WHERE DATA AND DISCOVERY CONVERGE.

Annual Report 2017

Dr. Ralf Schneider of the High Performance Computing Center Stuttgart is improving bone fracture treatment and shortening recovery time.

University of Basel researcher Dr. Annette Milnik is searching the foundations of memory to find better treatments for memory-related diseases.

Dr. Brian Mitchell and his team develop the CFD software GE uses to design quieter, more durable and more efficient jet engines.

Teams from Carnegie Clean Energy and the University of Western Australia are working to power the globe by capturing and converting ocean wave energy.

Fellow Shareholders,

Cray customers truly do change the world. Every year it's an honor to partner with these visionaries and witness how they combine computation and creativity to produce transformative work. You'll find a few examples of these amazing scientific and engineering endeavors, and the researchers behind them, on this report's inside front cover. The discoveries represented range from treating bone fractures to capturing energy from ocean waves to designing jet engines to finding cures for memory-related diseases. What binds these diverse fields together is the scope of their questions. They're continually asking "what if" because with Cray systems their problem-solving potential is expanded. We're proud to help our customers keep asking the next, bigger question. In turn, their vision pushes us to keep asking bigger questions of ourselves as we work to support our customers' need for high-performance technologies.

As we reflect on 2017, our story for the year has two distinct narratives. The first is about continued difficult conditions in our core market. This drove weaker revenue for the year and produced correspondingly disappointing financial results — something we are working hard to improve upon in the coming years. We began seeing signs of a slow-down in the high-end of supercomputing in 2016 as new sales opportunities slowed compared to the previous years. That slow-down continued into 2017, impacting each of our product groups as well as most of our target geographies. But our story is primed for a rebound. While this market downturn has been longer and more pronounced than we've seen in previous cycles, the long-term demand drivers for our technology and solutions remain intact, our business is well positioned for growth, and we believe the market will rally over the next couple of years.

Our competitive position in the market remains strong, as evidenced by a few statistics. We hold over a quarter of the top end of the Top500 list, an industry list of most of the fastest systems in the world, with 29 systems in the top 100. Our leadership in the worldwide weather forecasting and climate research market continues to expand — more than 75 percent of the world's global modeling centers now run on Cray systems. More than 12 percent of our revenue in 2017 came from commercial customers, representing a significant increase over 2016 on a percentage basis. We also completed several large installations throughout the year and won significant awards across all our product lines and geographies.

The second narrative is about growth and the opportunity to drive higher revenue in the coming years. We are beginning to see a pickup of market activity, a welcome sign after the last couple of years. Customer plans are beginning to firm, funding is coming together, and new opportunities are moving through their acquisition processes. For Cray, our differentiated technology leads our efforts to respond here, empowering innovative products and services for each of our target markets, and we remain focused on growing faster than the market rate in each of them.

Over the course of the year, we also continued to expand in our three strategic growth areas — big data analytics, high-performance storage, and artificial intelligence (AI). In fact, some of our most exciting wins in 2017 were in these areas. For example, Samsung's Strategy and Innovation Center chose our CS-Storm for use in its AI research, the Alan Turing Institute, the UK's national institute for data science, selected the Urika-GX for its analytics work, and in storage our list of U.S. and international government customers continues to grow.

One of our most significant achievements of 2017 was the strategic partnership we formed with Seagate, where we brought on Seagate's ClusterStor storage business and combined it with our own efforts. We completed the transaction in the third quarter and have made excellent progress on the integration. Given the phenomenal growth of data, storage is becoming more important in our market and the addition of the ClusterStor product line means we can offer a more complete line of storage solutions to our customers.

Turning to our other products, leadership at the high-end of the market continues to drive us. What's evolving is how our customers are using supercomputing. Whereas several years ago their focus may have been entirely on solving the largest scientific problems as quickly as possible, the kinds of questions our customers are now asking are getting broader. Along with simulation and modeling, they're now weaving in big data, machine learning, and deep learning algorithms. These questions are all converging into common problems and workflows that need an integrated platform and our products and roadmap are well positioned to respond to these growing demands.

For the supercomputing market, the Cray XC line of supercomputers and the Cray CS line of highly flexible clusters continue to lead the market for performance, efficiency, and scalability. What makes them so effective at traditional workloads — the combination of diverse processing technologies, fast system interconnects, and Cray software expertise in a unified

architecture — is also what makes them able to handle the new demands of these converged workloads. Our contract wins this year provide ample evidence. The GW4 Alliance and the UK Met Office selected us to deliver a system for the unique purpose of evaluating multiple advanced architectures and comparing different CPUs and GPUs against different applications. We delivered both XC and CS systems to New Zealand's National Institute of Water and Atmospheric Research for a broad range of uses — weather and climate research, numerical weather prediction, data analytics, and general scientific research.

As we discuss converging workloads, AI warrants its own focus. It already commands a great deal of media attention and we believe its importance will continue to grow. In 2017, we launched the Cray Urika-XC analytics software suite which brings graph analytics, deep learning, and big data analytics tools to the XC series of supercomputers. What that means is users have the critical ability to run analytics and AI workloads alongside scientific modeling and simulations — and it points again to the convergence of HPC and data-intensive workloads. In response to the growth in AI, we also launched our Cray Accel AI fast start solutions. These are configurations of our Cray CS-Storm supercomputer coupled with software specifically meant to jumpstart our customer's efforts to scale up machine and deep learning. Several notable wins in 2017 underscore that customers have confidence in our technology leadership. For example, leading energy, manufacturing, and financial services companies chose CS-Storm systems for their deep learning work as did multiple government customers.

We are also expanding our go-to-market strategies as we explore new ways to deliver the value of a Cray supercomputer and drive growth. Several partnerships we formed in 2017 highlight these efforts. Partnerships with cloud computing providers Microsoft Azure and Markley are improving customer access to Cray technology. Through Microsoft, customers can access dedicated, customized, and fully managed Cray systems in an Azure datacenter. This is a unique offering in the public cloud today. With Markley, our supercomputing technologies are also available as a hosted offering. Additional efforts include agreements with solution providers, such as Mark III Systems, to deliver solutions that leverage our product portfolio, and a partnership with big data company Phizzle on a data aggregation solution.

Turning to corporate transitions, we were pleased to welcome Catriona Fallon to our board of directors. She brings many years of technology industry leadership experience to Cray, having held executive-level positions with companies such as Itron, Silver Springs Networks, Cognizant, HP, and Marin Software. Ms. Fallon replaces Marty Homlish who stepped down due to the growing demands for his time from his new company.

As we turn to 2018 and beyond, our focus remains the same — to win new business and expand our presence in the big data and commercial markets. The high-end supercomputing market looks to be on track to begin to rebound in 2018, and there are long-term, large, exascale-level opportunities in the coming years. Our supercomputing expertise, our focus on how workloads are changing and converging, the highly-differentiated solutions we've developed, the expanded delivery methods we're establishing for our technologies, and the R&D investment we continue to make in developing highly adaptable and scalable solutions puts us in an excellent position to capitalize on the coming growth opportunities.

On behalf of our board of directors and management, I would like to thank all of our customers, partners, employees, and shareholders for your continued support of Cray.

Sincerely,

Peter J. Ungaro
President and Chief Executive Officer

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

For the Fiscal Year Ended December 31, 2017

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

For the Transition Period From _________ to _________.
Commission File Number: 000-26820

CRAY INC.

(Exact Name of Registrant as Specified in Its Charter)

Washington	**93-0962605**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**
901 Fifth Avenue, Suite 1000 Seattle, Washington	**98164**
(Address of Principal Executive Offices)	**(Zip Code)**

Registrant's telephone number, including area code:
(206) 701-2000

Securities Registered Pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $.01 par value	**Nasdaq Stock Market LLC**

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

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

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐ (Do not check if a smaller reporting company)	Smaller reporting company	☐
		Emerging growth company	☐

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

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

The aggregate market value of the Common Stock held by non-affiliates of the registrant as of June 30, 2017, was approximately $730,642,233 based upon the closing price of $18.40 per share as reported on June 30, 2017, on The Nasdaq Global Market.

As of February 13, 2018, there were 40,475,586 shares of Common Stock issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement to be delivered to shareholders in connection with the registrant's Annual Meeting of Shareholders to be held on or around June 12, 2018, are incorporated by reference into Part III.

CRAY INC.

FORM 10-K

For Fiscal Year Ended December 31, 2017

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Forward-Looking Statements

This annual report on Form 10-K contains forward-looking statements that involve risks and uncertainties, as well as assumptions that, if they never materialize or if they prove incorrect, could cause our actual results to differ materially from those expressed or implied by such forward-looking statements. Forward-looking statements are based on our management's beliefs and assumptions and on information currently available to them. In some cases you can identify forward-looking statements by terms such as "may," "will," "should," "could," "would," "expect," "plans," "anticipates," "believes," "continue," "estimates," "projects," "predicts" and "potential" and similar expressions, but the absence of these words does not mean that a statement is not forward-looking. All statements other than statements of historical fact are statements that could be deemed forward-looking statements, and examples of forward-looking statements include any projections of earnings, revenue or other results of operations or financial results; any statements of the plans, strategies, objectives and beliefs of our management; any statements concerning proposed new products, technologies or services; any statements regarding potential new markets or applications for our products; any statements regarding the effects of the acquisition of Seagate's ClusterStor line of business; any statements regarding technological developments or trends; any statements regarding future research and development or co-funding for such efforts; any statements regarding future expansions of our facilities and offices; any statements regarding future market and economic conditions; any statements regarding the expected vesting of our performance-based equity awards; and any statements of assumptions underlying any of the foregoing. These forward-looking statements are subject to the safe harbor created by Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act). Our actual results could differ materially from those anticipated in these forward-looking statements for many reasons, including the risks faced by us and described in Item 1A. Risk Factors in Part II and other sections of this report and our other filings with the U.S. Securities and Exchange Commission (SEC). You should not place undue reliance on these forward-looking statements, which apply only as of the date of this report. You should read this report completely and with the understanding that our actual future results may be materially different from what we expect. We assume no obligation to update these forward-looking statements, whether as a result of new information, future events, or otherwise, except as otherwise required by law.

PART I

Item 1. *Business*

General

For over 40 years we have been developing highly advanced computing solutions for the world's most complex science, engineering and analytics challenges. Ever since we introduced the first Cray supercomputer in 1976, our technologies have helped solve today's problems and made tomorrow's questions possible. We exist to provide the right tools to the world's visionaries to help them solve questions they need answered.

We focus on designing, developing, manufacturing, marketing and servicing computing products that magnify and enhance human capital, foster innovation and create competitive advantages. That means our products are aimed primarily at the high-end of the high performance computing (HPC) and data analytics and artificial intelligence (AI) markets - the segments populated by the pioneers, executives and entrepreneurs leading their industries in both the public and private sectors. These products include compute systems commonly known as supercomputers, as well as storage, data analytics and AI solutions. We offer them individually, integrated into a complete solution or hosted in the cloud, depending on a customer's need. We also provide related software and system maintenance, support, and engineering services.

We provide solutions based on four main models: (1) tightly integrated supercomputing designed throughout for scalability and sustained performance; (2) customizable cluster supercomputing based on highest-performance industry-standard components; (3) robust high-performance storage solutions; and (4) integrated solutions for graph analysis, large-scale analytics and AI applications.

Close customer partnerships are fundamental to our business. The questions driving our customers' work inform our product direction and, in turn, our products combined with our customer engagement enable users to ask the next, more complex questions. To ensure customer success, we also provide customized service from installation to 24x7 onsite support. Our customers include domestic and foreign government and government-funded entities, academic institutions and commercial companies.

Our continuing strategy is to gain market share by extending our technology leadership and differentiation and expanding our share and addressable market in areas where we can leverage our experience and technology, such as in AI applications and data analytics. Underpinning this strategy is our focus on understanding our customers' needs and building products that continually extend their capabilities.

Overview

Huge growth in data volumes and data complexity, the development of advanced algorithmic techniques, and increased time-to-value expectations are driving the need for supercomputing-class architectures. We believe that our experience building some of the largest supercomputers in the world has positioned us to address the data analytics and emerging AI markets with products that apply supercomputing technologies to solve the most challenging use cases at scale.

Our supercomputing products span a broad performance spectrum and address the critical computing resource challenges HPC users face today: achieving massive scaling to tens of thousands of processors; ease of use for increased productivity; and very high levels of sustained performance on real applications. We achieve this by partnering with users to understand what is limiting them and then designing and integrating supercomputers that help clear those obstacles. Our systems combine highly capable processors, high-speed interconnect technology, and innovative packaging to address increased thermal requirements driven by density and processor power requirements, upgradability, energy efficiency and system reliability. In addition, our robust, HPC-optimized software environment enhances performance, productivity and manageability at supercomputing scale.

Our storage and data management products include integrated data storage solutions designed to support systems requiring the highest performance requirements needed for supercomputing and data-intensive workloads. These solutions leverage years of experience delivering high-performance parallel storage and file systems to leading-edge customers. With our storage solutions, users can also rapidly deploy highly scalable and extremely fast file systems that integrate with supercomputer and cluster computing solutions from both Cray and third-party HPC vendors.

Products, Services and Customer Support

We concentrate on building product solutions in two major markets: the supercomputing portion of the HPC market and big data, including storage and AI solutions. We also provide related software and system maintenance, support, and engineering services that leverage our intimate understanding of our customers and their requirements.

Cray Supercomputing Systems

Our "Adaptive Supercomputing" vision has expanded the concept of heterogeneous computing to a fully integrated view of hardware and software supporting multiple processing technologies and diverse workloads.

This approach means our supercomputers integrate diverse technologies into a unified architecture enabling customers to match the computational solution to their desired outcome. Our Cray XC series supercomputers, including the Cray XC40 and Cray XC50 supercomputers, provide significantly higher sustained performance on challenging applications that require the highest levels of scaling, with substantial performance improvements over competing solutions. Our Cray CS series of cluster supercomputer solutions, including the Cray CS500 and Cray CS-Storm systems, emphasize flexibility, capacity, custom design and integration for compute-intensive customer needs.

Our supercomputer systems offer a variety of benefits, including:

- superior price-performance compared to other supercomputer systems, cluster computing solutions, and traditional cloud computing solutions;
- productivity, quality, reliability and resiliency at the highest scale;
- scalability to the world's fastest supercomputers for HPC, analytics and AI workloads leveraging the innovative Aries network;
- support for open standards: Linux-based operating systems, containers, open file systems (*e.g*., Lustre), open programming models (*e.g.*, MPI, PGAS, shared memory, OpenMP and OpenACC), popular programming languages such as Python, Scala and R, traditional HPC languages such as Fortran, C and C++, new languages such as Chapel, big data environments (Apache Spark and distributed Dask) and machine learning frameworks (TensorFlow and BigDL);
- flexible and customizable upgrade paths that enable customers to leverage their investments over longer periods of time and thereby reduce total costs of ownership;
- integrated operating system software and Cray programming environment, including energy-aware features;
- excellent energy efficiency optimized for minimum energy consumed to solution;
- flexibility of processor type, memory, network configuration, storage configuration and system software tools; and
- the Cray service experience, which brings with it a proven research and development team and a global sales and service organization dedicated to the needs of HPC users.

We expect the continued advancement of many-core and accelerator processors, the increasing diversity of processor architectures, as well as changing memory and storage hierarchy to be advantageous trends for Cray as they complement our technical strengths in networking, scaling, system software and cooling and power management technologies. The growing number of cores on each processor continues to amplify the scaling issues that customers face today, and accelerators or coprocessors will further stress the system's communications network. We believe our balanced approach to system design and support for innovative parallel programming methodologies will become increasingly critical in enabling customers to take advantage of the benefits of many-core processing.

Cray XC Series Supercomputer. The Cray XC series supercomputer is our highly integrated supercomputing system. It provides extreme scale, sustained performance, and heterogeneous computational resources through the combination of processor options, including Intel Xeon Scalable processors and the Cavium ThunderX2 Arm processor, the Aries interconnect and its flexible and unique Dragonfly network topology, our robust and fully-integrated software environment and innovative power and

cooling technologies. In addition, the XC series includes Intel Xeon Phi processors and NVIDIA Tesla graphics processor units (GPU).

The Cray XC series supercomputer utilizes the Cray Linux Environment, a suite of high-performance software which has been enhanced and hardened over more than a decade on our supercomputing systems. Customers may buy a single Cray XC series supercomputer to run both a highly scalable custom workload as well as an industry-standard, independent software vendor workload. The XC series system also includes our powerful compiler, runtime and related software which leverages the underlying hardware components. Users have access to a variety of carefully optimized applications on the XC series system, including Fortran and C++ applications, applications written in languages like Python, Scala as well as Cray's Chapel parallel programming language designed to make parallel programming more productive and more generally accessible. Applications can run natively in the Cray Linux Environment or can leverage container technologies familiar to cloud and enterprise application developers. Additionally, XC customers can run analytics and AI workloads alongside modeling and simulation workloads, using Urika-XC, familiar system tools and schedulers.

The Cray XC50 supercomputer supports the newest generation of CPU and GPU processors - Intel Xeon Scalable processors, Cavium ThunderX2 processors, NVIDIA Tesla P100 PCIe GPUs and Intel Xeon Phi - coupled with the Aries network and Cray's HPC-optimized software stack including the Cray Linux Environment and Cray Programing Environment, to deliver our fastest system with peak system performance of 500 petaflops (PF) and 1 PF in a single cabinet.

The Cray XC50-AC air-cooled supercomputer, supporting NVIDIA Tesla P100 PCIe GPUs, Intel Xeon Scalable processors and Arm-based ThunderX2 processors, currently is capable of delivering up to 236 teraflops peak performance in a 24" cabinet with no requirement for liquid cooling or extra blower cabinets. Ideal for dedicated test, development, AI and analytics use cases, the air-cooled XC50 system offers all of the benefits of our XC50 supercomputer in a smaller form factor.

The Cray XC40 system is designed for production supercomputing and user productivity. It offers the combined advantages of the Aries interconnect and Dragonfly network topology, Intel Xeon multi-core and Intel Xeon Phi many-core processors, bringing more than 125 PF of peak system performance.

Cray CS500 Cluster Supercomputer. The Cray CS500 cluster supercomputing system is a modular, highly scalable, high availability platform designed for a broad range of workloads. It offers an energy-efficient, air-cooled architecture and comes integrated with a comprehensive and easy to manage HPC software stack, software tools compatible with most open source and commercial compilers, tools, schedulers and libraries. This solution supports both Cray and third-party systems management software solutions.

Cray CS-Storm Accelerated GPU Supercomputer. The CS-Storm supercomputer is a purpose-built solution employing NVIDIA Volta or NVIDIA Pascal GPUs in a high-density architecture to deliver industry-leading performance, density and energy efficiency for HPC and AI applications. The Cray CS-Storm 500NX system combines an innovative architecture design that supports up to eight GPUs connected by the NVIDIA NVLink high-speed network. The Cray CS-Storm 500GT provides configurations that can maximize network bandwidth with up to four network links per node with up to 10 GPU or FPGA cards per node all running at full power. These configurations are all provided with the same HPC software environment available on the Cray CS500 cluster system. Additionally, an available analytics and AI software environment, including popular machine and deep learning frameworks (e.g. TensorFlow, MXNet, Torch, Microsoft Cognitive Toolkit, Caffe, Caffe2 and others) makes the Cray CS-Storm ideal for machine and deep learning training workloads. A CS-Storm supercomputer chassis may also be incorporated within a CS500 cluster supercomputer. The software stack, programming environment and management infrastructure are shared, making such integration seamless.

Cray Analytics and AI Products

Cray Urika-XC Analytics and AI Software Suite. The Cray Urika-XC software suite extends the use of the Cray XC series supercomputer to the world of big data analytics and AI. It includes the widely used Apache Spark cluster framework for big data processing, popular Python-based tools (Anaconda, distributed Dask), and open source deep learning frameworks (BigDL and TensorFlow) optimized to take advantage of the performance and scale of the XC series.

Google's widely used TensorFlow library for machine learning is enhanced with the Cray Programming Environment Machine Learning Plugin - a Cray innovation delivering highly efficient scaling. By leveraging the Aries interconnect and eliminating many of the mundane administrative tasks required for distributed deep learning, data scientists can train neural networks at scale on an XC supercomputer - leveraging either CPUs or GPUs to more than 500 nodes. Finally, the Urika-XC software suite includes an implementation of the world's most scalable graph database - the Cray Graph Engine. With the Cray Graph Engine, customers can tackle multi-terabyte datasets comprised of billions of objects to uncover hidden relationships in even the noisiest of data. It can run in conjunction with open analytics tools, enabling users to build complete end-to-end analytics workflows and avoid unnecessary data movement.

Cray Urika-GX Platform. The Cray Urika-GX platform is architected for production-class big data analytics workloads. It comes pre-integrated with Apache Hadoop and Apache Spark frameworks as well as Cray's high-performance Cray Graph Engine. The Cray Urika-GX system features Intel Xeon E5 processors, up to 22 terabytes of DRAM memory, up to 176 terabytes of local SSD storage capacity, and the high-speed Aries network interconnect, which together provide leading in-memory compute and network performance necessary to solve the most demanding big data problems.

Cray Storage and Data Management Products

Cray ClusterStor Storage Systems. Our flagship storage product line, the Cray ClusterStor HPC storage system, embeds the Lustre parallel file system and other software in an optimal configuration to reduce deployment time and total cost of ownership while increasing reliability, capacity and performance. ClusterStor systems offer an optimal combination of modular scaling capacity from terabytes to petabytes and sustained input/output (I/O) performance from several gigabytes per second to over one terabyte per second in a single file system. ClusterStor systems are engineered to be installed and put into production more quickly than other HPC storage solutions and can be attached to Cray XC and Cray CS series systems, as well as industry-standard Linux clusters. Together with ClusterStor storage, we offer storage management software.

Cray DataWarp Applications Accelerator. Our DataWarp technology addresses a key problem experienced by supercomputing customers: disk-based storage I/O has not kept up with improvements in processor performance and delivering sustainable performance on a spectrum of applications with varying I/O-intensive workloads has become costly and impractical. DataWarp provides a new tier of storage featuring SSD and software that is tightly integrated with Cray XC series supercomputing resources. DataWarp supports high application I/O requirements while reducing overall application computing time for I/O-intensive workloads. Production customers have increased the I/O bandwidth of their production supercomputing systems by over two times, enhancing their ability to make scientific discoveries faster.

Engineering and Customer Support

Custom Engineering. When a customer's needs cannot be met through our standard product offerings, we provide an alternative. Our custom engineering business leverages our amassed intellectual property and technology portfolio, deep domain expertise and know-how to design and build solutions and services designed to match a customer's specific needs.

Customer Support. Our worldwide customer support organization delivers the "Cray experience." This unique, high-quality support relationship gives us a competitive advantage and plays an important role in our ability to maintain long-term customer relationships. Support services are important to our customers, and in many cases we locate our support personnel at or near customer sites globally, supported by a central service organization. Our support services include hardware and software maintenance in support of our systems, applications support, installation project management, system installation and de-installation, site preparation and technical training for our systems. In addition, we offer ancillary services in application consulting, third-party software support, site engineering, on-site analysts for defined projects and specialized training. Our support arrangements generally provide for support services on an annual basis, although many cover multiple years. While most customers pay for support on an annual basis, others pay on a monthly, quarterly or multi-year basis. Typically, customers may select levels of support and response times, ranging from delivery of parts only, to 24x7 coverage with two-hour response times.

Sales and Marketing

We focus our sales and marketing activities on both horizontal and vertical marketing activities ranging from government agencies or government-funded research laboratories, to academic institutions and commercial entities requiring HPC, big data

systems and storage. Our primary sales model is direct, and we offer solutions through a highly-trained direct sales force operating throughout North America, South America, Asia, Europe, the Middle East, Australia and Africa. More than half of our sales force is located in the United States and Canada, with the remainder overseas. Our ClusterStor storage systems are available both through our direct sales force as well as through a partner network of global and regional resellers.

A formal request-for-proposal process for HPC systems or technology drives a majority of our large systems sales and engineering service engagements in the academic and government markets. We utilize pre-sales technical experts to develop technical proposals that meet customer requirements and benchmarking teams to demonstrate the advantages of our particular supercomputing products or service being proposed. For a majority of our larger sales opportunities, the proposal process, including establishing system size, options, pricing and other commitments, involves a number of resources outside of our sales organization. While we often tailor our supercomputer (including cluster) solutions for individual customers, there is substantial commonality in the underlying components and systems, allowing us to leverage manufacturing and supply chain operations.

Government agencies and government-funded scientific research institutions around the world comprise a large portion of our customer base. We actively manage our relationship with U.S. government agencies and Congress.

Our Technology

We are dependent on the successful early identification, development and timely introduction of new products and capabilities. This process relies on developing and maintaining close customer and user partnerships - an activity we embrace and which we believe sets us apart from our competitors. Our research and development activities include identification of new trends, technologies and workload needs in the ever changing HPC and big data markets, and then leveraging our specialized expertise and research in the design of system architectures, hardware and software necessary to implement our expanding product portfolio to address customer needs.

Product Architectures

Our product portfolio covers a breadth of architectures including tightly integrated massively parallel supercomputers, highly flexible and configurable cluster supercomputers, purpose-built big data analytics products and world class storage solutions.

Hardware

We have extensive experience and expertise in the definition, design and integration of the hardware components required of HPC system solutions. This includes processors, board design, memory, storage, network and interconnect technologies, I/O subsystems, power, cooling and packaging infrastructures, along with the low-level hardware system software required to manage key components. The majority of our hardware research and development investments are in the following areas:

- *Compute and storage architectures, high-speed interconnect and board integration and design*. We integrate a variety of processor, volatile and nonvolatile memory hierarchies and network devices using a combination of custom and industry standard printed circuit boards, high-density connectors, carefully chosen transmission and storage media and optimized topologies.
- *Power, packaging and cooling*. We use a variety of dense packaging techniques to produce systems with superior performance, socket densities and energy efficiency. This packaging combines industry standard and custom-designed technologies in the areas of printed circuit board assemblies, power distribution and liquid and air cooling.

