services. The following table presents total revenues, gross profit, and long-lived assets, excluding long-term deferred tax assets, (in thousands) according to geographic region:

Geographic regions:	Domestic	EMEA	Other Regions	Consolidated
Year ended December 31, 2019				
Total revenues	\$ 273,581	\$ 159,643	\$ 53,103	\$ 486,327
Gross profit	\$ 216,365	\$ 126,939	\$ 43,049	\$ 386,353
Year ended December 31, 2018				
Total revenues	\$ 287,258	\$ 156,706	\$ 53,674	\$ 497,638
Gross profit	\$ 228,310	\$ 126,315	\$ 43,514	\$ 398,139
Year ended December 31, 2017 (as adjusted)				
Total revenues	\$ 293,251	\$ 154,716	\$ 55,876	\$ 503,843
Gross profit	\$ 234,266	\$ 126,296	\$ 46,632	\$ 407,194
As of December 31, 2019				
Long-lived assets	\$ 118,168	\$ 13,636	\$ 11,912	\$ 143,716
As of December 31, 2018				
Long-lived assets	\$ 49,611	\$ 5,931	\$ 4,511	\$ 60,053

The domestic region consists of the United States and Canada. The EMEA region includes operations in Europe, the Middle East, and Africa. The other regions include all other foreign countries, generally comprising Latin America and the Asia Pacific region. For the years ended December 31, 2019, 2018, and 2017, no individual foreign country accounted for 10% or more of total consolidated revenues.

For the years ended December 31, 2019, 2018, and 2017, no individual customer accounted for 10% or more of total consolidated revenues.

As of December 31, 2019 and 2018, no individual foreign country accounted for 10% or more of total consolidated assets.

(15) Sale of Domain Name

On May 30, 2019, the Company completed the sale of its Voice.com domain name for consideration of \$30.0 million in cash (the "Domain Name Sale"). As of the date of the Domain Name Sale, the Company had no unamortized costs associated with the Voice.com domain name asset. The Company did not incur any material costs related to the Domain Name Sale. The Domain Name Sale resulted in a gain of \$29.8 million in the second quarter of 2019, which was recorded as "Other income, net" for such quarter in the Consolidated Statements of Operations. The Company also recorded a discrete \$8.1 million tax provision in the second quarter of 2019 related to the Domain Name Sale.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(16) Selected Quarterly Financial Data (Unaudited)

Gross profit

Net income

Basic

Diluted

Earnings per share:(1)

The following tables contain unaudited Statement of Operations information for each quarter of 2019 and 2018. During the second quarter of 2019, the Company recorded a gain of \$29.8 million and an associated discrete tax provision of \$8.1 million related to the Domain Name Sale. In the third quarter of 2018, the Company estimated and recorded a measurement-period adjustment to reduce the Transition Tax by \$3.1 million.

		Quarter Ended				
	March 31	June 30	September 30	December 31	Year	
		(in thous	ands, except per	share data)		
<u>2019</u>						
Revenues	\$ 115,366	\$ 117,737	\$ 119,693	\$ 133,531	\$ 486,327	
Gross profit	\$ 89,193	\$ 92,387	\$ 95,878	\$ 108,895	\$ 386,353	
Net income (loss)	\$ (7,906)	\$ 20,394	\$ 9,700	\$ 12,167	\$ 34,355	
Earnings (loss) per share:(1)						
Basic	\$ (0.77)	\$ 1.99	\$ 0.95	\$ 1.19	\$ 3.35	
Diluted	\$ (0.77)	\$ 1.98	\$ 0.94	\$ 1.18	\$ 3.33	
	Quarter Ended					
	March 31	June 30	September 30	December 31	Year	
		(in thousands, except per share data)				
<u>2018</u>						
Revenues	\$ 122,967	\$ 120,602	\$ 122,152	\$ 131,917	\$ 497,638	

\$

\$

\$

97,782 \$

1,673 \$

0.15 \$

0.15 \$

95,562 \$

4,828 \$

0.42 \$

0.42 \$

98,763 \$ 106,032 \$ 398,139

0.30 \$

0.30 \$

3,301 \$ 22,501

1.98

1.97

12,699 \$

1.11 \$

1.10 \$

⁽¹⁾ The sum of the basic and diluted earnings (loss) per share for the four quarters may differ from annual earnings per share as the weighted average shares outstanding are computed independently for each of the quarters presented.