Software

We have extensive experience designing, developing and adapting system software such as the operating system, system management, optimized data management, movement and analysis, as well as programming environment software as an integral aspect of our product portfolio and distributing that software as part of system sales. Our software research and development expertise and experience includes operating system optimizations and scalable hardware control, monitoring and management, including power control, monitoring of environmental data, and hardware diagnostics. Our integrated system software together provides reliability, availability and serviceability (RAS) for Cray systems. The Cray programming environment includes our

own and commercially available third-party compilers, communication and scientific libraries as well as a rich suite of application development tools and software for achieving the best possible application performance. We believe this suite of products provide Cray with competitive advantage and allow us more flexibility in adopting new processing technologies as they become available.

Additionally, we research, evaluate and develop innovative software for advanced data analytics, machine learning, and deep learning at scale. This work includes industry leading graph analytics and associated algorithms for discovering previously unknown insights from large, disparate data sets, as well as optimizations to Hadoop and Spark for performance and manageability at scale. Our research includes techniques and optimizations to scale advanced analytics, machine learning, and deep learning across distributed scalable systems, and in large, shared memory architectures.

When necessary, we purchase or license certain software and technologies from third parties to meet certain specific customer requirements, while focusing our own resources where we believe we add the highest value.

For information relating to amounts spent on research and development, see *Note 19 - Research and Development* in the Notes to Consolidated Financial Statements in Item 15. Exhibits and Financial Statement Schedules in Part IV of this annual report on Form 10-K.

Manufacturing and Supply Chain

We subcontract the manufacture of a majority of the hardware sub-assemblies and certain components for our high-end products and custom-engineered systems, including integrated circuits, printed circuit boards, storage enclosures, connectors, cables and power supplies, on a sole or limited source basis to third-party suppliers. We use contract manufacturers to assemble certain components. Our manufacturing strategy currently centers on build-to-order systems, focusing on obtaining competitive assembly and component costs while concentrating our resources on the final assembly, test and quality assurance stages to ensure a positive customer experience. This strategy allows us to avoid the large capital commitment and overhead associated with establishing full-scale manufacturing facilities, helps us to maintain the flexibility to adopt new technologies as they become available without the risk of equipment obsolescence, provides near real-time configuration changes to exploit faster and/or less expensive technologies and provides a higher level of large scale system quality. Our manufacturing personnel are located in Chippewa Falls, Wisconsin.

Our systems designed for the supercomputer market segment and our custom-engineered solutions incorporate components that are available from single or limited sources, often containing our design input or proprietary designs. Such components include integrated circuits, interconnect systems and certain memory devices. Prior to development of a particular product, components are typically competitively bid to a short list of technology partners. The technology partner that provides the highest value solution for the component is often awarded the contract for the life of the component. Once we have engaged a technology partner, changing our product designs to utilize another supplier’s standard or custom components can be a costly and time-consuming process. We also have sole or limited sources for less critical components, such as peripherals, power supplies, cooling and chassis hardware. We obtain key processor components from Intel, NVIDIA and other vendors from time to time for our Cray XC and cluster systems. We have a license for the Aries interconnect chip from Intel which we purchase through Broadcom Corporation (formerly Avago) that contracts with Taiwan Semiconductor Manufacturing Company for the manufacture of the application specific integrated circuit (ASIC). Our procurements from these vendors are primarily through purchase orders. We have chosen to deal with sole sources in specific cases due to the availability of specific technologies, economic advantages and other factors. Reliance on single or limited source vendors involves several risks, including the possibility of shortages of key components, long lead times, reduced control over delivery schedules, design or persistent quality issues and changes in direction by vendors. We have been adversely affected by delays in obtaining qualified competitive components previously.

Our Markets

Our key target markets are (i) the supercomputing portion of the HPC market and (ii) the big data market, encompassing high-end analytics, storage and AI markets. High performance, real-time analytics and machine learning on large volumes of data is developing into an important success driver for business, government and academia, and successfully addressing this market is important to our future success. Several of our core strengths and technologies, such as the abilities to process vast amounts of unique data at very high speeds and to drive faster time to actionable insights, are demonstrated capabilities of our supercomputing

solutions. Bringing these technologies to market is core to our ability to address anticipated and emerging analytics and AI challenges, enabling us to bring highly differentiated analytics offerings to market. Our target markets are as follows:

- *Scientific Research.* Scientific research includes government research laboratories and research universities around the world. In the United States, the Department of Defense, through its High Performance Computing Modernization Program, funds a number of research organizations that are our target customers. The Office of Science in the Department of Energy and its laboratories are key customers, as are the National Science Foundation and the National Aeronautics and Space Administration and similar agencies around the world. These research centers also provide supercomputing and big data resources to their affiliated organizations (such as the Department of Defense contractors) and industrial partners.

- *National Security.* Classified work in various worldwide government agencies has represented an important market for us over many years. Certain U.S. government departments have on occasion provided funding support for our research and development efforts to meet their objectives. Current and potential customers include a number of Department of Defense-related classified organizations, the National Nuclear Security Administration of the Department of Energy and analogous foreign counterparts who have interest in our full range of products.

- *Defense.* The defense segment has wide-ranging needs for HPC systems that in some ways are unique and in other ways are similar to our other market segments. HPC systems can assist in the development of defense technologies, equipment and secure communications infrastructure, as well as in the identification and analysis of military intelligence. Intelligence supports real-time development of defense strategy and decision making, while technology advancements are necessary to maintain military advantages, including deterrents, and to protect the warfighter.

- *Earth Sciences.* Weather forecasting and climate modeling applications require increasing speed and larger volumes of data. Forecasting models and climate applications have grown increasingly complex with an ever-increasing number of interactive variables, making improved supercomputing, analytics and storage capabilities increasingly critical. We have a number of customers running weather and climate applications, including customers in Germany, the United Kingdom, Korea, Brazil, Switzerland, Singapore, Denmark, Finland, India, Spain, Canada, Japan, Australia, New Zealand and the United States.

- *Energy*. Supercomputing in the energy sector is driven largely by oil and gas exploration and processing, from seismic analysis to reservoir simulations. The simulation methods used often require high performance networks and storage subsystems. We currently have commercial customers utilizing both our systems and storage solutions in production.

- *Financial Services*. Analytics and supercomputing systems are providing competitive advantage in areas as disparate as trading, compliance, marketing optimization and risk analysis. Financial services applications are very time sensitive, so high performance data analytics solutions are highly sought after. Our customers are using a range of our solutions and systems to derive a competitive advantage in this segment.

- *Life Sciences.* The life sciences industry has demanding data and simulation requirements that test the limits of HPC and big data systems. In the life sciences, HPC methods cover a vast area ranging across modeling systems from the molecular level to the whole cell, next-generation genomic sequencing and healthcare optimization. Machine learning and analytics are key to making sense and creating insight in the enormous volumes of data being generated. Our solutions can help discover new relationships that can allow existing drugs to help address new medical issues. Our customers are utilizing our products and solutions across these ranges of use cases today.

- *Manufacturing.* Supercomputers are used to design lighter, safer and more durable vehicles, study wind noise and airflow around vehicles, improve airplane flight characteristics and, in many other computer-aided engineering applications, to improve time-to-market and product quality. We currently have aerospace, automotive and manufacturing customers around the globe that are actively using our HPC and big data solutions.

- *Emerging Markets.* The rise of analytics and AI across industries has resulted in growing interest in Cray supercomputers. AI is rapidly becoming the next major driver in the HPC market. Deep learning and machine learning,

both subsets of AI, are specific use cases within the broader advanced analytics space. Scientific computing is a natural area for both identifying and driving a broader set of deep learning-enabled applications. Further, deep learning core computational motifs are rooted in linear algebra and mathematical optimization, which map well to long-standing focus areas for systems research within the HPC community. Finally, several use cases in scientific data analysis typically require large-scale pattern recognition on multi-dimensional image and time series datasets, and machine learning and deep learning are emerging as valuable tools to handle these use cases. Deep learning applications run at scale on the Cray XC series and Cray CS series supercomputers.

Sales to the United States federal government (U.S. Government) and system acquisitions primarily funded by the U.S. Government, accounted for approximately 53% of our total revenue in 2017, 47% of our total revenue in 2016 and 47% of our total revenue in 2015. Significant customers with over 10% of our annual total revenue were the U.S. Government and a foreign weather center in 2017, the U.S. Government and a foreign weather center in 2016 and the U.S. Government in 2015. International customers accounted for 35% of our total revenue in 2017, 46% of our total revenue in 2016 and 36% of our total revenue in 2015.

We have four operating segments that are reportable for financial reporting purposes. Segment information and related disclosures are set forth in *Note 18 — Segment Information* in the Notes to Consolidated Financial Statements in Item 15. Exhibits and Financial Statement Schedules in Part IV of this annual report on Form 10-K.

Competition

The broad HPC market is very competitive. Many of our competitors are established, well-known companies in the HPC market, including IBM, HPE, Lenovo, Dell/EMC, Huawei, NEC, Hitachi, Fujitsu and Atos-Bull. We also compete with systems builders and resellers of systems that are constructed from commodity components using processors manufactured by Intel, NVIDIA, AMD and others. IBM, Intel, NEC and Fujitsu also build systems leveraging their own processors. In addition, certain Chinese companies are investing significantly in HPC and are becoming more aggressive and competitive in the HPC global arena. Our competitors include the previously named companies as well as smaller companies that assemble systems from commercially available commodity products. The Cray CS500 and CS-Storm supercomputing cluster products are designed to help us better address this market by providing flexible HPC alternatives with competitive pricing. To the extent that IBM and other processor suppliers develop processors or networks with greater capabilities or at lower cost than the processors we use from Intel and NVIDIA, our systems may be at a competitive disadvantage to systems utilizing such other processors.

We compete primarily on the basis of product performance, scalability, breadth of features, price/performance, total cost of ownership, quality, reliability, upgradability, service and support, corporate reputation, brand image and account relationships. Our market approach here is more focused than many of our competitors, with the Cray XC Series designed with high levels of integration to meet the exacting needs of this performance and scalability driven market. We work to offer systems that provide greater performance on the largest, most difficult computational problems and superior price-performance on many important applications in the high-end of the supercomputer market segment. Our highly-integrated systems often offer superior total cost of ownership advantages as they typically use less electric power, require less cooling and occupy less space than lower bandwidth cluster systems.

The market for our Cray CS product line is very competitive. The majority of competition is from Lenovo, HPE, Huawei, Dell/EMC, Atos-Bull and Fujitsu, all of which offer open-standards cluster solutions to address the growth in the supercomputing market. We compete primarily on the basis of price-performance, open-standards architecture, flexible configurations, energy-efficiency, reliability, scalability, corporate reputation and account relationships. Our market approach is to offer cluster solutions that better address large and complex computational problems, a superior integration, support and relationship experience.

The competitive landscape in the big data market is quite varied, with competition from vendors offering integrated solutions, such as Oracle, commodity cluster systems with either open source or proprietary data analytics software, and traditional business intelligence vendors such as Teradata, Oracle, IBM and SAP. The analytics market for pattern recognition and knowledge discovery using graph databases is still nascent and fragmented as no dominant applications have yet emerged, with the result that custom and open source software approaches such as Hadoop and Spark are often used. However, customers with large, mission-critical graph problems have discovered that commodity approaches do not scale or deliver results in an

acceptable timeframe, and have recognized the advantages of specialized solutions. We introduced the Cray Urika-XC and Urika-GX offerings - which compete primarily on the basis of performance, scalability, integration and total cost of ownership - as an alternative for users of big data and analytics. The AI market is nascent and rapidly evolving. Competition will include cloud infrastructure companies, systems and subsystems developed by processor vendors, start-up companies and our traditional system competitors.

Our storage products compete with a number of manufacturers and integrators of parallel storage solutions, including IBM with its Spectrum Scale parallel file system, as well as solutions from Data Direct Networks, Lenovo, NetApp, Dell EMC and other storage companies. The parallel storage and file system market is currently fragmented with a number of competing providers in the HPC marketplace. We believe that our strong storage products, along with our extensive experience and excellent reputation as an HPC systems vendor, compete effectively against our competition, especially when the prospective target market overlaps with our HPC systems target market.

Intellectual Property

We attempt to protect our trade secrets and other proprietary rights through formal agreements with our employees, customers, suppliers and consultants, and others who may have access to such information. Although we intend to protect our rights vigorously, there can be no assurance that our contractual and other security arrangements will be successful.

Our general policy is to seek patent protection for those inventions and improvements that give us a competitive advantage and are likely to be incorporated into our products and services. We have a number of patents and pending patent applications relating to our hardware and software technologies. While we believe our patents and applications have value, no single patent or group of patents is in itself essential to us as a whole or to any of our key products. Any of our proprietary rights could be challenged, invalidated or circumvented and may not provide significant competitive advantage.

We have licensed certain patents and other intellectual property from others in our industry. These licenses often contain restrictions on our use of the underlying technology. We have also entered into cross-license arrangements with other companies involved in the HPC industry.

Employees

As of December 31, 2017, we had 1,273 employees. We have no collective bargaining agreement with our employees. We have not experienced a work stoppage and believe that our employee relations are very good.

Corporation Information

We were incorporated in the State of Washington in December 1987 under the name Tera Computer Company. We changed our corporate name to Cray Inc. in connection with our acquisition of the Cray Research, Inc. operating assets from Silicon Graphics, Inc. in 2000. Our corporate headquarters are located at 901 Fifth Avenue, Suite 1000, Seattle, Washington 98164. Our telephone number is (206) 701-2000 and our website address is www.cray.com. The contents of our website are not incorporated by reference into this annual report on Form 10-K or our other SEC reports and filings.

Available Information

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, are available free of charge at our website at www.cray.com, as soon as reasonably practicable after we file such reports with the SEC electronically. The public may read and copy any materials that we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov. In addition, we have set forth our Code of Business Conduct, Corporate Governance Guidelines, the charters of the Audit, Compensation, Corporate Governance and Strategic Technology Assessment Committees of our Board of Directors and other governance documents on our website, www.cray.com, under "Company - Investors - Corporate Governance." The contents of our website are not incorporated by reference into this annual report on Form 10-K or our other SEC reports and filings.

Item 1A. ***Risk Factors***

In addition to the other information contained in this annual report on Form 10-K, you should carefully read and consider the following risk factors. If any of these risks occur, our business, financial condition or operating results could be materially adversely affected and the trading price of our common stock could decline. Additional risks and uncertainties not presently known to us or that we currently believe are not material may also impair our business, financial condition or operating results.

Our operating results fluctuate significantly and we may not achieve profitability in any given period. Our operating results are subject to significant fluctuations which make predicting revenue and operating results for any specific period very difficult, particularly because a material portion of product revenue recognized in any given quarter or year typically depends on a limited number of system sales expected for that quarter or year and product revenue generally depends on the timing of product acceptances by customers and contractual provisions affecting revenue recognition. Receiving less than anticipated customer orders, delays in achieving customer acceptances of installed systems and recognizing revenue from a product transaction or transactions due to development or product delivery delays, customer site readiness delays, unexpected manufacturing delays or defects, not receiving needed components on time, not receiving components with anticipated quality and performance, the inability of a system to meet performance requirements or targets or other contractual obligations, among other factors, could have a material adverse effect on our operating results in any specific quarter or year, such as by reducing or delaying associated revenue, gross profit and cash receipts from one quarter to another, or even from one year to another, particularly in the case of revenue expected to be realized in the fourth quarter of any year, as has happened in the past. In addition, because our revenue can be concentrated in particular quarters, often the fourth quarter, we generally do not expect to sustain profitability over successive quarters even if we are profitable for the year.

Although we recorded positive annual net income between 2010 and 2016, we recorded a net loss in 2017 and we expect to report a net loss in 2018 and may well experience a net loss in any year in addition to quarterly losses. Net income may fluctuate significantly as a result of many factors, including as a result of reduced revenue, gross margins or significant investments we may make to grow our business which often require many years to come to fruition and may not be realized when expected, if at all. For example, we anticipate incurring significant expenditures in connection with continued investments in research and development. Due to the inherent difficulty in estimating costs associated with projects of this scale and nature, certain of the costs associated with these potential projects may be higher than estimated and it may take longer than expected to complete, if at all. In addition, while we were profitable in 2016, our revenue and profitability declined year over year in both 2016 and 2017, substantially driven by a slow-down in the segments of the high-end of the supercomputing market that we target. It is uncertain whether or when the segments of the high-end of the supercomputing market that we target will rebound and resume growing.

Whether we will be able to increase our revenue and achieve and sustain profitability on a quarterly and annual basis depends on a number of factors, including:

- our ability to secure sufficient orders at high enough gross margins for our Cray XC and Cray CS systems as well as upgrades and successor systems, such as our next generation “Shasta” system;
- successfully delivering and obtaining sufficient customer acceptances of ordered systems, including attached storage systems;
- our ability to successfully integrate the ClusterStor product line, business and associated sales channel and our ability to successfully generate revenue and profitability from sales of our storage, data analytics and AI solutions;
- our ability to successfully and timely design for, procure and integrate competitive processors for our Cray XC and Cray CS systems and upgrades and successor systems, such as our next generation Shasta system;
- our expense levels, including research and development expense;
- delays in delivery of upgraded or new systems, longer than expected customer acceptance cycles or penalties resulting from system acceptance issues;

- our ability to resolve and the costs incurred in connection with any actual or alleged issues with our products, including third-party components of such products, such as those that relate to product defects, such as the current "Meltdown" and "Spectre" processor vulnerabilities or intellectual property rights;
- our ability to efficiently scale our internal processes to meet necessary peak requirements and growth in our business;
- the level of revenue recognized in any given period, which is affected by the very high average sales prices and limited number of significant system sales and resulting potential acceptances in any quarter, the timing of product orders and acceptances by customers and contractual provisions affecting the timing and amount of revenue recognition;
- our ability to continue to broaden our customer base beyond our traditional customers;
- revenue delays or losses due to customers postponing purchases as a result of delays in available budgets or waiting for the availability of future upgraded or new systems, including those containing new processors, such as our next generation Shasta systems;
- the level of product gross profit contribution in any given period due to volume, competition or product mix, particularly with the introduction of flexible commodity-based supercomputers, competitive factors, strategic transactions, product life cycle, currency fluctuations, acceptance penalties and component costs;
- the competitiveness of our products, services and prices;
- our ability to secure additional government funding for future development projects;
- maintaining and successfully completing our product development projects on schedule and within budgetary limitations;
- the level and timing of maintenance contract renewals with existing customers; and
- the terms and conditions of sale or lease for our products and services.

The receipt of orders and the timing of shipments and acceptances impacts our quarterly and annual results, including cash flows, and is affected by events outside our control, such as:

- whether or when the segments of the high-end of the supercomputing market that we target, which are currently experiencing a slow-down, rebound and resume growing;
- the timely availability of acceptable components, including, but not limited to, processors and memory, in sufficient quantities to meet customer delivery schedules and other customer commitments at a competitive cost and the identification of issues with already-delivered components, including processors, that require remediation and/or impact the performance of our products;
- the timing and level of government funding and resources available for product acquisitions and research and development contracts, which have been, and may continue to be, adversely affected by the current global economic and fiscal uncertainties, increased governmental budgetary limitations and disruptions in the operations of the United States and other governments;
- competitor and supplier pricing strategies;
- currency fluctuations, international conflicts or economic crises, including the ongoing economic challenges in the United States, Japan and Europe, and fluctuations in oil prices that can affect the resources available to potential customers to purchase products;
- new tariffs or taxes imposed on components and products sourced or manufactured outside of the United States;
- the introduction or announcement of competitive or key industry supplier products;

- price fluctuations or product shortages in the processors and other commodity electronics and memory markets;
- the availability of adequate customer facilities to install and operate new Cray systems;
- general economic trends, including changes in levels of customer capital spending; and
- our customers' ability to make future payments in accordance with contractual terms of their purchase or sales-type lease agreements.

Because of the numerous factors affecting our operating results, we may not achieve profitability on a quarterly or annual basis in the future. We anticipate that our quarterly results will fluctuate significantly, and include losses, even in years where we expect or achieve positive annual net income. Delays in the availability of acceptable third-party components, product development, receipt of orders, product acceptances, issues with third-party component performance or reliability, reductions in outside funding for our research and development efforts, a reduction in the size in the segments of the high-end of the supercomputing market that we target, the level and timing of approved government fiscal budgets and achieving contractual development milestones have had a substantial adverse effect on our past results and are expected to continue to have such an effect on our operating results in 2018 and in future years.

Our business could be adversely affected by conditions affecting the HPC market. A substantial portion of our business depends on the demand for HPC products by large enterprise, the U.S. Government and foreign government customers, and we are dependent upon the overall economic health of the high-end of the supercomputing market. Demand for our products and services depends substantially upon the general demand for supercomputers and associated services, as well as technological needs in the data analytics, AI and storage markets, which fluctuate based on numerous factors, including capital spending levels and growth of our current and prospective customers. Moreover, the purchase of our products is often discretionary and may involve a significant commitment of capital and other resources. As a result, spending priorities for our current and future customers may vary and demand for our products and services may also fluctuate. For instance, while we were profitable in 2016, our revenue and profitability declined year over year in both 2016 and 2017, substantially driven by a slow-down in the segments of the high-end of the supercomputing market that we target, and we believe that this downturn has continued into 2018. It is uncertain whether or when these segments will recover from the ongoing downturn. While we believe that the market's long-term growth drivers remain intact, there is no assurance that these markets will rebound and resume growing. A prolonged slow-down in these markets could continue to harm our financial condition and results of operations.

If we are unable to successfully develop, sell and deliver our Cray XC systems and successor systems, such as our next generation Shasta system, our operating results will be adversely affected. We expect that a substantial portion of our revenue in the foreseeable future will come from the sale of Cray XC systems and successor systems, such as our next generation Shasta system, including systems integrating future processors and accelerators where we are dependent upon third-party suppliers to deliver according to expected plans. The development efforts related to these systems are lengthy and technically challenging processes, and require a significant investment of capital, engineering and other resources often years ahead of the time when we can be assured that they will result in competitive products. We may invest significant resources that may prove ultimately unsuccessful. Unanticipated performance and/or development issues may require more engineers, time or testing resources than are currently available. Given the breadth of our engineering challenges, changes in the market and technology and our limited engineering and technical personnel resources, we periodically review the anticipated contributions and expense of our product programs to determine their long-term viability, and we may substantially modify or terminate one or more development programs. We may not be successful in meeting our development schedules for technical reasons, including those related to our dependence on third-party suppliers of components such as processors and accelerators, and/or because of insufficient engineering resources, which could result in an uncompetitive product or cause a lack of confidence in our capabilities among our key customers. To the extent that we incur delays in completing the design, development and production of hardware components, delays in development of requisite system software, cancellation of or changes to programs due to technical or economic infeasibility, inability to source acceptable third-party components such as processors and accelerators or investment in unproductive development efforts, our revenue, results of operations and cash flows, and the reputation of such systems in the market, could be adversely affected.

In addition, many factors affect our ability to successfully sell and recognize revenue for these systems, including the following:

- the level of product differentiation in our Cray XC systems and successor systems, such as our next generation Shasta system. We need to compete successfully against HPC systems from both large, established companies and smaller companies and demonstrate the value of our balanced, tightly integrated systems to our customers in a variety of markets;
- our ability to meet all customer requirements for acceptance. Even after a system has been delivered, we sometimes do not meet all of the contract requirements for customer acceptance and ongoing reliability of our systems within the provided-for acceptance period, which has resulted in contract penalties and delays in our ability to recognize revenue from system deliveries. Most often these penalties have adversely affected revenue and gross profit at the time of revenue recognition through the provision of additional equipment and services and/or service credits to satisfy delivery delays and performance shortfalls. The risk of contract penalties is increased when we bid for new business prior to us or our suppliers completing development of new products and when we must estimate future system performance and costs, such as has been and will be required with our Cray XC systems, next generation Shasta systems and ClusterStor storage systems;
- our ability to source competitive, key components in appropriate quantities (to have enough to sell without ending up with excess inventory that can lead to obsolescence charges), in a timely fashion and with reasonable costs and terms and conditions and that meet the performance criteria required; and
- whether potential customers delay purchases of our products because they decide to wait for successor systems or upgrades that we or our suppliers have announced or they believe will be available in the future.

Failure to successfully develop and sell our Cray XC systems and successor systems, such as our next generation Shasta system, will adversely affect our operating results.

If our current and future products targeting markets outside of our traditional markets, primarily products targeting the data analytics, AI and commercial markets, are not successful, our ability to grow or even maintain our revenues and achieve and sustain profitability will be adversely affected. Our ability to materially grow or even maintain our revenues and achieve and sustain profitability will be adversely affected if we are unable to generate sufficient revenue from products targeting markets outside of our traditional markets, including if those market segments do not grow significantly. We are currently focusing on data analytics, AI and storage opportunities as well as the commercial market for all of our products. To grow outside our primary markets, we must successfully and in a cost-effective manner design and develop products utilizing technologies different from our traditional supercomputing products, compete successfully with many established companies and new entrants in these markets, win awards for new contracts, timely perform on existing contracts, develop our capability for broader market sales and business development and successfully develop and introduce new solution-oriented offerings, notwithstanding that these are relatively new businesses for us and we do not have significant experience targeting these markets. Data analytics, AI and storage and data management opportunities require significant monetary investments ahead of revenue, including product development efforts, adding experienced personnel and initiating new marketing and sales efforts and therefore may reduce net income in the short term even if ultimately successful in the longer term. In addition, if we do not successfully integrate the ClusterStor product line and related business, including its more than 125 employees and contractors, our ability to generate revenue from our storage business may be adversely affected.

Our reliance on third-party suppliers poses significant risks to our operating results, business and prospects. We rely upon third-party vendors, particularly Intel, to supply processors including graphics processing units and memory, and for most of the products, we sell and use service providers to co-develop key technologies. We purchase or subcontract the manufacturing of a majority of the hardware components for our high-end products, including integrated circuits, printed circuit boards, memory parts, hard disk drives and storage product enclosures, cables and power supplies, on a sole or limited source basis to third-party suppliers. We use contract manufacturers to assemble certain important components for all of our systems. We also rely on third parties to supply key software and hardware capabilities, such as file systems, solution-specific servers, disk drives and storage subsystems. Because specific components must be designed into our systems well in advance of initial

deliveries of those systems, we are particularly reliant on our processor vendors, particularly Intel, to deliver on the capabilities and pricing expected at the time we design key elements of the system and make binding bids to customers. We are subject to substantial risks because of our reliance on these and other limited or sole source suppliers, including the following risks:

- if a supplier does not provide components or systems that meet specifications in sufficient quantities and with acceptable performance, price or quality on time or deliver when required, or delays future components or systems beyond anticipated delivery dates, then sales, production, delivery, acceptance and revenue from our systems could be delayed and/or reduced and we could be subject to costly repair and/or delay costs and penalties even once delivered and accepted, which is currently happening and has happened multiple times in the past and has at times significantly lowered our revenue for a particular quarter or year;
- if a supplier provides us with hardware or software that contains bugs or other errors, defects or security vulnerabilities, such as the recent "Meltdown and "Spectre" processor vulnerabilities, or is different from what we expected, our development projects and production systems may be adversely affected through reduced performance or capabilities, additional design testing and verification efforts, including of required patches, re-spins of integrated circuits and/or development of replacement components, and the production and sales of our systems could be delayed and systems installed at customer sites could require significant, expensive field component replacements or other remediation and/or we might be required to pay penalties;
- if our relationship with a key supplier, such as Intel, is adversely affected for any reason, such as due to competitive pressures or changes in company strategies and priorities, our ability to obtain components on competitive financial terms could be adversely affected;
- if a supplier cannot provide a competitive key component, for example, due to inadequate performance or a prohibitive price, or eliminates key features from components, such as with the processors we design into our systems, our systems may be less competitive than systems using components with greater capabilities;
- if an interruption of supply of our components, services or capabilities occurs because a supplier changes its technology roadmap, suffers damage to its manufacturing facilities, decides to no longer provide those products or services, increases the price of those products or services significantly or imposes reduced delivery allocations on its customers, it could take us a considerable period of time to identify and qualify alternative suppliers, to redesign our products as necessary and to begin to manufacture the redesigned components or otherwise obtain those services or capabilities. In some cases, such as with key integrated circuits and memory parts or processors, we may not be able to redesign such components or find alternate sources that we could use in any realistic timeframe, if at all;
- if a supplier plans future processors that are made available in a way that encourages customers to delay purchases of our products because they decide to wait for successor systems or upgrades they believe will be available in the future or to purchase products with future processors from our competitors who are willing to take greater risk on delivery, our operating results will be adversely affected;
- if Cray systems at customer sites develop significant issues with third-party components, as has occurred in the past, the cost to Cray to repair or replace the components or otherwise address such issue may be material. If we are unable to effectively address such problem or a problem causes customer disruption, our relationship with our customers may also be harmed;
- if a supplier of a component is subject to a claim that the component infringes a third-party's intellectual property rights, as has happened with multiple suppliers, we may not be able to obtain necessary components or our cost to obtain such components could increase significantly;
- if a key supplier is acquired or undergoes a significant business change, as has occurred in the past, the production and sales of our systems and services may be delayed or adversely affected, or our development programs may be delayed or may be impossible to complete;

- if a supplier providing us with key research and development and design services or core technology components with respect to integrated circuit design, network communication capabilities or software is late, fails to provide us with effective functionality or loses key internal talent, our development programs may be delayed or prove to be impossible to complete; and
- some of our key component and service suppliers are small companies with limited financial and other resources, and consequently may be more likely to experience financial and operational difficulties than larger, well-established companies, which increases the risk that they will be unable to deliver products as needed.

Delays in the availability of components with acceptable performance, features and reliability, or our inability to obtain such acceptable components in the quantities we need or at all, the discovery of issues with components after delivery and introduction into our products and increases in prices and order lead times for certain components, have occurred in the past. We have also experienced increased prices and/or delivery timelines of memory and other key components and the "Meltdown" and "Spectre" security vulnerabilities in processors included in our products. These types of issues have adversely affected our revenue and operating results in multiple prior periods, in some cases significantly, and could result in significant costs and/or effort to address. For instance, we expect that significant costs and efforts may be required to address the "Meltdown" and "Spectre" processor vulnerabilities, which could adversely affect our future results.

If we are unable to compete successfully in the highly competitive HPC market, our business will not be successful. The market for HPC systems is very competitive. An increase in competitive pressures in our market or our failure to compete effectively may result in pricing reductions, reduced gross margins and loss of market share and revenue. Many of our competitors are established well-known companies in the HPC market, including IBM, HPE, Lenovo, Dell/EMC, Huawei, NEC, Hitachi, Fujitsu and Atos-Bull. Most of these competitors have substantially greater research, engineering, manufacturing, marketing and financial resources than we do. In addition, certain Chinese companies are investing significantly in HPC and are becoming more aggressive and more competitive in the HPC global arena.

We also compete with systems builders and resellers of systems that are constructed from commodity components using processors manufactured and/or designed by Intel, ARM, AMD, NVIDIA and others. These competitors include the companies named above, as well as smaller companies that benefit from the low research and development costs needed to assemble systems from commercially available commodity products. Such companies, because they can offer high peak performance per dollar, can put pricing pressure on us in certain competitive procurements. In addition, to the extent that Intel, AMD, NVIDIA, IBM and other processor suppliers develop processors with greater capabilities or at a lower cost than the processors we currently use, our Cray XC systems may be at a competitive disadvantage to systems utilizing such other processors until we can design in, integrate and secure competitive processors, if at all. Also, to the extent any component supplier successfully adds differentiating capabilities to their HPC products that compete with what we provide, such as Intel, we may experience greater competitive pressures.

Our growth initiatives in the data analytics, AI and storage markets must also compete successfully with many established companies and new entrants, many of whom have significantly greater resources and brand recognition in these markets than we do.

Periodic announcements by our competitors of new HPC, storage or data analytics systems or plans for future systems and price adjustments may reduce customer demand for our products. Many of our potential customers already own or lease high performance computer, storage or data analytics systems. Some of our competitors have offered substantial discounts to potential customers. We have in the past been and may again be required to provide substantial discounts to make strategic sales, which may reduce or eliminate any gross profit on such transactions, or we may be required to provide lease financing for our products, which could result in a multi-year deferral of our receipt of cash and revenue for these systems. These developments limit our revenue and financial resources and reduce our ability to be profitable and grow.

The continuing commoditization of HPC hardware and software has resulted in increased pricing pressure and may adversely affect our operating results. The continuing commoditization of HPC hardware, such as processors, interconnects, storage and other infrastructure, and the growing commoditization of software, including plentiful building blocks and more

capable open source software, as well as the potential for integration of differentiated technology into already-commoditized components, has resulted in, and may result in increased pricing pressure that may cause us to reduce our pricing in order to remain competitive, which can negatively impact our gross margins and adversely affect our operating results.

If the U.S. Government and other governments purchase, or fund the purchase of, fewer supercomputers or delay such purchases, our revenue would be reduced and our operating results would be adversely affected. Historically, sales to the U.S. Government have represented the largest single market segment for supercomputer sales worldwide, including our products and services. In 2015, 2016 and 2017, approximately 47%, 47% and 53%, respectively, of our total revenue was derived from such sales. Our plans for the foreseeable future contemplate significant sales to the U.S. Government. Sales to the U.S. Government and other governments, including further sales pursuant to existing contracts, have been, and may continue to be, adversely affected by factors outside our control, such as by:

- uncertainties relating to priorities of the current administration or adverse decisions by the current administration to reduce or eliminate budgets for governmental agencies or departments that purchase or fund the purchase of our products and services;
- Congressional and executive branch decisions in addressing budget concerns and current policy;
- disruptions in the operations of the U.S. Government, including impacts of the current administration and government “shutdowns” such as recently occurred;
- “sequestration”;
- the downgrading of U.S. Government debt or the possibility of such action;
- the political climate in the United States focusing on cutting or limiting budgets and its effect on government budgets;
- the limits on federal borrowing capacity;
- changes in procurement policies;
- budgetary considerations, including Congressional delays in completing appropriation bills as has occurred in the past;
- domestic crises, such as costs of addressing the damage associated with natural disasters;
- international political developments, such as the downgrading of European debt or the United Kingdom’s departure from the European Union; or
- political efforts to limit the activities of U.S. intelligence community agencies, including proposed state legislation that would limit or even criminalize doing business with the U.S. National Security Agency for certain companies doing business with state governments.

If agencies and departments of the United States or other governments were to stop, reduce or delay their use and purchases of supercomputers, our revenue and operating results would be adversely affected.

If we cannot retain, attract and motivate key personnel, we may be unable to effectively implement our business plan. Our success depends in large part upon our ability to retain, attract and motivate highly skilled management, development, marketing, sales and service personnel. The loss of and failure to replace key technical management and personnel could adversely affect multiple development efforts, including those related to our next generation Shasta system. Recruitment and retention of senior management and skilled technical, sales and other personnel is very competitive, and we may not be successful in either attracting or retaining such personnel. We have lost key personnel to other high technology companies, and many larger companies with significantly greater resources than us have aggressively recruited, and continue to aggressively recruit, key personnel. As part of our strategy to attract and retain key personnel, we may offer equity compensation through grants of stock options, restricted stock awards or restricted stock units. Potential employees, however, may not perceive our equity incentives as attractive enough. In addition, due to the intense competition for qualified employees, we may be required to, and have had to,

increase the level of compensation paid to existing and new employees, which could materially increase our operating expenses. In July 2017, we implemented a restructuring plan that included a reduction of our workforce and as a result we may have lost important talent and skill sets and may have a more difficult time retaining and motivating those employees not directly impacted by the restructuring as well as attracting new employees.

We may infringe or be subject to claims that we infringe the intellectual property rights of others. We are and may in the future be subject to patent infringement and other intellectual property claims and lawsuits in various jurisdictions, and we cannot be certain that our products or activities do not violate the patents, trademarks, or other intellectual property rights of third-parties. Companies in the technology industry, and other patent, copyright, and trademark holders seeking to profit from royalties, own large numbers of patents, copyrights, trademarks, domain names, and trade secrets and frequently commence litigation based on allegations of infringement, misappropriation, or other violations of intellectual property or other rights. As we face increasing competition and gain an increasingly high profile, the intellectual property rights claims against us have grown and will likely continue to grow. For example, we are currently involved in litigation with Raytheon Company (Raytheon) which is described in *Note 13 - Commitments and Contingencies* in the Notes to Consolidated Financial Statements in Item 15. Exhibits and Financial Statement Schedules in Part IV of this annual report on Form 10-K.

We intend to vigorously defend and prosecute these litigation matters and, based on our reviews to date, we believe we have valid defenses with respect to each of these matters. However, litigation is inherently uncertain, and any judgment or injunctive relief entered against us or any adverse settlement could materially and adversely impact our business, financial condition, operating results, and prospects. As a result of these or other intellectual property infringement claims, we could be required or otherwise decide that it is appropriate to:

- pay third-party infringement claims;
- discontinue manufacturing, using or selling particular products subject to infringement claims;
- discontinue using the technology or processes subject to infringement claims;
- develop other technology not subject to infringement claims, which could be time-consuming and costly or may not be possible; and/or
- license technology from third-parties, which license may not be available on commercially reasonable terms, or at all.

In addition, litigation can involve significant management time and attention and be expensive, as it has been with Raytheon, regardless of outcome. During the course of these litigation matters, there may be announcements of the results of hearings and motions, and other interim developments related to the litigation matters. If securities analysts or investors regard these announcements as negative, the market price of our common stock may decline.

If our cluster systems are not successful, our operating results could be adversely affected. Our cluster products were first introduced in late 2012. Cluster-based solutions face intense competition in the marketplace with buying decisions often driven by price, and if we cannot successfully sell these solutions with acceptable margins, our operating results will be adversely affected.

We have made and entered into in the past, and may make and enter into in the future, acquisitions or strategic transactions which could require significant management attention, disrupt our business, result in dilution to our shareholders, deplete our cash reserves, increase our business risks and adversely affect our financial results. Acquisitions and strategic transactions, such as our recent acquisition of the ClusterStor business from Seagate, involve numerous risks, including the following:

- difficulties in successfully integrating the operations, systems, technologies, products, sales channels, manufacturing processes, offerings and personnel of the acquired company or companies, assets and/or business;
- insufficient revenue, margin or other benefits to offset increased expenses or other negative impacts associated with acquisitions or strategic transactions;

- diversion of management's attention from normal daily operations of the business and the challenges of managing larger and more widespread operations resulting from acquisitions or strategic transactions, including other customers of an acquired business;
- potential difficulties in completing projects associated with in-process research and development intangibles;
- difficulties in entering markets in which we have no or limited direct prior experience and where competitors in such markets have stronger market positions;
- initial dependence on unfamiliar supply chains or relatively small supply partners;
- the potential loss of key employees, customers, distributors, vendors and other business partners of the companies or businesses we acquire following and continuing after announcement of any transaction; and
- the potential to invest significant time and resources into a potential acquisition or strategic transaction that does not ultimately complete or close.

Acquisitions or strategic transactions may also cause us to:

- use a substantial portion of our cash reserves or incur debt;
- issue equity securities or grant equity incentives to acquired employees that would dilute our current shareholders' percentage ownership;
- assume or incur liabilities, including potentially unknown or underestimated liabilities;
- record goodwill and non-amortizable intangible assets that are subject to impairment testing on a regular basis and potential periodic impairment charges;
- incur amortization expenses related to certain intangible assets;
- incur large and immediate write-offs and restructuring and other related expenses; or
- become subject to intellectual property litigation or other litigation.

Acquisitions of high-technology companies, assets and/or businesses are inherently risky and subject to many factors outside of our control, and no assurance can be given that our previously completed, currently planned or future acquisitions or strategic transactions will be successful and will not materially adversely affect our business, operating results, or financial condition. Failure to manage and successfully integrate acquisitions could materially harm our business and operating results.

We maintain confidential and proprietary information on our computer networks and employ security measures designed to protect this information from unauthorized access. If our security measures are breached, we could lose proprietary data and may suffer economic losses. We maintain confidential information on our computer networks, including information and data that are proprietary to our customers and third parties, as well as to us. Although we have designed and employed and continue to enhance a multitude of security measures to protect this information from unauthorized access, security breaches may occur, and in the past have occurred, as a result of third-party action, including computer hackers, employee error, inherent hardware or software vulnerabilities, malfeasance or otherwise. Security breaches can result in someone obtaining unauthorized access to our data or our customers' data, including our intellectual property and other confidential business information. Because the techniques employed by hackers to obtain unauthorized access or to sabotage systems change frequently, we may be unable to anticipate these techniques or to implement adequate preventative measures. A security breach could result in disclosure of our trade secrets or disclosure of confidential customer, supplier or employee data. If this should happen, we could be exposed to potentially significant legal liability, remediation expense, harm to our reputation and other harm to our business.

We may not be able to protect our proprietary information and rights adequately. We rely on a combination of patent, copyright, trademark and trade secret protection, nondisclosure agreements and licensing arrangements to establish, protect and enforce our proprietary information and rights. We have a number of patents and have additional applications pending. There can be no assurance, however, that patents will be issued from the pending applications or that any issued patents will adequately

protect those aspects of our technology to which such patents will relate. Despite our efforts to safeguard and maintain our proprietary rights, we cannot be certain that we will succeed in doing so or that our competitors will not independently develop or patent technologies that are substantially equivalent or superior to our technologies. The laws of some countries do not protect intellectual property rights to the same extent or in the same manner as do the laws of the United States. Additionally, under certain conditions, the U.S. government might obtain non-exclusive rights to certain of our intellectual property. Although we continue to implement protective measures and intend to defend our proprietary rights vigorously, these efforts may not be successful.

We are subject to market and financial risks due to our international operations that could adversely affect those operations or our profitability and operating results. Our international operations include sales and service offices in Europe, the Middle East, South America, Asia, Australia and Canada. Our operations in countries outside of the United States, which accounted for approximately 35% of our total revenue for the year ended December 31, 2017, expose us to greater risks associated with international sales and operations. Our profitability and international operations are, and will continue to be, subject to a number of risks and potential costs, including:

- supporting multiple languages;
- recruiting sales and technical support personnel internationally with the skills to sell and support our products and the potentially high cost related to employee separations;
- complying with governmental regulations, including obtaining required import or export approval for our products;
- increased complexity and costs of managing international operations;
- increased exposure to foreign currency exchange rate fluctuations;
- trade protection measures and business practices that favor local competition;
- risks and costs associated with employee-favorable labor laws in many foreign jurisdictions;
- longer sales cycles and manufacturing lead times;
- financial risks such as longer payment cycles and difficulties in collecting accounts receivable;
- difficulties associated with repatriating cash generated or held abroad in a tax-efficient manner;
- ineffective legal protection of intellectual property rights;
- more complicated logistics and distribution arrangements;
- additional taxes and penalties;
- inadequate local infrastructure that could result in business disruptions;
- global political and economic instability; and
- other factors beyond our control such as natural disasters, terrorism, civil unrest, war and infectious disease.

Our global operations are also subject to numerous U.S. and foreign laws and regulations, including those related to anti-corruption, tax, corporate governance, imports and exports, privacy and data security, financial and other disclosures and labor relations. These laws and regulations are complex and may have differing, conflicting and evolving legal standards, making compliance difficult and costly. If we or our employees, contractors or agents violate these laws and regulations, we could be subject to fines, penalties or criminal sanctions and may be prohibited from conducting business in one or more countries. Any violations, individually or in the aggregate, could have a material adverse effect on our operations and financial condition.

In addition, the United Kingdom gave formal notice of withdrawal from the European Union in March 2017. Consequently, the British government is currently negotiating the terms of the United Kingdom's future relationship with the European Union. The negotiated measures could potentially disrupt some of our target markets and jurisdictions in which we operate, including the United Kingdom and Germany, such as by adversely affecting tax benefits or liabilities in these or other jurisdictions or by

restricting the movement of employees between the United Kingdom and other countries. Any such changes may adversely affect our operations and financial results.

Customers and other third parties may make statements speculating about or announcing the purchase, acceptance or intention to complete purchases or acceptances of our products before such purchases or acceptances are substantially certain, and these proposed purchases or acceptances may not be completed when or as expected, if at all. From time to time, customers and other third parties may make statements speculating about or announcing a potential purchase of our products before we have obtained an order for such purchases or completed negotiations and signed a contract for the purchase of such products. In some instances, government and government-funded customers may announce possible purchases even before they have obtained the necessary budget to procure the products. As a result, these statements, postings or announcements do not mean that we will ultimately be able to secure the sale when or as expected or at all as it is not certain that the contract or order negotiations will be completed successfully or as expected or that the customer will be able to obtain the budget they hope for or expect. In addition, from time to time, customers and other third parties may make statements speculating about or announcing the completion of an acceptance process of a delivery system before such acceptance is completed or certain. As a result, these statements or announcements do not mean that we will ultimately be able to obtain the acceptance when or as expected or recognize revenue.

We are subject to increasing government regulations and other requirements due to the nature of our business, which may adversely affect our business operations. In 2015, 2016 and 2017, approximately 47%, 47% and 53%, respectively, of our total revenue was derived from the U.S. Government. In addition to normal business risks, our contracts with the U.S. government are subject to unique risks, some of which are beyond our control. Our contracts with the U.S. government are subject to particular risks, including:

The funding of U.S. government programs is subject to Congressional appropriations. Many of the U.S. government programs in which we participate may extend for several years; however, these programs are normally funded annually. Changes in U.S. strategy and priorities may affect our future procurement opportunities and existing programs. Long-term government contracts and related orders are subject to cancellation, or delay, if appropriations for subsequent performance periods are not made. The termination of funding for existing or new U.S. government programs could result in a material adverse effect on our results of operations and financial condition.

The U.S. government may modify, curtail or terminate its contracts with us. The U.S. government may modify, curtail or terminate its contracts and subcontracts with us, without prior notice at its convenience upon payment for work done and commitments made at the time of termination. Modification, curtailment or termination of our major programs or contracts could have a material adverse effect on our results of operations and financial condition.

Our U.S. government contract costs are subject to audits by U.S. government agencies. U.S. government representatives may audit the costs we incur on our U.S. government contracts, including allocated indirect costs. Such audits could result in adjustments to our contract costs. Any costs found to be improperly allocated to a specific contract will not be reimbursed, and such costs already reimbursed must be refunded. If any audit uncovers improper or illegal activities or non-compliance with the terms of a specific contract, we may be subject to civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, suspension of payments, fines and suspension or prohibition from doing business with the U.S. government.

Our business is subject to potential U.S. government inquiries and investigations. We may be subject to U.S. government inquiries and investigations of our business practices due to our participation in government contracts. Any such inquiry or investigation could potentially result in a material adverse effect on our results of operations and financial condition.

Our U.S. government business is also subject to specific procurement regulations and other requirements. These requirements, although customary in U.S. government contracts, increase our performance and compliance costs. These costs might increase in the future, reducing our margins, which could have a negative effect on our financial condition. Failure to comply with these regulations and requirements could lead to suspension or debarment, for cause, from U.S. government contracting or subcontracting for a period of time or the inability to participate in certain procurements and could have a negative effect on our reputation and ability to secure future U.S. government contracts.

U.S. export controls could hinder our ability to make sales to foreign customers and our future prospects. The U.S. government regulates the export of HPC systems such as our products. We have experienced delays for up to several months in receiving appropriate approvals necessary for certain sales, which have delayed the shipment of our products. Delay or denial in the granting of any required licenses could make it more difficult to make sales to certain foreign customers, eliminating an important source of potential revenue. Restrictions on the export of information needed to manufacture our products has in the past impacted and could in the future impact our ability to have certain products and components made in certain lower cost jurisdictions.

Our stock price is volatile. The trading price of our common stock is subject to significant fluctuations in response to many factors, including stock market trends and shareholder profile, our quarterly operating results, changes in analysts' estimates or our outlook, our capital raising activities, announcements of technological innovations and customer contracts by us or our competitors, others in the industry or our customers, a significant aggressive seller or buyer, litigation activities, general economic conditions and conditions in our industry. From January 1, 2017 through December 31, 2017, the closing sales price of our common stock on The Nasdaq Global Market ranged from $16.35 to $26.55 per share. Because our stock price has been volatile, investing in our common stock is risky.

We incorporate software licensed from third parties into the operating systems for our products as well as in our tools to design products and any significant interruption in the availability of these third-party software products or defects in these products could reduce the demand for our products or cause delay in development. The operating system as well as other software we develop for our supercomputers contains components that are licensed to us under open source software licenses. Our business could be disrupted if this software, or functional equivalents of this software, were either no longer available to us or no longer offered to us on commercially reasonable terms. In either case we would be required to redesign our operating system software to function with alternative third-party software, or develop these components ourselves, which would result in increased costs and could result in delays in product shipments. Our supercomputer systems utilize software system variants that incorporate Linux technology. The open source licenses under which we have obtained certain components of our operating system software may not be enforceable. Any ruling by a court that these licenses are not enforceable, or that Linux-based operating systems, or significant portions of them, may not be copied, modified or distributed as provided in those licenses, would adversely affect our ability to sell our systems. In addition, as a result of concerns about the risks of litigation and open source software generally, we may be forced to protect our customers from potential claims of infringement. In any such event, our financial condition and results of operations may be adversely affected.

We also incorporate proprietary software from third parties, such as for file systems, job scheduling and storage subsystems. We have experienced functional issues in the past with implementing such software with our supercomputer systems. In addition, we may not be able to secure needed software systems on acceptable terms, or at all, which may make our systems less attractive to potential customers. These issues may result in lost revenue, additional expense by us and/or loss of customer confidence.

The "conflict minerals" rule of the SEC, has caused us to incur additional expenses, could limit the supply and increase the cost of certain metals used in manufacturing our products, and could make us less competitive in our target markets. The SEC requires public companies to disclose the origin, source and chain of custody of specified minerals, known as conflict minerals, that are necessary to the functionality or production of products manufactured or contracted to be manufactured by us. Companies must obtain sourcing data from suppliers, engage in supply chain due diligence, and file annually with the SEC a specialized disclosure report on Form SD covering the prior calendar year. Implementation of our conflict minerals policy could limit our ability to source at competitive prices and to secure sufficient quantities of certain minerals used in the manufacture of our products, specifically tantalum, tin, gold and tungsten, as the number of suppliers that provide conflict-free minerals may be limited. In addition, we have incurred, and may continue to incur, material costs associated with complying with the conflict minerals rule, such as costs related to the determination of the origin, source and chain of custody of the minerals used in our products, the adoption of conflict minerals-related governance policies, processes and controls, and possible changes to products or sources of supply as a result of such activities. Within our supply chain, we may not be able to sufficiently verify the origins of the relevant minerals used in our products through the data collection and due diligence procedures that we implement, which may harm our reputation. Furthermore, we may encounter challenges in satisfying those customers that require that all of the

components of our products be certified as conflict free, and if we cannot satisfy these customers, they may choose a competitor's products. We continue to investigate the presence of conflict materials within our supply chain.