INDEX TO EXHIBITS

Exhibit <u>Number</u>	<u>Description</u>
3.1	Second Restated Certificate of Incorporation of the registrant (incorporated herein by reference to Exhibit 3.1 to the registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2003 (File No. 000-24435)).
3.2	Amended and Restated By-Laws of the registrant (incorporated herein by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K filed with the SEC on January 30, 2015 (File No. 000-24435)).
4.1	Form of Certificate of Class A Common Stock of the registrant (incorporated herein by reference to Exhibit 4.1 to the registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2003 (File No. 000-24435)).
4.2	Description of the registrant's registered securities.
10.1†	MicroStrategy Incorporated 2013 Stock Incentive Plan (incorporated herein by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed with the SEC on September 9, 2013 (File No. 000-24435)).
10.2†	Amendment No. 1 to the MicroStrategy Incorporated 2013 Stock Incentive Plan (incorporated herein by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed with the SEC on April 28, 2014 (File No. 000-24435)).
10.3†	Amendment No. 2 to the MicroStrategy Incorporated 2013 Stock Incentive Plan (incorporated herein by reference to Exhibit 99.3 to the registrant's Registration Statement on Form S-8 filed with the SEC on July 25, 2014 (File No. 333-197645)).
10.4†	Amendment No. 3 to the MicroStrategy Incorporated 2013 Stock Incentive Plan (incorporated herein by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed with the SEC on October 26, 2015 (File No. 000-24435)).
10.5†	Amendment No. 4 to the MicroStrategy Incorporated 2013 Stock Incentive Plan (incorporated herein by reference to Exhibit 10.4 to the registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2018 (File No. 000-24435)).
10.6†	2013 Form of Nonstatutory Stock Option Agreement (incorporated herein by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K filed with the SEC on September 9, 2013 (File No. 000-24435)).
10.7†	2016 Form of Nonstatutory Stock Option Agreement (incorporated herein by reference to Exhibit 10.1 to the registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2016 (File No. 000-24435)).
10.8†	Summary of Perquisites and Associated Other Compensation Arrangements for Named Executive Officers (incorporated herein by reference to Exhibit 10.6 to the registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2015 (File No. 000-24435)).
10.9†	Summary of Director Fees and Perquisites and Associated Other Compensation Arrangements for Non-Employee Directors (incorporated herein by reference to Exhibit 10.2 to the registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2014 (File No. 000-24435)).
10.10†	Sublease Agreement, dated as of January 31, 2011, by and between the Company and Aeromar Management Company, LLC (incorporated herein by reference to Exhibit 10.14 to the registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 (File No. 000-24435)).
10.11†	Summary of Designated Company Vehicles Policy (incorporated herein by reference to Exhibit 10.1 to the registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2007 (File No. 000-24435)).

- 10.12† Amended and Restated Performance Incentive Plan (incorporated herein by reference to Exhibit 99.1 to the registrant's Current Report on Form 8-K filed with the SEC on December 28, 2012 (File No. 000-24435)).
- 10.13† Summary of Salary Determinations for Certain Executive Officers (incorporated herein by reference to the registrant's Current Report on Form 8-K filed with the SEC on March 22, 2019 (File No. 000-24435)).
- 10.14† 2019 Senior Executive Vice President, Worldwide Sales Compensation Plan (incorporated herein by reference to Exhibit 99.1 to the registrant's Current Report on Form 8-K filed with the SEC on March 22, 2019 (File No. 000-24435)).
- 10.15[†] 2019 Senior Executive Vice President, Worldwide Services Compensation Plan (incorporated herein by reference to Exhibit 99.2 to the registrant's Current Report on Form 8-K filed with the SEC on March 22, 2019 (File No. 000-24435)).
- 10.16† Summary of Compensation for Senior Executive Vice President & Chief Financial Officer (incorporated herein by reference to the registrant's Current Report on Form 8-K filed with the SEC on October 29, 2019 (File No. 000-24435)).
- 10.17† Agreement, dated as of November 25, 2019, by and between the registrant and Margaret Breya.
- 21.1 Subsidiaries of the registrant.
- 23.1 Consent of KPMG LLP.
- 31.1 Certification pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Chairman of the Board of Directors, President & Chief Executive Officer.
- 31.2 Certification pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Senior Executive Vice President & Chief Financial Officer.
- 32.1 Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- 101.INS Inline XBRL Instance Document. The instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
- 101.SCH Inline XBRL Taxonomy Extension Schema.
- 101.CAL Inline XBRL Taxonomy Extension Calculation Linkbase.
- 101.DEF Inline XBRL Taxonomy Extension Definition Linkbase.
- 101.LAB Inline XBRL Taxonomy Extension Label Linkbase.
- 101.PRE Inline XBRL Taxonomy Extension Presentation Linkbase.
- 104 Cover Page Interactive Data File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibits 101).

[†] Management contracts and compensatory plans or arrangements.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

MICROSTRATEGY INCORPORATED

(Registrant)

By: /s/ Michael J. Saylor

Name: Michael J. Saylor

e: Chairman of the Board of Directors, President & Chief Executive Officer

Date: February 13, 2020

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

<u>Name</u>	<u>Position</u>	<u>Date</u>
/S/ MICHAEL J. SAYLOR Michael J. Saylor	Chairman of the Board of Directors, President & Chief Executive Officer (Principal Executive Officer)	February 13, 2020
/S/ LISA MAYR Lisa Mayr	Senior Executive Vice President & Chief Financial Officer (Principal Financial and Accounting Officer)	February 13, 2020
/S/ STEPHEN X. GRAHAM Stephen X. Graham	Director	February 13, 2020
/S/ JARROD M. PATTEN Jarrod M. Patten	Director	February 13, 2020
/s/ LESLIE RECHAN Leslie Rechan	Director	February 13, 2020
/s/ CARL J. RICKERTSEN Carl J. Rickertsen	Director	February 13, 2020

SCHEDULE II VALUATION AND QUALIFYING ACCOUNTS For the years ended December 31, 2019, 2018, and 2017 (in thousands)

Aller and Contact Local Local Contact Local	Balance at the beginning of the period		Additions (1)	Deductions	Balance at the end of the period	
Allowance for doubtful accounts:						
December 31, 2019	\$	5,489	124	(3,976)	\$	1,637
December 31, 2018	\$	4,190	1,912	(613)	\$	5,489
December 31, 2017	\$	3,181	2,269	(1,260)	\$	4,190
Deferred tax valuation allowance:						
December 31, 2019	\$	1,507	633	(10)	\$	2,130
December 31, 2018	\$	1,015	492	0	\$	1,507
December 31, 2017	\$	832	183	0	\$	1,015

⁽¹⁾ Reductions in/charges to revenues and expenses.