We are required to evaluate our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act of 2002 at the end of each fiscal year, and any adverse results from such future evaluations could result in a loss of investor confidence in our financial reports and have an adverse effect on our stock price. Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, we are required to furnish a report by our management and a report by our independent registered public accounting firm on our internal control over financial reporting in our annual reports on Form 10-K as to whether we have any material weaknesses in our internal controls over financial reporting. Depending on their nature and severity, any future material weaknesses could result in our having to restate financial statements, could make it difficult or impossible for us to obtain an audit of our annual financial statements or could result in a qualification of any such audit. In such events, we could experience a number of adverse consequences, including our inability to comply with applicable reporting and listing requirements, a loss of market confidence in our publicly available information, delisting from The Nasdaq Global Market, an inability to complete a financing, loss of other financing sources such as our line of credit, and litigation based on the events themselves or their consequences.

Our reported financial results may be adversely affected by changes in accounting principles generally accepted in the United States. Generally accepted accounting principles in the United States are subject to interpretation by the Financial Accounting Standards Board, the SEC and various bodies formed to promulgate and interpret appropriate accounting principles. A change in these principles or interpretations could have a significant effect on our reported financial results, and could affect the reporting of transactions completed before the announcement of a change.

U.S. federal income tax reform could adversely affect us. On December 22, 2017, the Tax Cuts and Jobs Act was signed into law, enacting a broad range of changes to the U.S. Internal Revenue Code. The Tax Cuts and Jobs Act, among other things, includes changes to U.S. federal tax rates, imposes significant additional limitations on the deductibility of interest and net operating losses, allows for the expensing of certain capital expenditures and puts into effect a number of changes impacting operations outside of the United States. In the fourth quarter of 2017, we reduced our deferred tax asset by approximately $28.9 million as a result. The Company will continue to assess the impact of the new tax legislation on its net deferred tax assets and liabilities and will continue to examine the impact this tax legislation may have on our business.

Provisions of our Restated Articles of Incorporation and Amended and Restated Bylaws could make a proposed acquisition of our business that is not approved by our Board of Directors more difficult. Provisions of our Restated Articles of Incorporation and Amended and Restated Bylaws could make it more difficult for a third-party to acquire us. These provisions could limit the price that investors might be willing to pay in the future for our common stock. For example, our Restated Articles of Incorporation and Amended and Restated Bylaws provide for:

- removal of a director only in limited circumstances and only upon the affirmative vote of not less than two-thirds of the shares entitled to vote to elect directors;
- the ability of our Board of Directors to issue up to 5,000,000 shares of preferred stock, without shareholder approval, with rights senior to those of the common stock;
- no cumulative voting of shares;
- the right of shareholders to call a special meeting of the shareholders only upon demand by the holders of not less than 30% of the shares entitled to vote at such a meeting;
- the affirmative vote of not less than two-thirds of the outstanding shares entitled to vote on an amendment, unless the amendment was approved by a majority of our continuing directors, who are defined as directors who have either served as a director since August 31, 1995, or were nominated to be a director by the continuing directors;
- special voting requirements for mergers and other business combinations, unless the proposed transaction was approved by a majority of continuing directors;
- special procedures to bring matters before our shareholders at our annual shareholders' meeting; and
- special procedures to nominate members for election to our Board of Directors.

These provisions could delay, defer or prevent a merger, consolidation, takeover or other business transaction between us and a third-party that is not approved by our Board of Directors.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. *Properties*

Our principal properties are as follows:

Location of Property	Uses of Facility	Approximate
Chippewa Falls, WI	Manufacturing, hardware development, central service and warehouse	213,600
Bloomington, MN	Software development, sales and marketing	87,705
Seattle, WA	Executive offices, hardware and software development, sales and marketing	51,643
San Jose, CA	Hardware and software development	21,733
Austin, TX	Hardware development	20,916
Longmont, CO	ClusterStor product development	14,292

We own 205,478 square feet of manufacturing, development, service and warehouse space in Chippewa Falls, Wisconsin, and lease the remaining space described above.

We lease a total of 5,600 square feet of office space, primarily for software development, in Pleasanton, California. We also lease a total of approximately 11,000 square feet, primarily for sales and service offices, in other domestic locations. In addition, various foreign sales and service subsidiaries have leased an aggregate of approximately 30,000 square feet of office space, in international locations. We believe our facilities are adequate to meet our needs at least through 2018.

Item 3. *Legal Proceedings*

For a discussion of legal proceedings, see *Note 13 — Commitments and Contingencies* in the Notes to Consolidated Financial Statements in Item 15. Exhibits and Financial Statement Schedules in Part IV of this annual report on Form 10-K.

Item 4. *Mine Safety Disclosures*

Not applicable.

PART II

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

Price Range of Common Stock and Dividend Policy

Our common stock is traded on The Nasdaq Global Market under the symbol CRAY. As of February 13, 2018, we had 40,475,586 shares of common stock outstanding that were held by 456 holders of record. The actual number of shareholders is greater than this number of registered record holders, and includes shareholders who are beneficial owners, but whose shares are held in "street name" by brokers and other nominees.

The quarterly high and low sales prices of our common stock for the periods indicated are as follows:

	High	Low
Year Ended December 31, 2017:		
First Quarter	$ 22.55	$ 16.10
Second Quarter	$ 21.98	$ 16.50
Third Quarter	$ 20.95	$ 17.35
Fourth Quarter	$ 26.65	$ 17.90
Year Ended December 31, 2016:		
First Quarter	$ 43.79	$ 28.25
Second Quarter	$ 43.40	$ 27.39
Third Quarter	$ 32.30	$ 20.60
Fourth Quarter	$ 23.68	$ 16.77

We have not paid cash dividends on our common stock and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. Any determination to pay dividends in the future will be at the discretion of our Board of Directors and will be dependent on a number of factors, including our earnings, capital requirements and overall financial conditions. In addition, the terms of our credit agreement with Wells Fargo Bank currently restrict our ability to pay dividends.

Equity Compensation Plan Information

The following table provides information as of December 31, 2017, with respect to compensation plans under which shares of our common stock are authorized for issuance, including plans previously approved by our shareholders and plans not previously approved by our shareholders.

Plan Category	Number of Shares of Common Stock to be Issued Upon Exercise of Outstanding Options	Weighted-Average Exercise Price of Outstanding Options	Number of Shares of Common Stock Available for Future Issuance Under Equity Compensation Plans (excluding shares reflected in 1st column)
Equity compensation plans approved by shareholders[1]	2,008,538	$ 17.42	3,107,064
Equity compensation plans not approved by shareholders[2]	25,936	$ 4.88	—
Total	2,034,474		3,107,064

(1) The shareholders approved our 1995, 1999 and 2003 stock option plans, our 2004, 2006 and 2009 long-term equity compensation plans, our 2013 equity incentive plan, as amended and restated, and our 2001 employee stock purchase plan, as amended. Our 1995, 1999 and 2003 stock option plans and our 2004, 2006 and 2009 long-term equity compensation plans have terminated and no more awards may be granted under those plans. Pursuant to our 2013 equity incentive plan, incentive options may be granted to employees (including officers) and nonqualified options may be granted to employees, officers, directors, agents and consultants with exercise prices at least equal to the fair market value of the underlying common stock at the time of grant. While our Board of Directors may grant options with varying vesting periods under

these plans, most options granted to employees vest over four years, with 25% of the options vesting after one year and the remaining options vesting monthly over the next three years, and most option grants to non-employee directors vesting immediately. Also pursuant to our 2013 equity incentive plan, our Board of Directors may grant restricted stock awards, stock bonus awards, stock appreciation rights, restricted stock units, performance shares and performance units to employees, directors, consultants, independent contractors and advisors. As of December 31, 2017, under our 2013 equity incentive plan, an aggregate of 3,107,064 shares were available for grant as stock options or stock appreciation rights and an aggregate of 2,004,557 shares were available for restricted stock awards, stock bonus awards, restricted stock units, performance shares or performance units to employees, directors, consultants, independent contractors and advisors.

(2) The shareholders did not approve our 2000 non-executive employee stock option plan. Under the 2000 non-executive employee stock option plan approved by our Board of Directors on March 30, 2000, an aggregate of 1,500,000 shares pursuant to non-qualified options could be issued to employees, agents and consultants but not to officers or directors. Otherwise, our 2000 non-executive employee stock option plan is similar to the stock option plans described in footnote (1) above. On March 30, 2010, our 2000 non-executive employee stock option plan was terminated, which ended future grants but did not affect then outstanding options. As of December 31, 2017, under our 2000 non-executive employee stock plan, we had options for 25,936 shares outstanding.

Unregistered Sales of Securities

We had no unregistered sales of our securities in 2017 not previously reported.

Issuer Repurchases

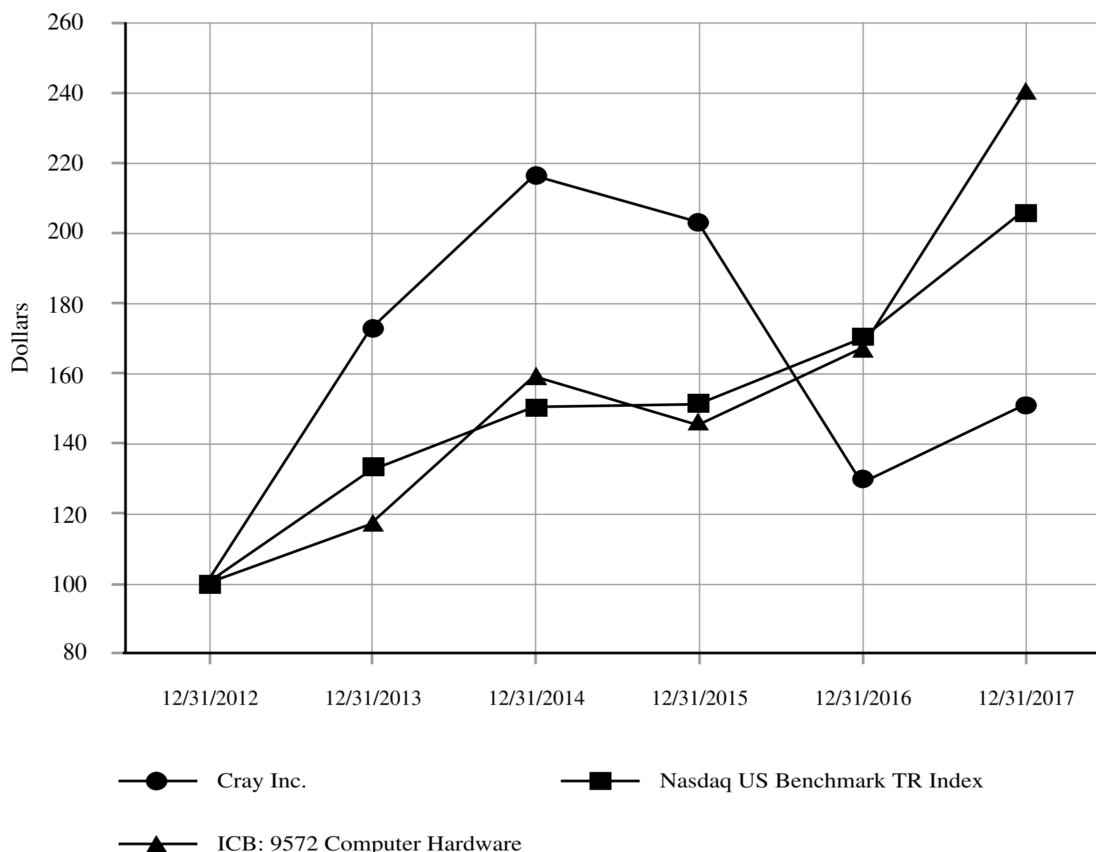
We did not repurchase any of our common stock in 2017, other than in connection with the forfeiture of common stock by holders of restricted stock and restricted stock units in exchange for payments by the Company of statutory tax withholding amounts on behalf of the holders arising as a result of the vesting of restricted stock and restricted stock units.

STOCK PERFORMANCE GRAPHS

The graph below compares the cumulative total return to shareholders for our common stock with the comparable return of the Nasdaq OMX Global Indexes Nasdaq US Benchmark TR Index and the Nasdaq OMX Global Indexes ICB: 9572 Computer Hardware Index.

The graph assumes that a shareholder invested $100 in our common stock on December 31, 2012, and that all dividends were reinvested. We have never paid cash dividends on our common stock. All return information is historical and is not necessarily indicative of future performance.

COMPARISON OF CUMULATIVE TOTAL RETURN AMONG OUR COMMON STOCK, THE NASDAQ US BENCHMARK TR INDEX AND THE ICB: 9572 COMPUTER HARDWARE INDEX THROUGH DECEMBER 31, 2017



	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017
Cray Inc.	$ 100.0	$ 172.2	$ 216.2	$ 203.4	$ 129.8	$ 151.7
Nasdaq US Benchmark TR Index	100.0	133.5	150.1	150.8	170.5	206.9
ICB: 9572 Computer Hardware Index	100.0	117.6	159.5	145.2	167.4	240.7

Item 6. *Selected Consolidated Financial Data*

The following table presents selected historical consolidated financial data for Cray Inc. and its subsidiaries, which is derived from our audited consolidated financial statements:

	Years Ended December 31,				
	2017	2016	2015	2014	2013
	(In thousands, except for per share data)				
Operating Data:					
Product revenue	$ 250,195	$ 499,432	$ 601,294	$ 460,748	$ 436,330
Service revenue	142,314	130,377	123,395	100,858	89,419
Total revenue	392,509	629,809	724,689	561,606	525,749
Cost of product revenue	188,830	332,016	426,821	321,554	298,244
Cost of service revenue	72,975	77,578	72,185	55,638	43,179
Total cost of revenue	261,805	409,594	499,006	377,192	341,423
Gross profit	130,704	220,215	225,683	184,414	184,326
Research and development, net	98,777	112,130	96,563	94,048	87,728
Sales and marketing	59,894	64,893	60,150	57,785	51,345
General and administrative	29,113	34,053	27,966	23,381	23,603
Restructuring	8,568	—	—	—	—
Operating expenses	196,352	211,076	184,679	175,214	162,676
Income (loss) from operations	(65,648)	9,139	41,004	9,200	21,650
Other income (expense), net	5,002	(1,365)	365	(9)	(1,378)
Interest income, net	3,276	2,147	1,408	506	757
Gain on strategic transaction	4,480	—	—	—	—
Income (loss) before income taxes	(52,890)	9,921	42,777	9,697	21,029
Benefit (provision) for income taxes	(80,939)	694	(15,240)	52,626	11,194
Net income (loss)	$ (133,829)	$ 10,615	$ 27,537	$ 62,323	$ 32,223
Net income (loss) per common share:					
Basic	$ (3.33)	$ 0.27	$ 0.70	$ 1.61	$ 0.85
Diluted	$ (3.33)	$ 0.26	$ 0.68	$ 1.54	$ 0.81
Weighted average outstanding shares:					
Basic	40,139	39,833	39,257	38,634	37,832
Diluted	40,139	41,012	40,691	40,435	39,776
Cash Flow Data:					
Cash provided by (used in):					
Operating activities	$ (73,341)	$ (52,313)	$ 147,756	$ (58,109)	$ (87,350)
Investing activities	(13,663)	8,998	7,216	(22,755)	27,211
Financing activities	(332)	(540)	(1,373)	(70)	(93)
Depreciation and amortization	16,760	14,684	17,017	16,324	14,242
Purchases of property and equipment	17,467	7,503	7,467	17,193	13,136
Balance Sheet Data:					
Cash, cash equivalents, restricted cash and investments	$ 147,317	$ 224,617	$ 284,891	$ 145,796	$ 220,449
Working capital	354,300	373,028	376,559	325,541	325,733
Total assets	618,757	714,572	694,175	651,434	603,366
Shareholders' equity	400,297	525,476	492,510	453,854	375,587

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

Overview and Executive Summary

We focus on designing, developing, manufacturing, marketing and servicing computing products that magnify and enhance human capital, foster innovation and create competitive advantages. That means our products are aimed primarily at the high-end of the high performance computing (HPC) and data analytics and artificial intelligence (AI) markets - the segments populated by the pioneers, executives and entrepreneurs leading their industries in both the private and public sectors. These products include compute systems commonly known as supercomputers, and storage, data analytics and AI solutions. We offer them individually, integrated into a complete solution or hosted in the cloud, depending on a customer's need. We also provide related software and system maintenance, support, and engineering services. Our customers include domestic and foreign government and government-funded entities, academic institutions and commercial companies. We provide customer-focused solutions based on four main models: (1) tightly integrated supercomputing designed throughout for scalability and sustained performance; (2) customizable cluster supercomputing based on highest-performance industry-standard components; (3) robust high-performance storage solutions; and (4) integrated solutions for graph analysis and large-scale analytics and AI applications. All of our solutions also emphasize total cost of ownership, scalable performance and data center flexibility as key features. Our continuing strategy is to gain market share by extending our technology leadership and differentiation and expanding our share and addressable market in areas where we can leverage our experience and technology, such as in AI applications and data analytics. We also meet diverse customer requirements by combining supercomputing, cluster supercomputing, and data analytics and AI into unique offerings that work in a workflow-driven datacenter environment.

Summary of 2017 Results

Total revenue decreased by $237.3 million in 2017 compared to 2016, from $629.8 million to $392.5 million. Product revenue decreased by $249.2 million and service revenue increased by $11.9 million over the same period. The year over year decrease in product revenue was substantially driven by a slow-down in the high-end segments of the supercomputing market that we target, as well as the timing of contracts and deliveries. Some 2017 deliveries were impacted by certain customer site readiness issues. The year over year increase in service revenue was primarily driven by increased maintenance revenue, which continues to be driven by our larger installed system base, including the benefit from longer lifetimes of installed systems due to the slowdown in acquisitions of new replacement systems.

Product gross profit margin decreased from 34% in 2016 to 25% in 2017. In the third quarter of 2017, we determined that a large contract currently scheduled for acceptance in 2018 would be performed at a loss of $4.1 million. The loss is attributable in part to higher component costs, predominantly for memory, changes in the configuration of the system from the time of bid, and changes in exchange rate. We recorded the full amount of the loss in 2017, which negatively affected margins. One relatively large sale to a U.S. government customer in the second quarter of 2017 and one relatively large sale to a foreign customer in the fourth quarter of 2017, both carrying lower margins, also significantly contributed to the decrease in product gross profit margin from 2016 to 2017. Gross profit margin from services increased from 40% in 2016 to 49% in 2017. Service gross profit margins for 2016 were unusually low as the result of $3.0 million of costs incurred to replace a high-value third party component in a customer system. The improved gross profit margin for 2017 also benefited, in part, from the leveraging of our fixed service costs.

We recorded a loss from operations of $65.6 million in 2017 compared to income from operations of $9.1 million in 2016. The decrease was primarily attributable to lower revenue and product gross profit margin and increased costs due to restructuring charges in 2017, partially offset by a decrease in our other operating expenses.

We recorded a net loss of $133.8 million in 2017 compared to net income of $10.6 million in 2016. The year over year change was primarily driven by the decrease in operating income discussed above and an increase of $81.6 million in income tax expense for 2017 compared to 2016. Income tax expense for 2017 included $28.9 million directly attributable to the enactment of the Tax Cuts and Jobs Act that required us to revalue our U.S. deferred tax assets as a result of a reduction in the U.S. federal corporate income tax rate to 21% and income tax expense of $74.1 million as a result of our decision to increase the valuation allowance held against our U.S. deferred tax assets. These amounts were partially offset by the gain on the strategic transaction with Seagate and a $3.3 million gain from the sale of an investment in a private company.

Net cash used in operations during 2017 was $73.3 million, compared to net cash used in operations of $52.3 million in 2016. Net cash used in operations during 2017 was primarily driven by an increase of $97.7 million in inventory as a result of system builds for future deliveries and our net loss, adjusted for non-cash and non-operating items, of $31.7 million. These amounts were partially offset by collections from customers that resulted in a decrease of $38.7 million in accounts and other receivables. Working capital decreased from $373.0 million at December 31, 2016 to $354.3 million at December 31, 2017.

Market Overview and Challenges

Significant trends in the HPC industry include:

- convergence of traditional supercomputing modeling simulation with big data analytics and AI;
- supercomputing with many-core commodity processors driving increasing scalability requirements;
- increased micro-architectural diversity, including increased usage of many-core processors and accelerators, as the rate of increases in per-core performance slows;
- data I/O and capacity needs growing much faster than computational needs;
- the rise of AI along with machine learning and deep learning technologies which utilize HPC technologies for performance and scale;
- technology innovations in memory and storage allowing for faster data access such as high bandwidth memory, NVRAM, SSDs and flash devices;
- the increasing commoditization of HPC hardware, particularly processors and system interconnects;
- the growing concentration of very large suppliers of key computing, memory and storage components in the industry;
- the growing commoditization of software, including plentiful building blocks and more capable open source software;
- electrical power requirements becoming a design constraint and driver in total cost of ownership determinations;
- increasing use of analytics technologies (Hadoop, Spark, NoSQL and Graph) in both the HPC and big data markets;
- increased adoption of cloud computing as a solution for loosely-coupled HPC applications;
- large increases in memory prices during the past year; and
- decreasing demand for supercomputers and significant variability in market demand from quarter-to-quarter and year-to-year.

Several of these trends have recently impacted the growth rate and related improvements in price-performance of products in the industry and has contributed to the expansion and acceptance of loosely-coupled cluster systems using processors manufactured by Intel, AMD and others combined with commercially available, commodity networking and other components, particularly in the middle and lower portions of the supercomputing market. These systems may offer higher theoretical peak performance for equivalent cost, and "price/peak performance" is sometimes the dominant factor in HPC procurements. Vendors of such systems often put pricing pressure on us, resulting in lower margins in competitive procurements.

In the market for the largest, and most scalable systems, those often costing in excess of $10 million, the use of generally available network components can result in increasing data transfer bottlenecks as these components do not balance processor power with network communication and system software capability. With increasing processor core counts due to new many-core processors, these unbalanced systems will typically have lower productivity, especially in larger systems running more complex applications. We and others augment standard microprocessors with other processor types, such as graphics processing units, in order to increase computational power, further complicating programming models. In addition, with increasing scale, bandwidth and processor core counts, large computer systems use progressively higher amounts of power to operate and require special cooling capabilities.

To position ourselves to meet the market's demanding needs, we concentrate our research and development efforts on technologies that enable our supercomputers to perform at scale - that is, to continue to increase actual performance as systems and applications grow ever larger in size - and in areas where we can leverage our core expertise in other markets whose applications demand these tightly coupled architectures. We also invest relatively significantly in next-generation technology to successfully and uniquely address the challenges of "Exascale computing" (systems with exaflops-levels of performance). In addition, we have demonstrated expertise in system and performance software and several processor technologies. We expect to be in a comparatively advantageous position as larger many-core processors become available and as multiple processing technologies become integrated into single systems in heterogeneous environments. In addition, we have continued to expand our addressable market by leveraging our technologies, customer base, the Cray brand and by introducing complementary products and services to new and existing customers, as demonstrated by our emphasis on strategic initiatives, such as big data analytics, AI and storage.

In analytics and AI, we are developing and delivering high performance data discovery, advanced analytics, machine learning and deep learning solutions. These solutions compete with open source software, running on commodity cluster or cloud systems. Although these competitive systems have low acquisition costs, the total cost of ownership (TCO) is driven up by management, power, efficiency and scaling challenges. We concentrate our efforts on developing solutions that minimize the TCO, delivering faster time-to-solution and advanced capabilities that are key drivers for many of our data analytics and AI customers. We support open source technologies such as Hadoop, Spark and Jupyter Notebook to design large-scale data analytics stacks that simplify analyses of scientific and commercial application and Python and R, distributed Dask, BigDL, TensorFlow and TensorBoard for advanced AI solutions.

In storage, we are developing and delivering high value products for the high performance parallel storage market. Our recent transaction with Seagate enhances our capabilities in storage and data management. Our storage products are primarily positioned to enable tight integration of storage to computing solutions and/or utilize parallel file processing technologies and facilitate storage across multiple data tiers. We support open source parallel file systems and protocols such as Lustre.

We have also expanded our addressable market by providing cluster systems and solutions to the supercomputing market that allow us to offer flexible platforms to incorporate best of breed components to allow customers to optimize the system to fit their unique requirements.

Key Performance Indicators

Our management monitors and analyzes several key performance indicators in order to manage our business and evaluate our financial and operating performance, including:

Revenue. Product revenue generally constitutes the major portion of our revenue in any reporting period and, for the reasons discussed in this annual report on Form 10-K, is subject to significant variability from period to period and is difficult to forecast. In the short term, we closely review the status of customer proposals, customer contracts, product shipments, installations and acceptances in order to forecast revenue and cash receipts. In the longer-term, we monitor the status of the pipeline of product sales opportunities and product development cycles. We believe product revenue growth measured over several quarters is a better indicator of whether we are achieving our objective of increased market share in the supercomputing market. The Cray XC and Cray CS products, along with our longer-term product roadmap are efforts to increase product revenue. We have increased our business and product development efforts in big data analytics, AI and storage and data management. Service revenue related to our maintenance offerings is subject to less variations in the short term and may assist, in part, to offset the impact that the variability in product revenue has on total revenue.

Gross profit margin. Gross profit margin is impacted by the level of revenue, different customer requirements, competitive considerations, product type and our cost to build and deliver our products and services. Our services tend to carry higher gross profit margins than our products. We often bid contracts and commit to future system performance where certain key components are not available in the market at the time of bid and/or whose price might change from what was expected. While we have significant experience doing so, such actions are inherently risky and can impact our gross profit margin significantly in any period. For example, memory prices have more than doubled in less than a year which has had a significant impact on our

reported product gross profit margin. To mitigate this and other similar risks, we monitor the cost of components, manufacturing, and installation of our products. In assessing our service gross profit margin, we monitor headcount levels and third-party costs.

Operating expenses. Our operating expenses are driven primarily by headcount and compensation expense, including variable incentive compensation and contracted third-party research and development services. As part of our ongoing expense management efforts, we continue to monitor headcount levels in specific geographic and operational areas. With the recent reduction in revenue levels, we reduced the size of our workforce in 2017. However, the recent transaction with Seagate has partially offset this reduction but should help increase revenue and improve storage gross profit margin in the future.

Liquidity and cash flows. Due to the variability in product revenue, new contracts, acceptance and payment terms, our cash position also varies significantly from quarter-to-quarter and within a quarter. We monitor our expected cash levels, particularly in light of increased inventory purchases for large system installations and the risk of delays in product shipments, customer acceptances and, in the long-term, product development. Cash receipts generally lag customer acceptances.

Results of Operations

Revenue and Gross Profit

Our product and service revenue for the indicated years ended December 31 were (in thousands, except for percentages):

	Year Ended December 31,		
	2017	2016	2015
Product revenue	$ 250,195	$ 499,432	$ 601,294
Less: Cost of product revenue	188,830	332,016	426,821
Product gross profit	$ 61,365	$ 167,416	$ 174,473
Product gross profit percentage	25%	34%	29%
Service revenue	$ 142,314	$ 130,377	$ 123,395
Less: Cost of service revenue	72,975	77,578	72,185
Service gross profit	$ 69,339	$ 52,799	$ 51,210
Service gross profit percentage	49%	40%	42%
Total revenue	$ 392,509	$ 629,809	$ 724,689
Less: Total cost of revenue	261,805	409,594	499,006
Total gross profit	$ 130,704	$ 220,215	$ 225,683
Total gross profit percentage	33%	35%	31%

Product Revenue

Product revenue for 2017 decreased by $249.2 million, or 50%, compared to 2016, substantially driven by a slow-down in the high-end segments of the supercomputing market that we target, as well as the timing of contracts and deliveries. Some 2017 deliveries were impacted by certain customer site readiness issues.

Product revenue for 2016 decreased by $101.9 million, or 17%, compared to 2015, substantially driven by a slow-down in the high-end segments of the supercomputing market that we target compared to recent years. In addition, the year over year comparison was impacted by two large systems that were accepted in the first quarter of 2015, accounting for approximately $40.0 million in revenue, for which we had previously anticipated acceptance to occur in the fourth quarter of 2014.

Service Revenue

Service revenue for 2017 increased by $11.9 million, or 9%, compared to 2016. The year over year increase in service revenue was primarily driven by increased maintenance revenue, which continues to be driven by our larger installed system base, including the benefit from longer lifetimes of installed systems due to the slowdown in acquisitions of new replacement systems.

Service revenue for 2016 increased by $7.0 million, or 6%, compared to 2015. The year over year increase in service revenue was primarily driven by increased maintenance revenue which benefited from a larger installed system base.

Cost of Product Revenue and Product Gross Profit

Cost of product revenue for 2017 decreased by $143.2 million compared to 2016, driven primarily by lower product revenue. Product gross profit percentage was 25% in 2017 compared to 34% in 2016. In the third quarter of 2017, we determined that a large contract currently scheduled for acceptance in 2018 would be performed at a loss of $4.1 million. The loss is attributable in part to higher component costs, predominantly for memory, changes in the configuration of the system from the time of bid, and changes in exchange rate. We recorded the full amount of the loss in 2017, which negatively affected margins. One relatively large sale to a U.S. government customer in the second quarter of 2017 and one relatively large sale to a foreign customer in the fourth quarter of 2017, both carrying lower margins, also significantly contributed to the decrease in product gross profit margin from 2016 to 2017.

Cost of product revenue for 2016 decreased by $94.8 million compared to 2015, driven primarily by lower product revenue and an improved product gross margin percentage. Product gross profit percentage was 34% in 2016 compared to 29% in 2015. The year over year increase in product gross margin percentage was driven by lower memory costs, partially offset by concessions and penalties and an increase in write-offs for excess and obsolete inventory.

Cost of Service Revenue and Service Gross Profit

Cost of service revenue decreased by $4.6 million in 2017 compared to 2016, primarily driven by $3.0 million of costs incurred in 2016 to replace a high-value third party component in a customer system and lower outside service costs in 2017. Service gross profit margin increased from 40% in 2016 to 49% in 2017. Service gross profit margins for 2016 were unusually low as the result of the $3.0 million of costs incurred to replace a high-value third party component in a customer system. The improved gross profit margin also benefited, in part, from the leveraging of fixed costs with improved revenue.

Cost of service revenue increased by $5.4 million in 2016 compared to 2015, driven by the costs to support a larger installed base of systems which also resulted in higher service revenue, and $3.0 million of costs incurred to replace a high-value third-party component in a customer system that is under a service contract. Service gross profit margin decreased from 42% in 2015 to 40% in 2016. The service gross profit margin decreased primarily due to the impact of the $3.0 million described previously, higher headcount and related base compensation expense as well as higher third-party costs. These amounts were partially offset by a decrease in incentive compensation expense.

Operating Expenses

Research and Development

Research and development expenses for the indicated years ended December 31 were as follows (in thousands, except for percentages):

	Year Ended December 31,		
	2017	2016	2015
Gross research and development expenses	$ 141,289	$ 130,006	$ 126,060
Less: Amounts included in cost of revenue	(9,473)	(12,621)	(16,515)
Less: Reimbursed research and development (excludes amounts in revenue)	(33,039)	(5,255)	(12,982)
Net research and development expenses	$ 98,777	$ 112,130	$ 96,563
Percentage of total revenue	25%	18%	13%

Gross research and development expenses in the table above reflect all research and development expenditures. Research and development expenses include personnel expenses, depreciation, allocations for certain overhead expenses, software, prototype materials and third party contract engineering expenses.

In 2017, gross research and development expenses increased by $11.3 million compared to 2016, primarily due to increased investments in the development of new products. We also increased our average headcount which resulted in compensation costs

increasing by $6.4 million compared to 2016. Net research and development expenses decreased by $13.4 million compared to 2016 as a result of increased reimbursements from third-parties related to projects for the development of new products, primarily our next generation "Shasta" system. We anticipate that reimbursed research and development will continue to vary significantly from period to period but will remain at relatively high levels over the next couple of years as a result of these projects.

In 2016, gross research and development expenses increased by $3.9 million compared to 2015, primarily due to increased investments in the development of new products. Total compensation costs increased by $1.7 million compared to 2015, driven by higher average headcount, partially offset by lower incentive compensation expense. Expenses for outside services increased by $1.3 million over the same period. Net research and development expenses increased by $15.6 million compared to 2015 as a result of the increase in gross research and development expenses described above and a decrease in amounts included in cost of revenue and reimbursed research and development. The decrease in reimbursements was primarily driven by lower funding in 2016 compared to 2015 and the timing of milestone and project completions.

Other Operating Expenses

Our sales and marketing and general and administrative expenses for the indicated years ended December 31 were (in thousands, except for percentages):

	Year Ended December 31,		
	2017	2016	2015
Sales and marketing	$ 59,894	$ 64,893	$ 60,150
Percentage of total revenue	15%	10%	8%
General and administrative	$ 29,113	$ 34,053	$ 27,966
Percentage of total revenue	7%	5%	4%

Sales and Marketing. Sales and marketing expense decreased by $5.0 million in 2017 compared to 2016. We lowered our average headcount which resulted in compensation costs decreasing by $4.7 million compared to 2016.

Sales and marketing expense increased by $4.7 million in 2016 compared to 2015. Total compensation costs for 2016 increased by $3.6 million compared to 2015, driven by higher headcount, partially offset by lower incentive compensation expense. Marketing program spending also increased by $0.8 million over the same period.

General and Administrative. General and administrative expense decreased by $4.9 million in 2017 compared to 2016, primarily due to a $2.3 million termination fee for our St. Paul facility that was expensed in 2016 and a $2.0 million decrease in legal costs, from $7.5 million in 2016 to $5.5 million in 2017, related to our ongoing litigation with Raytheon, see *Note 13 — Commitments and Contingencies* in the Notes to Consolidated Financial Statements in Item 15. Exhibits and Financial Statement Schedules in Part IV of this annual report on Form 10-K. Due to our ongoing litigation with Raytheon, legal expenses may vary over the next several quarters but will likely remain at above historical levels until the matter is resolved. We also lowered our average headcount which resulted in compensation costs decreasing by $0.8 million compared to 2016

The $6.1 million increase in general and administrative expense in 2016 compared to 2015 was primarily due to a $6.0 million increase in legal costs associated with our ongoing litigation with Raytheon. We also incurred a $2.3 million lease termination fee for our St. Paul facility in 2016. These amounts were partially offset by a $2.1 million decrease in incentive compensation expense in 2016 compared to 2015.

Restructuring

In the third quarter of 2017, we implemented a restructuring plan to reduce our operating costs and better align our workforce with long-term business strategies. The restructuring plan reduced our workforce by approximately 190 employees, with the majority of such terminations effective in July 2017. For the year ended December 31, 2017, we recorded $8.6 million in expense in connection with the restructuring plan, primarily related to employee severance.

Other Income (Expense), Net

We recorded $5.0 million and $0.4 million of net other income for the years ended December 31, 2017 and 2015, respectively, and $1.4 million of net other expense for the year ended December 31, 2016. Net other income and expense includes gains and losses from foreign currency transactions, investments and disposals of assets. Net other income for 2017 included a $3.3 million gain from the sale of an investment in a private company.

Interest Income, Net

Our interest income and interest expense for the indicated years ended December 31 were (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Interest income	$ 3,386	$ 2,120	$ 1,465
Interest expense	(110)	27	(57)
Net interest income	$ 3,276	$ 2,147	$ 1,408

Interest income is earned on cash and cash equivalents, investment balances and the investment in sales-type lease.

Gain on Strategic Transaction

In the third quarter of 2017, we completed a strategic transaction with Seagate Cloud Systems Inc. centered around the transfer of Seagate's ClusterStor high-performance storage business to Cray. As part of the transaction, we have assumed customer support obligations associated with the ClusterStor product line and have added more than 125 employees and contractors. For the year ended December 31, 2017, we recognized a gain of approximately $4.5 million associated with the transaction.

Taxes

We recorded income tax benefit (expense) for the indicated years ended December 31 as follows (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Net income (loss) before income taxes	$ (52,890)	$ 9,921	$ 42,777
Tax benefit (expense)	(80,939)	694	(15,240)
Net income (loss)	$(133,829)	$ 10,615	$ 27,537
Effective tax rate	(153)%	(7)%	36%

The Tax Cuts and Jobs Act, which was signed into law on December 22, 2017, made significant changes to existing U.S. tax law, including, but not limited to, a permanent reduction to the U.S. federal corporate income tax rate from 35% to 21%, imposition of a one-time tax on deferred foreign income ("Repatriation Transition Tax"), adoption of a participation exemption system with respect to the taxation of future dividends received from foreign corporations, and repeal of the corporate alternative minimum tax system. Other significant changes in the Tax Cuts and Jobs Act include taxing payments made to foreign related parties that are deemed to be excessive, imposing a minimum tax on certain foreign earnings, requiring (beginning after December 31, 2021) the capitalization and subsequent amortization of certain research and development related expenses, and placing additional limits on the use of net operating losses and the deductibility of certain executive compensation.

Amounts we recorded during the year ended December 31, 2017 directly attributable to the enactment of the Tax Cuts and Jobs Act included a reduction, in the amount of $28.9 million, in the carrying value of our U.S. deferred tax assets as a result of a reduction in the U.S. federal corporate income tax rate to 21%, the estimated impact, in the amount of $0.3 million, associated with the Repatriation Transaction Tax, and the estimated impact, in the amount of $0.3 million, associated with our decision to no longer consider the undistributed earnings of our foreign subsidiaries to be permanently reinvested outside of the U.S. Estimated amounts have been recorded on a provisional basis in accordance with Securities and Exchange Commission Staff Accounting Bulletin 118 and may be adjusted, during a one-year measurement period, when we have had sufficient time to obtain, prepare and analyze historical tax returns, financial statements and related accounts that is required to finalize our accounting with respect to those items.

For the year ended December 31, 2017, the difference between the income tax benefit at the federal statutory rate of 35% and our income tax expense at the effective rate of (153)% was primarily attributable to the reduction in the U.S. federal corporate income tax rate as a result of the Tax Cuts and Jobs Act and its impact on the carrying value of our U.S. deferred tax assets and our decision after the Tax Cuts and Jobs Act was enacted to increase the valuation allowance held against our U.S. deferred tax assets, offset, in part, by research and development tax credits. For the year ended December 31, 2016, the difference between the income tax provision at the federal statutory rate of 35% and our income tax benefit at the effective income tax rate of (7)% was the result of research and development tax credits and additional tax deductions from share-based payments, sometimes referred to as excess tax benefits, partially offset by state taxes, non-deductible expenses and other permanent items. Excess tax benefits arise when tax deductions that we recognize with respect to share-based compensation exceed the compensation cost attributable to share-based compensation that was recognized in our consolidated financial statements. For the year ended December 31, 2015, the difference between the income tax provision at the federal statutory rate of 35% and our income tax expense at the effective rate of 36% was the result of state taxes, non-deductible expenses and other permanent items, partially offset by research and development tax credits.

During 2017, our valuation allowance increased by $74.1 million, substantially all of which was attributable to our decision to increase the valuation allowance held against our U.S. deferred tax assets on December 31, 2017.

The assessment of our ability to utilize our U.S. deferred tax assets was based upon all available positive and negative evidence, which included, among other things, our recent results of operations, forecasted domestic and international earnings over a number of years, all known business risks and industry trends, and applicable tax planning strategies. We consider our actual historical results over several years to have stronger weight than other more subjective indicators, including forecasts, when considering whether to establish or reduce a valuation allowance on deferred tax assets. We have significant difficulty projecting future results due to the nature of the business and the industry in which we operate. As of December 31, 2017, we had experienced a significant decline in revenue, gross profit, and operating income since 2015, had reported a cumulative pre-tax loss in recent years and are currently forecasting to report a pre-tax loss for the year ending December 31, 2018. Our conclusion about the realizability of our deferred tax assets, and therefore the appropriateness of the valuation allowance, is reviewed quarterly and could change in future periods depending on our future assessment of all available evidence. If we had determined that it was appropriate to increase the valuation allowance held against our U.S. deferred tax assets prior to enactment of the Tax Cuts and Jobs Act total tax expense for the year ended December 31, 2017 would not have changed. The decrease in the carrying value of our U.S. deferred tax assets as a result of the reduction in the U.S. federal corporate income tax rate would have been completely offset by a reduction in the valuation allowance that would have been previously established against those deferred tax assets.

As of December 31, 2017, we had U.S. federal net operating loss carryforwards of approximately $72.6 million and U.S. federal research and development tax credit carryforwards of approximately $36.0 million. The federal net operating loss carryforwards will expire between 2019 through 2037, and the research and development tax credits will expire from 2021 through 2037 if not utilized.

New Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers: Topic 606 (ASU 2014-09) to supersede nearly all existing revenue recognition guidance under GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration that is expected to be received for those goods or services. ASU 2014-09 defines a five step process to achieve this core principle and, in doing so, it is possible more judgment and estimates may be required within the revenue recognition process than required under existing GAAP, including identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. Adoption of ASU 2014-09 was initially required for fiscal and interim reporting periods beginning after December 15, 2016 using either of two methods: (i) retrospective to each prior reporting period presented with the option to elect certain practical expedients as defined within ASU 2014-09 (full retrospective method); or

(ii) retrospective with the cumulative effect of initially applying ASU 2014-09 recognized at the date of initial application and providing certain additional disclosures as defined per ASU 2014-09 (modified retrospective method).

In August 2015, FASB issued Accounting Standards Update No. 2015-14, Revenue from Contracts with Customers - Deferral of the Effective Date: Topic 606 (ASU 2015-14) that deferred the effective date of ASU 2014-09 by one year. Application of the new revenue standard is permitted for fiscal and interim reporting periods beginning after December 15, 2016 and required for fiscal and interim reporting periods beginning after December 15, 2017. We believe the impact of adopting the new guidance will be immaterial to our annual and interim financial statements. We believe that the impact will be limited to the identification of a significant financing component in a small number of our contracts with customers. We will also be required to make additional disclosures under the new guidance. We plan to adopt this standard in the first quarter of 2018 using the modified retrospective method.

In July 2015, FASB issued Accounting Standards Update No. 2015-11, Simplifying the Measurement of Inventory: Topic 330 (ASU 2015-11) to amend Topic 330, Inventory. Topic 330 previously required an entity to measure inventory at the lower of cost or market. Market could be replacement cost, net realizable value, or net realizable value less an approximately normal profit margin. ASU 2015-11 requires that inventory measured using either the first-in, first-out (FIFO) or average cost method now be measured at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. We adopted ASU 2015-11 at the beginning of the first quarter of 2017. Adoption of ASU 2015-11 did not have a material impact on our consolidated financial statements.

In November 2015, FASB issued Accounting Standards Update No. 2015-17, Balance Sheet Classification of Deferred Taxes: Topic 740 (ASU 2015-17). Current GAAP requires the deferred taxes for each jurisdiction to be presented as a net current asset or liability and net noncurrent asset or liability. This requires a jurisdiction-by-jurisdiction analysis based on the classification of the assets and liabilities to which the underlying temporary differences relate, or, in the case of loss or credit carryforwards, based on the period in which the attribute is expected to be realized. Any valuation allowance is then required to be allocated on a pro rata basis, by jurisdiction, between current and noncurrent deferred tax assets. The new guidance requires that all deferred tax assets and liabilities, along with any related valuation allowance, be classified as noncurrent on the balance sheet. As a result, each jurisdiction will now only have one net noncurrent deferred tax asset or liability. The guidance does not change the existing requirement that only permits offsetting within a jurisdiction. We adopted ASU 2015-17 at the beginning of the first quarter of 2017. At the time of adoption, all of our deferred tax assets and liabilities, along with any related valuation allowance, were classified as noncurrent on our Consolidated Balance Sheet. We adopted ASU 2015-17 on a retrospective basis. As such, prior period amounts have been adjusted to reflect the retrospective application of ASU 2015-17. This resulted in $19.1 million of current net deferred tax assets being reclassified as noncurrent on our December 31, 2016 Consolidated Balance Sheet.

In January 2016, FASB issued Accounting Standards Update No. 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities: Topic 825 (ASU 2016-01). The updated guidance enhances the reporting model for financial instruments, which includes amendments to address aspects of recognition, measurement, presentation and disclosure. Adoption of ASU 2016-01 is required for fiscal reporting periods beginning after December 15, 2017, including interim reporting periods within those fiscal years. We do not expect the adoption of ASU 2016-01 to have a material impact on our consolidated financial statements.

In February 2016, FASB issued Accounting Standards Update No. 2016-02, Leases: Topic 842 (ASU 2016-02), that replaces existing lease guidance. The new standard is intended to provide enhanced transparency and comparability by requiring lessees to record right-of-use assets and corresponding lease liabilities on the balance sheet. Under the new guidance, leases will continue to be classified as either finance or operating, with classification affecting the pattern of expense recognition in the Consolidated Statements of Operations. Lessor accounting is largely unchanged under ASU 2016-02. Adoption of ASU 2016-02 is required for fiscal reporting periods beginning after December 15, 2018, including interim reporting periods within those fiscal years with early adoption being permitted. As of December 31, 2017, the new standard requires application with a modified retrospective approach to each prior reporting period presented with various optional practical expedients. While we expect adoption to lead

to a material increase in the assets and liabilities recorded on our Consolidated Balance Sheet, we are still evaluating the overall impact on our consolidated financial statements.

In August 2016, FASB issued Accounting Standards Update No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments (ASU 2016-15). The updated guidance clarifies how companies present and classify certain cash receipts and cash payments in the statement of cash flows. Adoption of ASU 2016-15 is required for fiscal reporting periods beginning after December 15, 2017, including interim reporting periods within those fiscal years with early adoption being permitted. We do not expect the adoption of ASU 2016-15 to have a material impact on our consolidated financial statements.

In November 2016, FASB issued Accounting Standards Update No. 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash (ASU 2016-18) which amends ASC 230 to add or clarify guidance on the classification and presentation of restricted cash in the statement of cash flows. The amended guidance requires that amounts that are deemed to be restricted cash and restricted cash equivalents be included in the cash and cash-equivalent balances in the statement of cash flows. A reconciliation between the consolidated balance sheet and the statement of cash flows must be disclosed when the consolidated balance sheet includes more than one line item for cash, cash equivalents, restricted cash, and restricted cash equivalents. The guidance also requires that changes in restricted cash and restricted cash equivalents that result from transfers between cash, cash equivalents, and restricted cash and restricted cash equivalents should not be presented as cash flow activities in the statement of cash flows. An entity with a material balance of amounts generally described as restricted cash and restricted cash equivalents must disclose information about the nature of the restrictions. Adoption of ASU 2016-18 is required for fiscal reporting periods beginning after December 15, 2017, including interim reporting periods within those fiscal years with early adoption being permitted. We do not expect the adoption of ASU 2016-18 to have a material impact on our consolidated financial statements.

In January 2017, FASB issued Accounting Standards Update No. 2017-04, Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment (ASU 2017-04) which eliminates Step 2 from the goodwill impairment test. ASU 2017-04 also eliminates the requirements for any reporting unit with a zero or negative carrying amount to perform a qualitative assessment and, if it fails that qualitative test, to perform Step 2 of the goodwill impairment test. An entity still has the option to perform the qualitative assessment for a reporting unit to determine if the quantitative impairment test is necessary. Adoption of ASU 2017-04 is required for annual or interim goodwill impairment tests in fiscal years beginning after December 15, 2019 with early adoption being permitted for annual or interim goodwill impairment tests performed on testing dates after January 1, 2017. We adopted ASU 2017-04 at the beginning of the second quarter of 2017. Adoption of ASU 2017-04 did not have a material impact on our consolidated financial statements.

In August 2017, FASB issued Accounting Standards Update No. 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities (ASU 2017-12). The new standard simplifies and expands the eligible hedging strategies for financial and nonfinancial risks. It also enhances the transparency of how hedging results are presented and disclosed. Further, the new standard provides partial relief on the timing of certain aspects of hedge documentation and eliminates the requirement to recognize hedge ineffectiveness separately in earnings. Adoption of ASU 2017-12 is required for fiscal reporting periods beginning after December 15, 2018, including interim reporting periods within those fiscal years with early adoption being permitted. We are currently evaluating the potential impact of the pending adoption of ASU 2017-12 on our consolidated financial statements.

Liquidity and Capital Resources

We generate cash from operations predominantly from the sale of supercomputing systems and related services. We typically have a small number of significant contracts that make up the majority of total revenue. We have also entered into a sales-type lease agreement with a customer, under which we will receive quarterly payments over the term of the lease, which expires in September 2020. Material changes in certain of our balance sheet accounts were due to the level and timing of: product deliveries and customer acceptances, contractually determined billings, cash collections of receivables, inventory purchased for future deliveries, and incentive compensation. Working capital requirements, including inventory purchases and normal capital expenditures, are generally funded with cash from operations.

In the third quarter of 2017, we implemented a restructuring plan to reduce our operating costs and better align our workforce with long-term business strategies. The restructuring plan reduced our workforce by approximately 190 employees, with the vast majority of such terminations effective in July 2017. We recorded $8.6 million in expense associated with the restructuring plan, primarily related to employee severance, in 2017. The majority of the cash payments related to the restructuring charges were paid in 2017.

In September of 2017, we completed a strategic transaction with Seagate Cloud Systems Inc. centered around the addition of Seagate's ClusterStor high-performance storage business. As part of the transaction, we have assumed customer support obligations associated with the ClusterStor product line and have added more than 125 employees and contractors. Assets received as part of the transaction included cash of $8.0 million. We expect to receive approximately $1.8 million in additional cash in the first half of 2018 as part of post-closing adjustments based on the final analysis of obligations to be assumed

Total cash and investments decreased from $224.6 million at December 31, 2016 to $147.3 million at December 31, 2017. As of December 31, 2017, $19.1 million of our total cash and investments balance was held by foreign subsidiaries. As of December 31, 2017, we had $3.0 million in restricted cash associated with certain letters of credit outstanding to secure customer prepayments. As of December 31, 2017, we had working capital of $354.3 million compared to $373.0 million as of December 31, 2016.

Cash flow information for the indicated years ended December 31 included the following (in thousands):

	2017	2016	2015
Cash provided by (used in):			
Operating Activities	$ (73,341)	$ (52,313)	$ 147,756
Investing Activities	(13,663)	8,998	7,216
Financing Activities	(332)	(540)	(1,373)

Operating Activities. For the year ended December 31, 2017, cash used in operating activities was primarily driven by an increase of $97.7 million in inventory as a result of system builds for future deliveries and the net loss, adjusted for non-cash and non-operating items, of $31.7 million. These amounts were partially offset by collections from customers that resulted in a decrease of $38.7 million in accounts and other receivables. For the year ended December 31, 2016, cash used in operating activities was primarily driven by a $78.4 million increase in our accounts and other receivable balance from December 31, 2015 to December 31, 2016. This was due to a number of large customer acceptances in the fourth quarter of 2016 for which we collected cash in the first quarter of 2017. For the year ended December 31, 2015, cash provided by operating activities was primarily driven by net income of $27.5 million and the positive impact of adding back non-cash operating items of $42.4 million, customer acceptances of our systems that resulted in a decrease of $21.3 million in inventory, and collections from customers that resulted in a decrease of $36.7 million in accounts and other receivables.

Investing Activities. For the year ended December 31, 2017, cash used in investing activities was primarily due to purchases of debt securities of $94.9 million and purchases of property and equipment of $17.5 million, mostly related to leasehold improvements for our new facilities in Bloomington, Minnesota. These amounts were partially offset by sales and maturities of debt securities of $87.5 million and $8.0 million of cash received as part of the strategic transaction with Seagate, respectively. For the year ended December 31, 2016, cash provided by investing activities was principally due to sales and maturities of debt securities of $31.0 million, partially offset by purchases of debt securities of $16.2 million and purchases of property and equipment of $7.5 million. For the year ended December 31, 2015, cash provided by investing activities was principally due to sales and maturities of debt securities of $16.2 million and a release of $13.4 million in restricted cash related to a prepayment on a system from a customer that was released at the time of delivery, partially offset by purchases of debt securities of $15.0 million and purchases of property and equipment of $7.5 million.

Financing Activities. Net cash used in financing activities in 2017, 2016 and 2015 resulted primarily from statutory tax withholding amounts made in exchange for the forfeiture of common stock by holders of vesting restricted stock, partially offset by cash received from the issuance of common stock from the exercise of options and from the issuance of stock through our employee stock purchase plan.

Over the next twelve months, we expect our significant cash requirements will relate to operational expenses. Operational expenses consist primarily of personnel costs, costs of inventory associated with certain large-scale product deliveries, spare parts, outside engineering expenses, and the acquisition of property and equipment. In addition, we lease certain equipment and facilities used in our operations under operating leases in the normal course of business.

The following table summarizes our contractual cash obligations as of December 31, 2017 (in thousands):

	Amounts Committed by Year				
Contractual Obligations	**Total**	**1 Year**	**Years 2-3**	**Years 4-5**	**Thereafter**
Development agreements	$ 25,061	$ 19,930	$ 5,131	$ —	$ —
Operating leases	53,933	7,461	13,150	12,613	20,709
Total contractual cash obligations	$ 78,994	$ 27,391	$ 18,281	$ 12,613	$ 20,709

As of December 31, 2017, we had a $50.0 million revolving line of credit (Credit Facility) with Wells Fargo Bank, National Association, designed to be used for general corporate purposes, including working capital requirements and capital expenditures. The Credit Facility also supports the issuance of letters of credit. The Credit Facility is secured by a first priority lien in all of our accounts receivable and other rights to payment, general intangibles, inventory and equipment.

Any borrowings under the Credit Facility bear interest at either a fluctuating rate equal to the daily one month LIBOR rate plus a margin of 1.25% or a fixed interest rate for one, three or six months equal to the LIBOR rate for the applicable period plus a margin of 1.25%. We are also required to pay the lender customary letter of credit fees, and a commitment fee of 0.18% per annum in respect of the unutilized commitment amount under the Credit Facility. The Credit Facility requires that we maintain certain financial ratios and restricts our ability to incur additional indebtedness, pay dividends or distributions, create liens on assets, and engage in certain other activities. We were in compliance with all of our financial covenants as of the end of each quarter for the year ended December 31, 2017. The Credit Facility matures in March 2018. We have begun discussions with the bank that may result in changes to the size and terms of this arrangement.

We made no draws and had no outstanding cash borrowings on the line of credit as of December 31, 2017.

As of December 31, 2017, we had $15.0 million in USD equivalent value in outstanding letters of credit and $3.0 million in restricted cash associated with certain letters of credit to secure customer prepayments and other customer related obligations.

In our normal course of operations, we have development arrangements under which we engage outside engineering resources to work on our research and development projects. For the year ended December 31, 2017, we incurred $17.5 million for such arrangements.

At any particular time, our cash position is affected by the timing of cash receipts for product sales, maintenance contracts, government co-funding for research and development activities and our payments for inventory, resulting in significant fluctuations in our cash balance from quarter-to-quarter and within a quarter. Our principal sources of liquidity are our cash and cash equivalents, short-term investments and cash from operations. We expect our cash resources to be adequate for at least the next twelve months.

Beyond the next twelve months, the adequacy of our cash resources will largely depend on our success in achieving profitable operations and positive operating cash flows on a sustained basis.

Critical Accounting Policies and Estimates

This discussion, as well as disclosures included elsewhere in this annual report on Form 10-K, is based upon our financial statements, which have been prepared in accordance with GAAP. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingencies. In preparing our financial statements in accordance with GAAP, there are certain accounting policies that are particularly important. These include revenue recognition, inventory valuation, accounting for income taxes, research and development expenses and share-based compensation. We believe these accounting policies and others set forth in *Note 2 — Summary of Significant Accounting Policies* of the Notes to Consolidated Financial Statements in Item 15. Exhibits

and Financial Statement Schedules in Part IV of this annual report on Form 10-K should be reviewed as they are integral to understanding our results of operations and financial condition. In some cases, these policies represent required accounting. In other cases, they may represent a choice between acceptable accounting methods or may require substantial judgment or estimation.

Additionally, we consider certain judgments and estimates to be significant, including those relating to the estimated selling price determination used in revenue recognition, percentage of completion accounting, estimates of proportional performance on co-funded engineering contracts, collectibility of receivables, determination of inventory at the lower of cost or net realizable value, the value of used equipment returned or to be returned associated with customer contracts, useful lives for depreciation and amortization, determination of future cash flows associated with impairment testing of long-lived assets, including goodwill and other intangibles, determination of the implicit interest rate used in the sales-type lease calculation, estimated warranty liabilities, determination of the fair value of stock options and other assessments of fair value, evaluation of the probability of vesting of performance-based restricted stock and restricted stock units, calculation of deferred income tax assets, including estimates of future financial performance in the determination of the likely recovery of deferred income tax assets, our ability to utilize such assets, potential income tax assessments, the outcome of any legal proceedings and other contingencies. We base our estimates on historical experience, current conditions and on other assumptions that we believe to be reasonable under the circumstances. Actual results may differ materially from these estimates and assumptions.

Our management has discussed the selection of significant accounting policies and the effect of judgments and estimates with the Audit Committee of our Board of Directors.

Revenue Recognition

We recognize revenue, including transactions under sales-type leases, when it is realized or realizable and earned. We consider revenue realized or realizable and earned when we have persuasive evidence of an arrangement, delivery has occurred, the sales price is fixed or determinable, and collectibility is reasonably assured. Delivery does not occur until the products have been shipped or services provided to the customer, the risk of loss has transferred to the customer, and, where applicable, a customer acceptance has been obtained. The sales price is not considered to be fixed or determinable until all material contingencies related to the sales have been resolved. We record revenue in the Consolidated Statements of Operations net of any sales, use, value added or certain excise taxes imposed by governmental authorities on specific sales transactions. In addition to the aforementioned general policy, the following are our statements of policy with regard to multiple-element arrangements and specific revenue recognition policies for each major category of revenue.

Multiple-Element Arrangements. We commonly enter into revenue arrangements that include multiple deliverables of our product and service offerings due to the needs of our customers. Products may be delivered in phases over time periods which can be as long as five years. Maintenance services generally begin upon acceptance of the first equipment delivery and future deliveries of equipment generally have an associated maintenance period. We consider the maintenance period to commence upon acceptance of the product, or installation of the product where a formal acceptance is not required, which may include a warranty period and accordingly allocate a portion of the arrangement consideration as a separate deliverable which is recognized as service revenue over the entire service period. Other services such as training and engineering services can be delivered as a discrete delivery or over the term of the contract. A multiple-element arrangement is separated into more than one unit of accounting if the following criteria are met:

- The delivered item(s) has value to the customer on a standalone basis; and
- If the arrangement includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item(s) is considered probable and substantially in our control.

If these criteria are met for each element, the arrangement consideration is allocated to the separate units of accounting based on each unit’s relative selling price. If these criteria are not met, the arrangement is accounted for as one unit of accounting which would result in revenue being recognized ratably over the contract term or being deferred until the earlier of when such criteria are met or when the last undelivered element is delivered.

We follow a selling price hierarchy in determining the best estimate of the selling price of each deliverable. Certain products and services are sold separately in standalone arrangements for which we are sometimes able to determine vendor specific objective evidence (VSOE). We determine VSOE based on normal pricing and discounting practices for the product or service when sold separately.

When we are not able to establish VSOE for all deliverables in an arrangement with multiple elements, we attempt to establish the selling price of each remaining element based on third-party evidence (TPE). Our inability to establish VSOE is often due to a relatively small sample of customer contracts that differ in system size and contract terms which can be due to infrequently selling each element separately, not pricing products within a narrow range, or only having a limited sales history, such as in the case of certain advanced and emerging technologies. TPE is determined based on our prices or competitor prices for similar deliverables when sold separately. However, we are often unable to determine TPE, as our offerings usually contain a significant level of customization and differentiation from those of competitors and we are often unable to reliably determine what similar competitor products' selling prices are on a standalone basis.

When we are unable to establish selling price using VSOE or TPE, we use estimated selling price (ESP) in our allocation of arrangement consideration. The objective of ESP is to determine the price at which we would transact a sale if the product or service were sold on a standalone basis. In determining ESP, we use the cost to provide the product or service plus a margin, or consider other factors. When using cost plus a margin, we consider the total cost of the product or service, including customer-specific and geographic factors. We also consider the historical margins of the product or service on previous contracts and several factors including any changes to pricing methodologies, competitiveness of products and services and cost drivers that would cause future margins to differ from historical margins.

Products. We most often recognize revenue from sales of products upon delivery or customer acceptance of the system. Where formal acceptance is not required, we recognize revenue upon delivery or installation. When the product is part of a multiple element arrangement, we allocate a portion of the arrangement consideration to product revenue based on estimates of selling price.

Services. Maintenance services are provided under separate maintenance contracts with customers. These contracts generally provide for maintenance services for one year, although some are for multi-year periods, often with prepayments for the term of the contract. We consider the maintenance period to commence upon acceptance of the product or installation in situations where a formal acceptance is not required, which may include a warranty period. When service is part of a multiple element arrangement, we allocate a portion of the arrangement consideration to maintenance service revenue based on estimates of selling price. Maintenance contracts that are billed in advance of revenue recognition are recorded as deferred revenue. Maintenance revenue is recognized ratably over the term of the maintenance contract.

Revenue from engineering services is recognized as services are performed.

Project Revenue. Revenue from design and build contracts is recognized under the percentage-of-completion (or POC method). Under the POC method, revenue is recognized based on the costs incurred to date as a percentage of the total estimated costs to fulfill the contract. If circumstances arise that change the original estimates of revenues, costs, or extent of progress toward completion, revisions to the estimates are made. These revisions may result in increases or decreases in estimated revenues or costs, and such revisions are recorded in income in the period in which the circumstances that gave rise to the revision become known by management. We perform ongoing profitability analyses of our contracts accounted for under the POC method in order to determine whether the latest estimates of revenue, costs and extent of progress require updating. If at any time these estimates indicate that the contract will be unprofitable, the entire estimated loss for the remainder of the contract is recorded immediately.

We record revenue from certain research and development contracts which include milestones using the milestone method if the milestones are determined to be substantive. A milestone is considered to be substantive if management believes there is substantive uncertainty that it will be achieved and the milestone consideration meets all of the following criteria:

- It is commensurate with either of the following:
    - Our performance to achieve the milestone; or

- The enhancement of value of the delivered item or items as a result of a specific outcome resulting from our performance to achieve the milestone.

- It relates solely to past performance.
- It is reasonable relative to all of the deliverables and payment terms (including other potential milestone consideration) within the arrangement.

The individual milestones are determined to be substantive or non-substantive in their entirety and milestone consideration is not bifurcated.

Revenue from projects is classified as Product Revenue or Service Revenue, based on the nature of the work performed.

Nonmonetary Transactions. We value and record nonmonetary transactions at the fair value of the asset surrendered unless the fair value of the asset received is more clearly evident, in which case the fair value of the asset received is used.

Inventory Valuation

We record our inventory at the lower of cost or net realizable value, with cost computed on a first-in, first-out basis (FIFO). We regularly evaluate the technological usefulness and anticipated future demand for our inventory components. Due to rapid changes in technology and the increasing demands of our customers, we are continually developing new products. Additionally, during periods of product or inventory component upgrades or transitions, we may acquire significant quantities of inventory to support estimated current and future production and service requirements. As a result, it is possible that older inventory items we have purchased may become obsolete, be sold below cost or be deemed in excess of quantities required for production or service requirements. When we determine it is not likely we will recover the cost of inventory items through future sales, we write-down the related inventory to our estimate of its net realizable value. Prior to the adoption of ASU 2015-11 at the beginning of the first quarter of 2017, inventory was valued at the lower of cost or market. The adoption of ASU 2015-11 did not have a material impact on our consolidated financial statements.

Because the products we sell have high average sales prices and because a high number of our prospective customers receive funding from U.S. or foreign governments, it is difficult to estimate future sales of our products and the timing of such sales. It also is difficult to determine whether the cost of our inventories will ultimately be recovered through future sales. While we believe our inventory is stated at the lower of cost or net realizable value and that our estimates and assumptions to determine any adjustments to the cost of our inventories are reasonable, our estimates may prove to be inaccurate. We have sold inventory previously reduced in part or in whole to zero, and we may have future sales of previously written-down inventory. We also may incur additional expenses to write-down inventory to its estimated net realizable value. Adjustments to these estimates in the future may materially impact our operating results.

Accounting for Income Taxes

Deferred tax assets and liabilities are determined based on differences between financial reporting and tax bases of assets and liabilities and operating loss and tax credit carryforwards and are measured using the enacted tax rates and laws that will be in effect when the differences and carryforwards are expected to be recovered or settled.

A valuation allowance for deferred tax assets is provided when we estimate that it is more likely than not that all or a portion of the deferred tax assets will not be realized through future operations. This assessment is based upon consideration of all available positive and negative evidence, which includes, among other things, our recent results of operations, forecasted domestic and international earnings over a number of years, all known business risks and industry trends, and applicable tax planning strategies that should, if implemented, enable us to utilize our deferred tax assets before they expire. We consider our actual historical results over several years to have stronger weight than other more subjective indicators, including forecasts, when considering whether to establish or reduce a valuation allowance on deferred tax assets. We have significant difficulty projecting future results due to the nature of the business and the industry in which we operate.

We provided a valuation allowance against our U.S. deferred tax assets and against the majority of our foreign deferred tax assets at December 31, 2017 as the realization of such assets is not considered to be more likely than not at this time. In a future

period our assessment of the realizability of our deferred tax assets and therefore the appropriateness of the valuation allowance could change based on an assessment of all available evidence, both positive and negative in that future period. If our conclusion about the realizability of our deferred tax assets and therefore the appropriateness of the valuation allowance changes in a future period we could record a substantial tax benefit in our Consolidated Statement of Operations when that occurs. We recognize the income tax benefit from a tax position only if it is more likely than not that the tax position will be sustained on examination by the applicable taxing authorities, based on the technical merits of our position. The tax benefit recognized in the financial statements from such a position is measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement.

As of December 31, 2017, we had approximately $84.0 million of net deferred tax assets before application of a valuation allowance. As of December 31, 2017, net deferred tax assets after reduction by the valuation allowance of $82.9 million were $1.1 million. Included in our deferred tax assets is a deferred tax asset of $15.2 million related to federal net operating loss carryforwards that will expire between 2019 and 2037 and a deferred tax asset of $36.0 million related to federal research and development tax credits that will expire between 2021 and 2037.

Estimated interest and penalties are recorded as a component of interest expense and other expense, respectively.

Research and Development Expenses

Research and development expenses include costs incurred in the development and production of our hardware and software, costs incurred to enhance and support existing product features, costs incurred to support and improve our development processes, and costs related to future product development. Research and development costs are expensed as incurred, and may be offset by co-funding from third parties. We may also enter into arrangements whereby we make advance, non-refundable payments to a vendor to perform certain research and development services. These payments are deferred and recognized over the vendor's estimated performance period.

Amounts to be received under co-funding arrangements with the U.S. government or other customers are based on either contractual milestones or costs incurred. These co-funding milestone payments are recognized in operations as performance is estimated to be completed and are measured as milestone achievements occur or as costs are incurred. These estimates are reviewed on a periodic basis and are subject to change, including in the near term. If an estimate is changed, net research and development expense could be impacted significantly.

We do not record a receivable from the U.S. government prior to completing the requirements necessary to bill for a milestone or cost reimbursement. Funding from the U.S. government is subject to certain budget restrictions and milestones may be subject to completion risk, and as a result, there may be periods in which research and development costs are expensed as incurred for which no reimbursement is recorded, as milestones have not been completed or the U.S. government has not funded an agreement. Accordingly, there can be substantial variability in the amount of net research and development expenses from quarter to quarter and year to year.

We classify amounts to be received from funded research and development projects as either revenue or a reduction to research and development expense based on the specific facts and circumstances of the contractual arrangement, considering total costs expected to be incurred compared to total expected funding and the nature of the research and development contractual arrangement. In the event that a particular arrangement is determined to represent revenue, the corresponding costs are classified as cost of revenue.

Share-based Compensation

We measure compensation cost for share-based payment awards at fair value and recognize it as compensation expense over the service period for awards expected to vest. We recognize share-based compensation expense for all share-based payment awards, net of an estimated forfeiture rate. We recognize compensation cost for only those shares expected to vest on a straight-line basis over the requisite service period of the award.

Determining the appropriate fair value model and calculating the fair value of share-based payment awards requires subjective assumptions, including the expected life of the share-based payment awards and stock price volatility. We utilize the

Black-Scholes options pricing model to value the stock options granted under our options plans. In this model, we utilize assumptions related to stock price volatility, stock option term and forfeiture rates that are based upon both historical factors as well as management's judgment.

The fair value of restricted stock and restricted stock units is determined based on the number of shares or units granted and the quoted price of our common stock at the date of grant.

We have granted performance vesting restricted stock and performance vesting restricted stock units to executives as one of the ways to align compensation with shareholder interests. Vesting of these awards is contingent upon achievement of certain performance conditions. Compensation expense for these awards is only recognized when vesting is deemed to be "probable". Awards are evaluated for probability of vesting during each reporting period. We do not currently believe that any of our performance vesting restricted stock or performance vesting restricted stock units are "probable" of vesting.

Business Combinations

We account for business combinations using the purchase method of accounting and allocate the purchase price to the tangible and intangible assets acquired and the liabilities assumed based upon their estimated fair values at the acquisition date. The excess of the purchase price over the fair value of the net assets acquired is recorded as goodwill. If the fair value of the net assets acquired exceeds the purchase price we record a bargain purchase gain. We use estimates and assumptions to value assets acquired and liabilities assumed at the acquisition date. During the measurement period, which may be up to one year from the acquisition date, any refinements made to the fair value of the assets and liabilities assumed are recorded in the period in which the adjustments are recognized.

The fair values of intangible assets acquired are estimated using a discounted cash flow approach with Level 3 inputs. Under this method, an intangible asset's fair value is equal to the present value of the incremental after-tax cash flows (excess earnings) attributable solely to the intangible asset over its remaining useful life. To calculate fair value, we use risk-adjusted cash flows discounted at rates considered appropriate given the inherent risks associated with each type of asset. We believe the level and timing of cash flows appropriately reflects market participant assumptions.

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

We are exposed to financial market risks, including changes in interest rates and equity price fluctuations.

Interest Rate Risk: We invest our available cash in money market mutual funds whose underlying investments include investment-grade debt instruments of corporate issuers and in debt instruments of the U.S. government and its agencies. We do not have any derivative instruments or auction rate securities in our investment portfolio. We protect and preserve invested funds by limiting default, market and reinvestment risk. Investments in both fixed-rate and floating-rate interest earning instruments carry a degree of interest rate risks. Fixed-rate securities may have their fair market value adversely affected due to a rise in interest rates, while floating-rate securities may produce less income than expected if interest rates fall. Due in part to these factors, our future investment income may fall short of expectations due to changes in interest rates or we may suffer losses in principal if forced to sell securities which have declined in market value due to changes in interest rates. Although we are subject to the above noted risks, we believe that a 0.5% change in interest rates would not be material.

Foreign Currency Risk: We sell our products primarily in North America, Asia and Europe. As a result, our financial results could be affected by factors such as changes in foreign currency exchange rates or weak economic conditions in foreign markets. Our products are generally priced based on U.S. dollars, and a strengthening of the U.S. dollar could make our products less competitive in foreign markets. While we often sell products with payments in U.S. dollars, our product sales contracts may call for payment in foreign currencies and to the extent we do so, or engage with our foreign subsidiaries in transactions deemed to be either short-term or long-term in nature, we are subject to foreign currency exchange risks.

As of December 31, 2017, we had entered into foreign currency exchange contracts that were designated as cash flow hedges that hedge approximately $96.3 million of anticipated cash receipts on specific foreign currency denominated sales contracts. These foreign currency exchange contracts hedge the risk of foreign exchange rate changes between the time that the related contracts were signed and when the cash receipts are expected to be received. As of December 31, 2017, we had entered into foreign currency exchange contracts that had been dedesignated for the purposes of hedge accounting treatment totaling $46.9 million. Unrealized gains or losses recorded in the Consolidated Statements of Operations related to these contracts are generally offset by foreign currency adjustments on related receivables. These foreign currency exchange contracts are considered to be economic hedges.

Our foreign maintenance contracts are typically paid in local currencies and provide a partial natural hedge against foreign exchange exposure. To the extent that we wish to repatriate any of these funds to the United States, however, we are subject to foreign exchange risks. We do not hold or purchase any currency forward exchange contracts for trading purposes. As of December 31, 2017, a hypothetical 10% unfavorable change in foreign currency exchange rates would impact our annual operating results and cash flows by approximately $0.5 million.

Item 8. ***Financial Statements and Supplementary Data***

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* The Financial Statements are located following page F-1.

The selected quarterly financial data required by this item is set forth in *Note 22 - Quarterly Data* of the Notes to Consolidated Financial Statements in Item 15. Exhibits and Financial Statement Schedules in Part IV of this annual report on Form 10-K

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

None.

Item 9A. ***Controls and Procedures***

Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, as appropriate, to allow timely decisions regarding required disclosure. Our management, with the participation and under the supervision of our Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer/Corporate Controller, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report, and based on that evaluation, our Chief Executive Officer and Chief Financial Officer determined that our disclosure controls and procedures were effective.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal controls over financial reporting during the fourth quarter of 2017 that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined by Rule 13a-15(f) under the Exchange Act. 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 accounting principles generally accepted in the United States of America.

Our internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our 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.

Our management, including our Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in "*Internal Control — Integrated Framework (2013)*" issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2017.

Peterson Sullivan LLP, an independent registered public accounting firm, has expressed an unqualified opinion on the effectiveness of our internal control over financial reporting as of December 31, 2017.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors
Cray Inc.

Opinion on Internal Control over Financial Reporting

We have audited Cray Inc. and Subsidiaries' ("the Company") internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on the criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

We have also 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, 2017 and 2016, the related consolidated statements of operations, comprehensive income (loss), shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2017, and the related notes (collectively referred to as the "consolidated financial statements") and our report dated February 15, 2018, 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 accounting principles generally accepted in the United States. 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 accounting principles generally accepted in the United States, 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/ PETERSON SULLIVAN LLP

We have served as the Company's auditor since 2005.
Seattle, Washington
February 15, 2018

Item 9B. ***Other Information***

None.

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance***

The information required by this Item is contained in the proxy statement for our annual meeting of shareholders scheduled to be held on or around June 12, 2018, and such information is incorporated herein by reference.

Item 11. ***Executive Compensation***

The information required by this Item is contained in the proxy statement for our annual meeting of shareholders scheduled to be held on or around June 12, 2018, and such information is incorporated herein by reference.

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

The information required by this Item is contained in the proxy statement for our annual meeting of shareholders scheduled to be held on or around June 12, 2018, and such information is incorporated herein by reference.

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

The information required by this Item is contained in the proxy statement for our annual meeting of shareholders scheduled to be held on or around June 12, 2018, and such information is incorporated herein by reference.

Item 14. ***Principal Accounting Fees and Services***

The information required by this Item is contained in the proxy statement for our annual meeting of shareholders scheduled to be held on or around June 12, 2018, and such information is incorporated herein by reference.

PART IV

Item 15. *Exhibits and Financial Statement Schedules*

(a)(1) *Financial Statements*

Consolidated Balance Sheets at December 31, 2017 and December 31, 2016

Consolidated Statements of Operations for the years ended December 31, 2017, 2016 and 2015

Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2017, 2016 and 2015

Consolidated Statements of Shareholders' Equity for the years ended December 31, 2017, 2016 and 2015

Consolidated Statements of Cash Flows for the years ended December 31, 2017, 2016 and 2015

Notes to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

(a)(2) *Financial Statement Schedules*

Schedule II — Valuation and Qualifying Accounts — The financial statement schedule for the years ended December 31, 2017, 2016 and 2015 should be read in conjunction with the consolidated financial statements of Cray Inc. filed as part of this annual report on Form 10-K.

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

(a)(3) *Exhibits*

The Exhibits listed in the Exhibit Index are filed as part of this annual report on Form 10-K. Each management contract or compensatory plan or agreement listed on the Exhibit Index is identified by an asterisk.

EXHIBIT INDEX

Exhibit	Exhibit Description	Incorporated by Reference				Filed
		Form	File No.	Filing	Exhibit/	
2.1	Asset Purchase Agreement between Intel Corporation and the Company, dated April 24, 2012	8-K	000-26820	04/25/12	2.1	
3.1	Restated Articles of Incorporation	8-K	000-26820	06/08/06	3.3	
3.2	Amended and Restated Bylaws	8-K	000-26820	02/12/07	3.1	
3.3	First Amendment to Amended and Restated Bylaws	8-K	000-26820	04/19/12	3.1	
3.4	Second Amendment to Amended and Restated Bylaws	8-K	000-26820	02/28/17	3.1	
10.0*	1999 Stock Option Plan	S-8	333-57970	03/30/01	4.1	
10.1*	2000 Non-Executive Employee Stock Option Plan	S-8	333-57970	03/30/01	4.2	
10.2*	Amended and Restated 2001 Employee Stock Purchase Plan	10-K	000-26820	03/04/11	10.28	
10.3*	2003 Stock Option Plan	DEF 14A	000-26820	03/31/03	A	
10.4*	2004 Long-Term Equity Compensation Plan	DEF 14A	000-26820	03/24/04	B	
10.5*	2006 Long-Term Equity Compensation Plan	DEF 14A	000-26820	04/28/06	B	
10.6*	2009 Long-Term Equity Compensation Plan	DEF 14A	000-26820	03/31/09	A	
10.7*	2013 Equity Incentive Plan	DEF 14A	000-26820	04/24/13	A	
10.8*	Amended and Restated 2013 Equity Incentive Plan	DEF 14A	000-26820	04/25/16	A	
10.9*	Form of Officer Non-Qualified Stock Option Agreement	10-K	000-26820	04/01/05	10.32	
10.10*	Form of Officer Incentive Stock Option Agreement	10-K	000-26820	04/01/05	10.33	
10.11*	Form of Employee Restricted Stock Agreement	10-K	000-26820	03/09/07	10.11	
10.12*	Form of Director Restricted Stock Agreement	8-K	000-26820	06/08/06	10.1	
10.13*	Form of 2013 Equity Incentive Plan Notice of Stock Option Grant and Stock Option Award Agreement	8-K	000-26820	07/03/13	99.1	
10.14*	Form of 2013 Equity Incentive Plan Notice of Restricted Stock Award and Restricted Stock Purchase Agreement	8-K	000-26820	07/03/13	99.2	
10.15*	Form of 2013 Equity Incentive Plan Notice of Restricted Stock Award and Restricted Stock Purchase Agreement	8-K	000-26820	12/17/14	10.1	

Exhibit	Exhibit Description	Incorporated by Reference				Filed
		Form	File No.	Filing	Exhibit/	
10.16*	Form of 2013 Equity Incentive Plan Notice of Stock Option Grant and Stock Option Award Agreement	8-K	000-26820	12/17/14	10.2	
10.17*	Form of 2013 Equity Incentive Plan Notice of Restricted Stock Unit Award and Restricted Stock Unit Award Agreement	8-K	000-26820	12/17/14	10.3	
10.18*	Form of 2013 Equity Incentive Plan Notice of Stock Appreciation Right Award Grant and Stock Appreciation Right Award Agreement	8-K	000-26820	12/17/14	10.4	
10.19*	Letter Agreement between the Company and Peter J. Ungaro, dated March 4, 2005	8-K	000-26820	03/08/05	10.1	
10.20*	Offer Letter between the Company and Brian C. Henry, dated May 16, 2005	10-Q	000-26820	11/09/05	10.1	
10.21*	Offer Letter between the Company and Frederick A. Kohout, dated January 31, 2016					X
10.22*	Offer Letter between the Company and Charles A. Morreale, dated March 14, 2004	10-Q	000-26820	05/02/17	10.2	
10.23*	Offer Letter between the Company and Efstathios Papaefstathiou, dated November 11, 2016					X
10.24*	Offer Letter between the Company and Michael C. Piraino, dated August 31, 2009	10-Q	000-26820	04/29/14	10.2	
10.25*	Offer Letter between the Company and Steve Scott, dated August 30, 2014	10-Q	000-26820	10/28/14	10.1	
10.26*	Form of Management Retention Agreement entered into with executive officers prior to September 27, 2011 (including Annex A-1 and Annex A-2 applicable only to Peter J. Ungaro and Brian C. Henry)	8-K	000-26820	12/22/08	10.1	
10.27*	Form of Management Retention Agreement entered into with executive officers from September 27, 2011 forward	10-K	000-26820	02/13/14	10.20	
10.28*	Executive Severance Policy, as adopted on December 13, 2010	8-K	000-26820	12/17/10	10.1	
10.29*	Amended and Restated Non-Employee Director Compensation Policy	10-Q	000-26820	04/29/14	10.3	
10.30*	2017 Executive Bonus Plan	10-Q	000-26820	05/02/17	10.1	
10.31*	Form of Indemnification Agreement	8-K	000-26820	02/08/11	10.1	

Exhibit	Exhibit Description	Incorporated by Reference				Filed
		Form	File No.	Filing	Exhibit/	
10.32	Lease Agreement between North Pad Office, LLC and the Company, dated as of April 21, 2016	8-K	000-26820	04/27/16	10.10	
10.33	Intellectual Property Agreement between Intel Corporation and the Company, dated May 2, 2012	8-K	000-26820	05/03/12	10.1	
10.34	Amended and Restated Credit Agreement between Wells Fargo Bank, National Association and the Company, dated January 7, 2016, as amended					X
10.35	Revolving Line of Credit Note between Wells Fargo Bank, National Association and the Company, dated January 7, 2016	8-K	000-26820	01/11/16	10.2	
21.1	Subsidiaries of the Company					X
23.1	Consent of Peterson Sullivan LLP, Independent Registered Public Accounting Firm					X
24.1	Power of Attorney for directors and officers (included on the signature page of this report)					X
31.1	Rule 13a-14(a)/15d-14(a) Certification of Mr. Ungaro, Chief Executive Officer					X
31.2	Rule 13a-14(a)/15d-14(a) Certification of Mr. Henry, Chief Financial Officer					X
32.1	Certification pursuant to 18 U.S.C. Section 1350 by the Chief Executive Officer and the Chief Financial Officer					X
101.INS	XBRL Instance Document					X
101.SCH	XBRL Taxonomy Extension Schema Document					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					X

* Management contract or compensatory plan or arrangement.

Excluded from this list of exhibits, pursuant to Paragraph (b)(4)(iii)(a) of Item 601 of Regulation S-K, may be one or more instruments defining the rights of holders of long-term debt of the Company. The Company hereby agrees that it will, upon request of the Securities and Exchange Commission, furnish to the Commission a copy of any such instrument.

Item 16. ***Form 10-K Summary***

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Seattle, State of Washington, on February 15, 2018.

CRAY INC.

By /s/ PETER J. UNGARO

Peter J. Ungaro
Chief Executive Officer and President

Each of the undersigned hereby constitutes and appoints Peter J. Ungaro, Brian C. Henry and Michael C. Piraino and each of them, the undersigned's true and lawful attorney-in-fact and agent, with full power of substitution, for the undersigned and in his or her name, place and stead, in any and all capacities, to sign any or all amendments to this Annual Report on Form 10-K and any other instruments or documents that said attorneys-in-fact and agents may deem necessary or advisable, to enable Cray Inc. to comply with the Securities Exchange Act of 1934 and any requirements of the Securities and Exchange Commission in respect thereof, and to file the same, with all exhibits thereto, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents and each of them full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that each such attorney-in-fact and agent, or his substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Company and in the capacities indicated on February 15, 2018.

Signature	Title
By /s/ PETER J. UNGARO Peter J. Ungaro	Chief Executive Officer, President and Director (Principal Executive Officer)
By /s/ BRIAN C. HENRY Brian C. Henry	Chief Financial Officer and Executive Vice President (Principal Financial Officer)
By /s/ CHARLES D. FAIRCHILD Charles D. Fairchild	Chief Accounting Officer, Controller and Vice President (Principal Accounting Officer)
By /s/ PRITHVIRAJ BANERJEE Prithviraj Banerjee	Director
By /s/ CATRIONA M. FALLON Catriona M. Fallon	Director
By /s/ STEPHEN C. KIELY Stephen C. Kiely	Director
By /s/ SALLY G. NARODICK Sally G. Narodick	Director
By /s/ DANIEL C. REGIS Daniel C. Regis	Director
By /s/ MAX L. SCHIRESON Max L. Schireson	Director
By /s/ BRIAN V. TURNER Brian V. Turner	Director

CRAY INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
(In thousands, except share data)

	December 31, 2017	December 31, 2016
ASSETS		
Current assets:		
Cash and cash equivalents	$ 137,326	$ 222,962
Restricted cash	1,964	—
Short-term investments	6,997	—
Accounts and other receivables, net	162,034	197,941
Inventory	186,307	88,254
Prepaid expenses and other current assets	25,015	20,006
Total current assets	519,643	529,163
Long-term restricted cash	1,030	1,655
Long-term investment in sales-type lease, net	23,367	31,050
Property and equipment, net	36,623	30,620
Service spares, net	2,551	3,023
Goodwill	14,182	14,182
Intangible assets other than goodwill, net	4,345	1,637
Deferred tax assets, net	1,106	85,613
Other non-current assets	15,910	17,629
TOTAL ASSETS	$ 618,757	$ 714,572
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 57,207	$ 45,504
Accrued payroll and related expenses	18,546	17,199
Other accrued liabilities	9,471	10,303
Deferred revenue	80,119	83,129
Total current liabilities	165,343	156,135
Long-term deferred revenue	38,622	27,258
Other non-current liabilities	14,495	5,703
TOTAL LIABILITIES	218,460	189,096
Commitments and contingencies (Note 13)		
Shareholders' equity:		
Preferred stock — Authorized and undesignated, 5,000,000 shares; no shares issued or outstanding	—	—
Common stock and additional paid-in capital, par value $.01 per share — Authorized, 75,000,000 shares; issued and outstanding 40,464,963 and 40,757,458 shares, respectively	633,408	622,604
Accumulated other comprehensive income	915	2,782
Accumulated deficit	(234,026)	(99,910)
TOTAL SHAREHOLDERS' EQUITY	400,297	525,476
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$ 618,757	$ 714,572

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

CRAY INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share data)

	Years Ended December 31,		
	2017	2016	2015
Revenue:			
Product	$ 250,195	$ 499,432	$ 601,294
Service	142,314	130,377	123,395
Total revenue	392,509	629,809	724,689
Cost of revenue:			
Cost of product revenue	188,830	332,016	426,821
Cost of service revenue	72,975	77,578	72,185
Total cost of revenue	261,805	409,594	499,006
Gross profit	130,704	220,215	225,683
Operating expenses:			
Research and development, net	98,777	112,130	96,563
Sales and marketing	59,894	64,893	60,150
General and administrative	29,113	34,053	27,966
Restructuring	8,568	—	—
Total operating expenses	196,352	211,076	184,679
Income (loss) from operations	(65,648)	9,139	41,004
Other income (expense), net	5,002	(1,365)	365
Interest income, net	3,276	2,147	1,408
Gain on strategic transaction	4,480	—	—
Income (loss) before income taxes	(52,890)	9,921	42,777
Income tax benefit (expense)	(80,939)	694	(15,240)
Net income (loss)	$ (133,829)	$ 10,615	$ 27,537
Basic net income (loss) per common share	$ (3.33)	$ 0.27	$ 0.70
Diluted net income (loss) per common share	$ (3.33)	$ 0.26	$ 0.68
Basic weighted average shares outstanding	40,139	39,833	39,257
Diluted weighted average shares outstanding	40,139	41,012	40,691

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

CRAY INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)

	Years Ended December 31,		
	2017	2016	2015
Net income (loss)	$ (133,829)	$ 10,615	$ 27,537
Other comprehensive income (loss), net of tax:			
Unrealized gain (loss) on available-for-sale investments	(7)	8	(20)
Foreign currency translation adjustments	(490)	426	(394)
Unrealized gain (loss) on cash flow hedges	(1,457)	8,030	5,251
Reclassification adjustments on cash flow hedges included in net income (loss)	87	(13,324)	(3,698)
Other comprehensive income (loss)	(1,867)	(4,860)	1,139
Comprehensive income (loss)	$ (135,696)	$ 5,755	$ 28,676

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

CRAY INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(in thousands)

	Common Stock and Additional Paid In Capital		Accumulated Other Comprehensive Income	Accumulated Deficit	Total
	Number of Shares	Amount			
BALANCE, December 31, 2014	40,822	$ 598,390	$ 6,503	$ (151,039)	$ 453,854
Issuance of shares under employee stock purchase plan	27	711			711
Exercise of stock options	229	2,289			2,289
Restricted shares issued for compensation, net of forfeitures and taxes	(384)	(2,464)		(1,909)	(4,373)
Share-based compensation	—	11,353			11,353
Other comprehensive income			1,139		1,139
Net income				27,537	27,537
BALANCE, December 31, 2015	40,694	$ 610,279	$ 7,642	$ (125,411)	$ 492,510
Issuance of shares under employee stock purchase plan	27	718			718
Exercise of stock options	169	2,121			2,121
Restricted shares issued for compensation, net of forfeitures and taxes	(133)	(1,665)		(1,714)	(3,379)
Share-based compensation	—	11,151			11,151
Other comprehensive loss			(4,860)		(4,860)
Cumulative-effect adjustment resulting from adoption of ASU 2016-09 (Note 14)				16,600	16,600
Net income				10,615	10,615
BALANCE, December 31, 2016	40,757	$ 622,604	$ 2,782	$ (99,910)	$ 525,476
Issuance of shares under employee stock purchase plan	20	365			365
Exercise of stock options	157	1,342			1,342
Restricted shares issued for compensation, net of forfeitures and taxes	(469)	(1,752)		(287)	(2,039)
Share-based compensation	—	10,849			10,849
Other comprehensive loss			(1,867)		(1,867)
Net loss				(133,829)	(133,829)
BALANCE, December 31, 2017	40,465	$ 633,408	$ 915	$ (234,026)	$ 400,297

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

CRAY INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ended December 31,		
	2017	2016	2015
Operating activities:			
Net income (loss)	$ (133,829)	$ 10,615	$ 27,537
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	16,760	14,684	17,017
Share-based compensation expense	10,849	11,151	11,353
Deferred income taxes	81,468	(1,861)	12,103
Gain on strategic transaction	(4,480)	—	—
Gain on sale of equity investment	(3,349)	—	—
Other	837	2,850	1,945
Cash provided (used) due to changes in operating assets and liabilities:			
Accounts and other receivables	38,660	(78,396)	36,665
Long-term investment in sales-type lease, net	10,129	(17,224)	11,510
Inventory	(97,688)	15,343	21,292
Prepaid expenses and other assets	(5,306)	2,265	(3,972)
Accounts payable	11,527	16,903	(19,849)
Accrued payroll and related expenses and other accrued liabilities	7,572	(21,073)	23,841
Deferred revenue	(6,491)	(7,570)	8,314
Net cash provided by (used in) operating activities	(73,341)	(52,313)	147,756
Investing activities:			
Sales and maturities of available-for-sale investments	87,513	30,990	16,229
Purchases of available-for-sale investments	(94,902)	(16,159)	(14,991)
Cash received in strategic transaction	8,000	—	—
Proceeds from sale of equity investment	4,481	—	—
Change in restricted cash	(1,288)	1,670	13,445
Purchases of property and equipment	(17,467)	(7,503)	(7,467)
Net cash provided by (used in) investing activities	(13,663)	8,998	7,216
Financing activities:			
Proceeds from issuance of common stock through employee stock purchase plan	365	718	711
Purchase of employee restricted shares to fund related statutory tax withholding	(2,039)	(3,379)	(4,373)
Proceeds from exercise of options	1,342	2,121	2,289
Net cash used in financing activities	(332)	(540)	(1,373)
Effect of foreign exchange rate changes on cash and cash equivalents	1,700	157	428
Net increase (decrease) in cash and cash equivalents	(85,636)	(43,698)	154,027
Cash and cash equivalents:			
Beginning of period	222,962	266,660	112,633
End of period	$ 137,326	$ 222,962	$ 266,660
Supplemental disclosure of cash flow information:			
Cash paid for interest	$ 14	$ 31	$ 4
Cash paid for income taxes	930	2,441	3,890

Non-cash investing and financing activities:			
Inventory transfers to property and equipment and service spares	$ 2,429	$ 5,292	$ 8,177
Strategic transaction:			
Non-cash assets acquired:			
Receivable from Seagate	$ 1,782	$ —	$ —
Inventory	4,120	—	—
Property and equipment	2,915	—	—
Intangible assets	3,350	—	—
Liabilities assumed:			
Deferred revenue	$ 12,168	$ —	$ —
Deferred tax liabilities	3,019	—	—
Other liabilities	500	—	—

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

NOTE 1 DESCRIPTION OF BUSINESS

Cray Inc. (Cray or the Company) designs, develops, manufactures, markets and services products primarily at the high-end of the high performance computing (HPC) and data analytics and artificial intelligence (AI) markets. These products include compute systems commonly known as supercomputers, and storage, data analytics and AI solutions leveraging more than four decades of delivering the world's most advanced computing systems. The Company also provides related software, system maintenance and support and engineering services. The Company's customers include domestic and foreign government and government-funded entities, academic institutions and commercial entities.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Accounting Principles

The consolidated financial statements and accompanying notes are prepared in accordance with accounting principles generally accepted in the United States of America (GAAP).

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All material intercompany balances and transactions have been eliminated.

Reclassifications

Certain prior year amounts have been reclassified to conform with the current year presentation. There has been no impact on previously reported net income (loss) or shareholders' equity from such reclassifications.

Use of Estimates

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the amounts reported in the Company's consolidated financial statements and accompanying notes. Actual results could differ materially from those estimates.

Cash, Cash Equivalents and Restricted Cash

Cash and cash equivalents consist of highly liquid financial instruments that are readily convertible to cash and have maturities of three months or less at the time of acquisition. The Company maintains cash and cash equivalent balances with financial institutions that exceed federally insured limits. As of December 31, 2017 and 2016, the Company had $3.0 million and $1.7 million, respectively, in restricted cash associated with certain letters of credit to secure customer prepayments and other customer related obligations.

Investments

The Company's investments consist primarily of commercial paper, corporate debt, and other debt securities. Debt securities are classified as available-for-sale and are reported at fair value with unrealized gains and losses, net of applicable taxes, recorded in accumulated other comprehensive income, a component of shareholders' equity. The realized gains and losses for available-for-sale securities are included in other income and expense in the Consolidated Statements of Operations. Realized gains and losses are calculated based on the specific identification method.

The Company monitors its investment portfolio for impairment on a periodic basis. When the carrying value of an investment in debt securities exceeds its fair value and the decline in value is determined to be an other-than-temporary decline, and when the Company does not intend to sell the debt security and it is not more likely than not that the Company will be

required to sell the debt securities prior to recovery of its amortized cost basis, the Company records an impairment charge in the amount of the credit loss and the balance, if any, to other comprehensive income (loss).

Investments that mature between three months and one year from the purchase date are initially classified as short-term investments in the Consolidated Balance Sheet. Investments that mature beyond one year from the purchase date are initially classified as long-term investments in the Consolidated Balance Sheet.

Foreign Currency Derivatives

The Company uses foreign currency exchange contracts to hedge certain foreign currency exposures. Foreign currency exchange contracts are cash flow hedges of the Company's foreign currency exposures on certain revenue contracts and are recorded at the contract's fair value. Most of the Company's foreign currency exchange contracts are designated as cash flow hedges for the purposes of hedge accounting treatment and any gains or losses on the effective portion of the foreign currency exchange contract is initially reported in "Accumulated other comprehensive income," a component of shareholders' equity, with a corresponding asset or liability recorded based on the fair value of the foreign currency exchange contract. When the hedged transaction is recognized, any unrecognized gains or losses on the hedged transaction are reclassified into results of operations in the same period. Any hedge ineffectiveness is recorded to operations in the current period. The Company measures hedge effectiveness by comparing changes in fair values of the foreign currency exchange contract and expected cash flows based on changes in the spot prices of the underlying currencies. Cash flows from foreign currency exchange contracts accounted for as cash flow hedges are classified in the same category as the cash flows from the items being hedged. Unrealized gains or losses related to foreign currency exchange contracts that are not designated as cash flow hedges for the purposes of hedge accounting treatment are recorded in other income (expense) in the Consolidated Statements of Operations and are generally offset by foreign currency adjustments on related receivables. The Company does not use derivative financial instruments for speculative purposes.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of cash and cash equivalents, available-for-sale investments, accounts receivable, short-term and long-term restricted cash and foreign currency exchange contracts.

The Company maintains cash and cash equivalents, available-for-sale securities and foreign currency exchange contracts with various financial institutions. As part of its risk management process, the Company performs periodic evaluations of the relative credit standing of the financial institutions. The Company has not sustained any credit losses from instruments held at financial institutions. The Company utilizes foreign currency exchange contracts to protect against the effects of foreign currency fluctuations. Such contracts involve the risk of non-performance by the counterparty, which could result in a material loss.

The Company currently derives a significant portion of its revenue from sales of products and services to the U.S. Government. See *Note 18 — Segment Information* for additional information. Given the type of customers, the Company does not believe its accounts receivable represent significant credit risk.

The Company currently has a long-term investment in a sales-type lease it entered into with one of its customers. See *Note 8 — Sales-type Lease* for additional information. Given the credit standing of the customer, the Company does not believe that this investment represents a significant credit risk.

Other Concentration

The Company obtains certain components from single-source suppliers due to technology, availability, price, quality or other considerations. The loss of a single-source supplier, the single-source supplier's inability to deliver the required components or intellectual property due to natural disaster or other reasons, the deterioration of the relationship with a single-source supplier, or any unilateral modification of contract terms under which the Company is supplied components by a single-source supplier could have a significant adverse effect on the Company's revenue and gross margins.

Accounts Receivable

Accounts receivable are stated at principal amounts and are primarily comprised of amounts contractually due from customers for products and services and amounts due from government research and development contracts. The Company provides an allowance for doubtful accounts based on an evaluation of customer past due account balances. In determining whether to record an allowance for a specific customer, the Company considers a number of factors, including prior payment history and financial information for the customer.

Fair Values of Financial Instruments

The Company measures certain financial assets and liabilities at fair value based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. The Company's financial instruments primarily consist of debt securities, time deposits, money market funds, and foreign currency derivatives. See *Note 4 — Fair Value Measurement* for a further discussion on fair value of financial instruments.

Inventories

Inventories are valued at the lower of cost or net realizable value, with cost computed on a first-in, first-out basis (FIFO). The Company regularly evaluates the technological usefulness and anticipated future demand for various inventory components and the expected use of the inventory. When the Company determines it is not likely the cost of inventory items will be recovered through future sales, the Company writes-down the related inventory to its estimated net realizable value. Prior to the adoption of ASU 2015-11 at the beginning of the first quarter of 2017, inventories were valued at the lower of cost or market. The adoption of ASU 2015-11 did not have a material impact on the Company's consolidated financial statements.

In connection with certain of its sales agreements, the Company may receive used equipment from a customer. This inventory generally will be recorded at no value based on the expectation that the Company will not be able to resell or otherwise use the equipment. In the event that the Company has a specific contractual plan for resale or there is an expected scrap value at the date the inventory is acquired, the inventory is recorded at its estimated fair value.

Property and Equipment and Intangible Assets, Net

Property and equipment are recorded at cost less accumulated depreciation and amortization. Additions and improvements are capitalized and maintenance and repairs are expensed as incurred. Depreciation is calculated on a straight-line basis over the estimated useful lives of the related assets, ranging from eighteen months to seven years for furniture and fixtures, three years for computer equipment, and eight to twenty-five years for buildings and land improvements. Leasehold improvements are depreciated over the life of the lease or asset, whichever is shorter.

The Company amortizes purchased intangible assets with finite lives using the straight-line method over the estimated economic lives of the assets, ranging from two to ten years.

Service Spares

Service spares are valued at the lower of cost or net realizable value and represent inventory used to support service and maintenance agreements with customers. As inventory is utilized, replaced items are returned to the Company and are either repaired or scrapped. Costs incurred to repair inventory to a usable state are charged to expense as incurred. Service spares are recorded at cost and amortized over the estimated service life of the related product platform (generally four years). Prior to the adoption of ASU 2015-11 at the beginning of the first quarter of 2017, service spares were valued at the lower of cost or market. The adoption of ASU 2015-11 did not have a material impact on the Company's consolidated financial statements.

Impairment of Long-Lived Assets and Intangibles

The Company evaluates property, plant and equipment and intangible assets with finite lives for impairment whenever events or changes in circumstances indicate the carrying value of an asset may not be recoverable. The Company assesses the recoverability of the assets based on the undiscounted future cash flow the assets are expected to generate and recognizes an impairment loss when estimated undiscounted future cash flow expected to result from the use of the asset plus net proceeds expected from disposition of the asset, if any, are less than the carrying value of the asset. When the Company identifies an impairment, the carrying value of the asset is reduced to its estimated fair value based on a discounted cash flow approach or, when available and appropriate, to comparable market values.

Goodwill

Goodwill is not amortized but is tested for impairment at least annually. The Company reviews goodwill for impairment annually and whenever events or changes in circumstances indicate that the fair value of a reporting unit may be less than its carrying amount (a triggering event). In the second quarter of 2017, the Company determined that declining revenues in recent years, coupled with the anticipated loss for 2017, should be construed as a triggering event for the purposes of impairment testing of goodwill in accordance with ASC 350. The Company performed a quantitative goodwill impairment test on June 30, 2017. Due to the proximity of the triggering event to the October 1 annual testing date, the Company has elected to change the date of its annual goodwill impairment test from the beginning of its fourth fiscal quarter to the beginning of its second fiscal quarter. The Company first assesses qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount as a basis for determining whether it is necessary to perform the quantitative goodwill impairment test described in ASC Topic 350. The more likely than not threshold is defined as having a likelihood of more than 50 percent. If, after assessing the totality of events or circumstances, the Company determines that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then performing the quantitative goodwill impairment test is unnecessary and goodwill is considered to be unimpaired. However, if based on the qualitative assessment the Company concludes that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, the Company will proceed with performing the quantitative goodwill impairment test.

In performing the quantitative goodwill impairment test, the Company determines the fair value of each reporting unit and compares it to its carrying value. If the fair value of the reporting unit exceeds the carrying value of the net assets assigned to that unit, goodwill is not impaired. If the carrying value of a reporting unit exceeds its fair value, the Company records an impairment loss equal to the difference.

The Company performed a quantitative goodwill impairment test during the second fiscal quarter of 2017 and concluded that the fair values of its reporting units were greater than their carrying amounts.

Business Combinations

The Company accounts for business combinations using the purchase method of accounting and allocates the purchase price to the tangible and intangible assets acquired and the liabilities assumed based upon their estimated fair values at the acquisition date. The excess of the purchase price over the fair value of the net assets acquired is recorded as goodwill. If the fair value of the net assets acquired exceeds the purchase price the Company records a bargain purchase gain. The Company uses estimates and assumptions to value assets acquired and liabilities assumed at the acquisition date. During the measurement period, which may be up to one year from the acquisition date, any refinements made to the fair value of the assets and liabilities assumed are recorded in the period in which the adjustments are recognized.

The fair values of intangible assets acquired are estimated using a discounted cash flow approach with Level 3 inputs. Under this method, an intangible asset's fair value is equal to the present value of the incremental after-tax cash flows (excess earnings) attributable solely to the intangible asset over its remaining useful life. To calculate fair value, the Company uses risk-

adjusted cash flows discounted at rates considered appropriate given the inherent risks associated with each type of asset. The Company believes the level and timing of cash flows appropriately reflects market participant assumptions.

Revenue Recognition

The Company recognizes revenue, including transactions under sales-type leases, when it is realized or realizable and earned. The Company considers revenue realized or realizable and earned when it has persuasive evidence of an arrangement, delivery has occurred, the sales price is fixed or determinable, and collectibility is reasonably assured. Delivery does not occur until the products have been shipped or services provided to the customer, risk of loss has transferred to the customer, and, where applicable, a customer acceptance has been obtained. The sales price is not considered to be fixed or determinable until all material contingencies related to the sales have been resolved. The Company records revenue in the Consolidated Statements of Operations net of any sales, use, value added or certain excise taxes imposed by governmental authorities on specific sales transactions. In addition to the aforementioned general policy, the following are the Company's statements of policy with regard to multiple-element arrangements and specific revenue recognition policies for each major category of revenue.

Multiple-Element Arrangements. The Company commonly enters into revenue arrangements that include multiple deliverables of its product and service offerings due to the needs of its customers. Products may be delivered in phases over time periods which can be as long as five years. Maintenance services generally begin upon acceptance of the first equipment delivery and future deliveries of equipment generally have an associated maintenance period. The Company considers the maintenance period to commence upon acceptance of the product or installation in situations where a formal acceptance is not required, which may include a warranty period and accordingly allocates a portion of the arrangement consideration as a separate deliverable which is recognized as service revenue over the entire service period. Other services such as training and engineering services can be delivered as a discrete delivery or over the term of the contract. A multiple-element arrangement is separated into more than one unit of accounting if the following criteria are met:

- The delivered item(s) has value to the customer on a standalone basis; and
- If the arrangement includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item(s) is considered probable and substantially in the control of the Company.

If these criteria are met for each element, the arrangement consideration is allocated to the separate units of accounting based on each unit's relative selling price. If these criteria are not met, the arrangement is accounted for as one unit of accounting which would result in revenue being recognized ratably over the contract term or being deferred until the earlier of when such criteria are met or when the last undelivered element is delivered.

The Company follows a selling price hierarchy in determining the best estimate of the selling price of each deliverable. Certain products and services are sold separately in standalone arrangements for which the Company is sometimes able to determine vendor specific objective evidence (VSOE). The Company determines VSOE based on normal pricing and discounting practices for the product or service when sold separately.

When the Company is not able to establish VSOE for all deliverables in an arrangement with multiple elements, the Company attempts to establish the selling price of each remaining element based on third-party evidence (TPE). The Company's inability to establish VSOE is often due to a relatively small sample of customer contracts that differ in system size and contract terms which can be due to infrequently selling each element separately, not pricing products within a narrow range, or only having a limited sales history, such as in the case of certain advanced and emerging technologies. TPE is determined based on the Company's prices or competitor prices for similar deliverables when sold separately. However, the Company is often unable to determine TPE, as the Company's offerings usually contain a significant level of customization and differentiation from those of competitors and the Company is often unable to reliably determine what similar competitor products' selling prices are on a standalone basis.

When the Company is unable to establish selling price using VSOE or TPE, the Company uses estimated selling price (ESP) in its allocation of arrangement consideration. The objective of ESP is to determine the price at which the Company would transact a sale if the product or service were sold on a standalone basis. In determining ESP, the Company uses the cost to provide the product or service plus a margin, or considers other factors. When using cost plus a margin, the Company considers the total cost of the product or service, including customer-specific and geographic factors. The Company also considers the historical margins of the product or service on previous contracts and several factors including any changes to pricing methodologies, competitiveness of products and services and cost drivers that would cause future margins to differ from historical margins.

Products. The Company most often recognizes revenue from sales of products upon customer acceptance of the system. Where formal acceptance is not required, the Company recognizes revenue upon delivery or installation. When the product is part of a multiple element arrangement, the Company allocates a portion of the arrangement consideration to product revenue based on estimates of selling price.

Services. Maintenance services are provided under separate maintenance contracts with customers. These contracts generally provide for maintenance services for one year, although some are for multi-year periods, often with prepayments for the term of the contract. The Company considers the maintenance period to commence upon acceptance of the product, or installation of the product where a formal acceptance is not required, which may include a warranty period. When service is part of a multiple element arrangement, the Company allocates a portion of the arrangement consideration to maintenance service revenue based on estimates of selling price. Maintenance contracts that are billed in advance of revenue recognition are recorded as deferred revenue. Maintenance revenue is recognized ratably over the term of the maintenance contract.

Revenue from engineering services is recognized as services are performed.

Project Revenue. Revenue from design and build contracts is recognized under the percentage-of-completion (POC) method. Under the POC method, revenue is recognized based on the costs incurred to date as a percentage of the total estimated costs to fulfill the contract. If circumstances arise that change the original estimates of revenues, costs, or extent of progress toward completion, revisions to the estimates are made. These revisions may result in increases or decreases in estimated revenues or costs, and such revisions are recorded in income in the period in which the circumstances that gave rise to the revision become known by management. The Company performs ongoing profitability analyses of its contracts accounted for under the POC method in order to determine whether the latest estimates of revenue, costs and extent of progress require updating. If at any time these estimates indicate that the contract will be unprofitable, the entire estimated loss for the remainder of the contract is recorded immediately.

The Company records revenue from certain research and development contracts which include milestones using the milestone method if the milestones are determined to be substantive. A milestone is considered to be substantive if management believes there is substantive uncertainty that it will be achieved and the milestone consideration meets all of the following criteria:

- It is commensurate with either of the following:
    - The Company’s performance to achieve the milestone; or
    - The enhancement of value of the delivered item or items as a result of a specific outcome resulting from the Company’s performance to achieve the milestone.
- It relates solely to past performance.
- It is reasonable relative to all of the deliverables and payment terms (including other potential milestone consideration) within the arrangement.

The individual milestones are determined to be substantive or non-substantive in their entirety and milestone consideration is not bifurcated.

Revenue from projects is classified as Product Revenue or Service Revenue, based on the nature of the work performed.

Nonmonetary Transactions. The Company values and records nonmonetary transactions at the fair value of the asset surrendered unless the fair value of the asset received is more clearly evident, in which case the fair value of the asset received is used.

Sales-type leases

When the Company leases a system to a customer, the accounting involves specific determinations, which often involve complex provisions and significant judgments. The four criteria of the accounting standard that the Company uses in the determination of whether a lease is a sales-type lease or an operating lease are: (a) a review of the lease term to determine if it is equal to or greater than 75% of the economic life of the system; (b) a review of the minimum lease payments to determine if they are equal to or greater than 90% of the fair value of the system; (c) a determination of whether or not the lease transfers ownership to the lessee at the end of the lease term; and (d) a determination of whether or not the lease contains a bargain purchase option. If the lease transaction meets one of the four criteria, then it is recorded as a sales-type lease; otherwise it is an operating lease. Additionally, the Company assesses whether collectibility of the lease payments is reasonably assured and whether there are any significant uncertainties related to costs that it has yet to incur with respect to the lease.

The Company considers the economic lives of most of its products to range from three to four years. There is no significant after-market for the Company's used products and the Company believes that the economic lives are representative of the periods during which its products are expected to be economically usable, with normal service, for the purposes for which they were intended. Residual values are not significant.

The discount rate implicit in the sales-type lease is used to calculate the present value of minimum lease payments, which the Company records as a lease receivable. The minimum lease payment consists of the gross lease payments net of executory costs and contingencies, if any. While revenue is recognized at inception of the lease, the cash flow from the sales-type lease occurs over the course of the lease, which results in interest income. Unearned interest income is recorded at inception of the lease and amortized over the lease term using the effective interest method.

Foreign Currency Translation

The Company uses the U.S. dollar predominantly as its functional currency. Assets and liabilities of foreign subsidiaries that have a functional currency denominated in non-U.S. dollars are translated into U.S. dollars at year-end exchange rates, and revenue and expenses of these foreign subsidiaries are translated at average rates prevailing during the year. Translation adjustments are included in "Accumulated other comprehensive income," a separate component of shareholders' equity. Transaction gains and losses arising from transactions denominated in a currency other than the functional currency of the entity involved are included in "Other income (expense), net" in the accompanying Consolidated Statements of Operations. Net transaction gains were $1.7 million and $1.6 million for 2017 and 2015, respectively. Net transaction losses were $1.0 million for 2016.

Research and Development

Research and development expenses include costs incurred in the development and production of hardware and software, costs incurred to enhance and support existing product features, costs incurred to support and improve development processes, and costs related to future product development. Research and development costs are expensed as incurred, and may be offset by co-funding from third parties. The Company may also enter into arrangements whereby it makes advance, non-refundable payments to a vendor to perform certain research and development services. These payments are deferred and recognized over the vendor's estimated performance period.

Amounts to be received under co-funding arrangements with the U.S. government or others are based on either contractual milestones or costs incurred. These co-funding milestone payments are recognized in operations as performance is estimated to

be completed and are measured as milestone achievements occur or as costs are incurred. These estimates are reviewed on a periodic basis and are subject to change, including in the near term. If an estimate is changed, net research and development expense could be impacted significantly.

The Company does not record a receivable from the U.S. government prior to completing the requirements necessary to bill for a milestone or cost reimbursement. Funding from the U.S. government is subject to certain budget restrictions and milestones may be subject to completion risk, and as a result, there may be periods in which research and development costs are expensed as incurred for which no reimbursement is recorded, as milestones have not been completed or the U.S. government has not funded an agreement. Accordingly, there can be substantial variability in the amount of net research and development expenses from quarter to quarter and year to year.

The Company classifies amounts to be received from funded research and development projects as either revenue or a reduction to research and development expense based on the specific facts and circumstances of the contractual arrangement, considering total costs expected to be incurred compared to total expected funding and the nature of the research and development contractual arrangement. In the event that a particular arrangement is determined to represent revenue, the corresponding research and development costs are classified as cost of revenue.

Income Taxes

Deferred tax assets and liabilities are determined based on differences between financial reporting and tax bases of assets and liabilities and operating loss and tax credit carryforwards and are measured using the enacted tax rates and laws that will be in effect when the differences and carryforwards are expected to be recovered or settled.

A valuation allowance for deferred tax assets is provided when the Company estimates that it is more likely than not that all or a portion of the deferred tax assets will not be realized through future operations. This assessment is based upon consideration of all available positive and negative evidence, which includes, among other things, the Company's recent results of operations, forecasted domestic and international earnings over a number of years, all known business risks and industry trends, and applicable tax planning strategies that should, if implemented, enable the Company to utilize its deferred tax assets before they expire. The Company considers its actual historical results over several years to have stronger weight than other more subjective indicators, including forecasts, when considering whether to establish or reduce a valuation allowance on deferred tax assets. The Company has significant difficulty projecting future results due to the nature of the business and the industry in which it operates.

The Company provided a valuation allowance against its U.S. deferred tax assets and against the majority of its deferred tax assets arising in foreign jurisdictions at December 31, 2017 as the realization of such assets is not considered to be more likely than not at this time. In a future period, the Company's assessment of the realizability of its deferred tax assets and therefore the appropriateness of the valuation allowance could change based on an assessment of all available evidence, both positive and negative in that future period. If the Company's conclusion about the realizability of its deferred tax assets and therefore the appropriateness of the valuation allowance changes in a future period, the Company could record a substantial tax benefit in its Consolidated Statements of Operations when that occurs. The Company recognizes the income tax benefit from a tax position only if it is more likely than not that the tax position will be sustained on examination by the applicable taxing authorities, based on the technical merits of the Company's position. The tax benefit recognized in the financial statements from such a position is measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement.

Estimated interest and penalties are recorded as a component of interest expense and other expense, respectively.

Share-Based Compensation

The Company measures compensation cost for share-based payment awards at fair value and recognizes it as compensation expense over the service period for awards expected to vest. Share-based compensation expense is recognized for all share-based

payment awards, net of an estimated forfeiture rate. Compensation cost is only recognized for those shares expected to vest on a straight-line basis over the requisite service period of the award.

Determining the appropriate fair value model and calculating the fair value of share-based payment awards requires subjective assumptions, including the expected life of the share-based payment awards and stock price volatility. The Company utilizes the Black-Scholes options pricing model to value the stock options granted under its options plans. In this model, the assumptions utilized relate to stock price volatility, stock option term and forfeiture rates that are based upon both historical factors as well as management's judgment.

The fair value of restricted stock and restricted stock units is determined based on the number of shares or units granted and the quoted price of the Company's common stock at the date of grant.

The Company has granted performance vesting restricted stock and performance vesting restricted stock units to executives as one of the ways to align compensation with shareholder interests. Vesting of these awards is contingent upon achievement of certain performance conditions. Compensation expense for these awards is only recorded when vesting is deemed to be "probable."

Awards are evaluated for probability of vesting each reporting period.

Shipping and Handling Costs

Costs related to shipping and handling are included in "Cost of product revenue" and "Cost of service revenue" in the accompanying Consolidated Statements of Operations.

Advertising Costs

Sales and marketing expenses in the accompanying Consolidated Statements of Operations included advertising expenses of $3.4 million, $3.2 million, and $2.3 million in 2017, 2016, and 2015, respectively. The Company incurs advertising costs for representation at certain trade shows, promotional events and sales lead generation, as well as design and printing costs for promotional materials. The Company expenses all advertising costs as incurred.

Earnings Per Share (EPS)

Basic EPS is computed by dividing net income (loss) available to common shareholders by the weighted average number of common shares, excluding unvested restricted stock, outstanding during the period. Diluted EPS is computed by dividing net income (loss) available to common shareholders by the weighted average number of common and potential common shares outstanding during the period, which includes the additional dilution related to conversion of stock options, unvested restricted stock and unvested restricted stock units as computed under the treasury stock method.

For the year ended December 31, 2017, outstanding stock options, unvested restricted stock and unvested restricted stock units were antidilutive because of the net loss and, as such, their effect has not been included in the calculation of basic or diluted net loss per share. For the years ended December 31, 2016 and 2015, the added shares from these items included in the calculation of diluted shares and EPS totaled approximately 1.2 million, and 1.4 million, respectively. Potentially dilutive shares of 3.1 million, 1.2 million, and 0.9 million, respectively, have been excluded from the denominator in the computation of diluted EPS for the years ended December 31, 2017, 2016 and 2015, respectively, because they were antidilutive. An additional 0.5 million, 1.2 million and 1.2 million performance vesting restricted stock and performance vesting restricted stock units were excluded from the computation of diluted EPS for the years ended December 31, 2017, 2016 and 2015, respectively, because the conditions for vesting had not been met as of the balance sheet date.

Accumulated Other Comprehensive Income

Accumulated other comprehensive income, a component of shareholders' equity, consisted of the following at December 31 (in thousands):

	2017	2016
Accumulated unrealized net loss on available-for-sale investments	$ (7)	$ —
Accumulated currency translation adjustments	1,611	2,101
Accumulated unrealized net gain (loss) on cash flow hedges	(689)	681
Accumulated other comprehensive income	$ 915	$ 2,782

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers: Topic 606 (ASU 2014-09) to supersede nearly all existing revenue recognition guidance under GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration that is expected to be received for those goods or services. ASU 2014-09 defines a five step process to achieve this core principle and, in doing so, it is possible more judgment and estimates may be required within the revenue recognition process than required under existing GAAP, including identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. Adoption of ASU 2014-09 was initially required for fiscal and interim reporting periods beginning after December 15, 2016 using either of two methods: (i) retrospective to each prior reporting period presented with the option to elect certain practical expedients as defined within ASU 2014-09 (full retrospective method); or (ii) retrospective with the cumulative effect of initially applying ASU 2014-09 recognized at the date of initial application and providing certain additional disclosures as defined per ASU 2014-09 (modified retrospective method).

In August 2015, FASB issued Accounting Standards Update No. 2015-14, Revenue from Contracts with Customers - Deferral of the Effective Date: Topic 606 (ASU 2015-14) that deferred the effective date of ASU 2014-09 by one year. Application of the new revenue standard is permitted for fiscal and interim reporting periods beginning after December 15, 2016 and required for fiscal and interim reporting periods beginning after December 15, 2017. The Company believes the impact of adopting the new guidance will be immaterial to its annual and interim financial statements. The Company believes that the impact will be limited to the identification of a significant financing component in a small number of its contracts with customers. The Company will also be required to make additional disclosures under the new guidance. The Company plans to adopt this standard in the first quarter of 2018 using the modified retrospective method.

In July 2015, FASB issued Accounting Standards Update No. 2015-11, Simplifying the Measurement of Inventory: Topic 330 (ASU 2015-11). Topic 330 previously required an entity to measure inventory at the lower of cost or market. Market could be replacement cost, net realizable value, or net realizable value less an approximately normal profit margin. ASU 2015-11 requires that inventory measured using either the first-in-first-out (FIFO) or average cost method now be measured at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. The Company adopted ASU 2015-11 at the beginning of the first quarter of 2017. Adoption of ASU 2015-11 did not have a material impact on the Company's consolidated financial statements.

In November 2015, FASB issued Accounting Standards Update No. 2015-17, Balance Sheet Classification of Deferred Taxes: Topic 740 (ASU 2015-17). Current GAAP requires the deferred taxes for each jurisdiction to be presented as a net current asset or liability and net noncurrent asset or liability. This requires a jurisdiction-by-jurisdiction analysis based on the classification of the assets and liabilities to which the underlying temporary differences relate, or, in the case of loss or credit carryforwards, based on the period in which the attribute is expected to be realized. Any valuation allowance is then required to

be allocated on a pro rata basis, by jurisdiction, between current and noncurrent deferred tax assets. The new guidance requires that all deferred tax assets and liabilities, along with any related valuation allowance, be classified as noncurrent on the balance sheet. As a result, each jurisdiction will now only have one net noncurrent deferred tax asset or liability. The guidance does not change the existing requirement that only permits offsetting within a jurisdiction. The Company adopted ASU 2015-17 at the beginning of the first quarter of 2017. At the time of adoption, all of the Company's deferred tax assets and liabilities, along with any related valuation allowance, were classified as noncurrent on its Consolidated Balance Sheet. The Company adopted ASU 2015-17 on a retrospective basis. As such, prior period amounts have been adjusted to reflect the retrospective application of ASU 2015-17. This resulted in $19.1 million of current net deferred tax assets being reclassified as noncurrent on the Company's December 31, 2016 Consolidated Balance Sheet.

In January 2016, FASB issued Accounting Standards Update No. 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities: Topic 825 (ASU 2016-01). The updated guidance enhances the reporting model for financial instruments, which includes amendments to address aspects of recognition, measurement, presentation and disclosure. Adoption of ASU 2016-01 is required for fiscal reporting periods beginning after December 15, 2017, including interim reporting periods within those fiscal years. The Company does not expect the adoption of ASU 2016-01 to have a material impact on its consolidated financial statements.

In February 2016, FASB issued Accounting Standards Update No. 2016-02, Leases: Topic 842 (ASU 2016-02), that replaces existing lease guidance. The new standard is intended to provide enhanced transparency and comparability by requiring lessees to record right-of-use assets and corresponding lease liabilities on the balance sheet. Under the new guidance, leases will continue to be classified as either finance or operating, with classification affecting the pattern of expense recognition in the Consolidated Statements of Operations. Lessor accounting is largely unchanged under ASU 2016-02. Adoption of ASU 2016-02 is required for fiscal reporting periods beginning after December 15, 2018, including interim reporting periods within those fiscal years with early adoption being permitted. As of December 31, 2017, the new standard requires application with a modified retrospective approach to each prior reporting period presented with various optional practical expedients. While the Company expects adoption to lead to a material increase in the assets and liabilities recorded on its Consolidated Balance Sheet, the Company is still evaluating the overall impact on its consolidated financial statements.

In August 2016, FASB issued Accounting Standards Update No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments (ASU 2016-15). The updated guidance clarifies how companies present and classify certain cash receipts and cash payments in the statement of cash flows. Adoption of ASU 2016-15 is required for fiscal reporting periods beginning after December 15, 2017, including interim reporting periods within those fiscal years with early adoption being permitted. The Company does not expect the adoption of ASU 2016-15 to have a material impact on its consolidated financial statements.

In November 2016, FASB issued Accounting Standards Update No. 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash (ASU 2016-18) which amends ASC 230 to add or clarify guidance on the classification and presentation of restricted cash in the statement of cash flows. The amended guidance requires that amounts that are deemed to be restricted cash and restricted cash equivalents be included in the cash and cash-equivalent balances in the statement of cash flows. A reconciliation between the consolidated balance sheet and the statement of cash flows must be disclosed when the consolidated balance sheet includes more than one line item for cash, cash equivalents, restricted cash, and restricted cash equivalents. The guidance also requires that changes in restricted cash and restricted cash equivalents that result from transfers between cash, cash equivalents, and restricted cash and restricted cash equivalents should not be presented as cash flow activities in the statement of cash flows. An entity with a material balance of amounts generally described as restricted cash and restricted cash equivalents must disclose information about the nature of the restrictions. Adoption of ASU 2016-18 is required for fiscal reporting periods beginning after December 15, 2017, including interim reporting periods within those fiscal years with early adoption being

permitted. The Company does not expect the adoption of ASU 2016-18 to have a material impact on its consolidated financial statements.

In January 2017, FASB issued Accounting Standards Update No. 2017-04, Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment (ASU 2017-04) which eliminates Step 2 from the goodwill impairment test. ASU 2017-04 also eliminates the requirements for any reporting unit with a zero or negative carrying amount to perform a qualitative assessment and, if it fails that qualitative test, to perform Step 2 of the goodwill impairment test. An entity still has the option to perform the qualitative assessment for a reporting unit to determine if the quantitative impairment test is necessary. Adoption of ASU 2017-04 is required for annual or interim goodwill impairment tests in fiscal years beginning after December 15, 2019 with early adoption being permitted for annual or interim goodwill impairment tests performed on testing dates after January 1, 2017. The Company adopted ASU 2017-04 at the beginning of the second quarter of 2017. Adoption of ASU 2017-04 did not have a material impact on the Company's consolidated financial statements.

In August 2017, FASB issued Accounting Standards Update No. 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities (ASU 2017-12). The new standard simplifies and expands the eligible hedging strategies for financial and nonfinancial risks. It also enhances the transparency of how hedging results are presented and disclosed. Further, the new standard provides partial relief on the timing of certain aspects of hedge documentation and eliminates the requirement to recognize hedge ineffectiveness separately in earnings. Adoption of ASU 2017-12 is required for fiscal reporting periods beginning after December 15, 2018, including interim reporting periods within those fiscal years with early adoption being permitted. The Company is currently evaluating the potential impact of the pending adoption of ASU 2017-12 on its consolidated financial statements.

NOTE 3 STRATEGIC TRANSACTION

On September 25, 2017, the Company completed a strategic transaction with Seagate Cloud Systems Inc. (Seagate) centered around the transfer of Seagate's ClusterStor high-performance storage business (ClusterStor) to Cray. The ClusterStor business consists of the ClusterStor L300, ClusterStor L300N and the ClusterStor SL220 storage solutions. The Company will sell, support, develop, manufacture, and test the ClusterStor storage solutions. The addition of ClusterStor will allow the Company to have more control over its storage products and to increase the value added in its solutions. It will also enhance the opportunity for the Company to sell its storage products through other resellers and to consolidate its service capability.

The transaction was accounted for under the acquisition method of accounting. The assets acquired and liabilities assumed by the Company were primarily recognized at their fair value at the acquisition date using significant inputs that are not observable in the market (i.e., Level 3 inputs). The Company utilized a third-party appraisal in its determination of the fair value of the various intangible assets acquired and deferred revenue.

The Company received assets valued at $20.2 million and assumed liabilities valued at $15.7 million. The excess of assets received over liabilities assumed of $4.5 million has been accounted for as a bargain purchase and recognized as a gain in the line item gain on strategic transaction in the Consolidated Statements of Operations for the year ended December 31, 2017. The bargain purchase gain was primarily the result of the seller's planned exit from the business. Assets received included cash of $8.0 million. The Company expects to receive approximately $1.8 million in additional cash in the first half of 2018 as part of post-closing adjustments based on the final analysis of obligations to be assumed.

The Company has assumed customer support obligations associated with the ClusterStor business and has added more than 125 employees and contractors. Because the fair value of the assets acquired exceeded the amount of liabilities assumed, resulting in a $4.5 million gain on the transaction, the Company reassessed and reaffirmed that the recognition and measurement of identifiable assets acquired and liabilities assumed were appropriate as required by the accounting standards applicable to bargain purchase transactions.

The Company incurred approximately $0.5 million of legal and other transaction costs directly related to the transaction, all of which were expensed and included in general and administrative expenses in the Consolidated Statements of Operations for the year ended December 31, 2017.

The Company estimated the fair value of the assets acquired and liabilities assumed as of the acquisition date based on information that is currently available. The Company may obtain additional information to assist it in determining the fair value of the net assets acquired at the acquisition date during the measurement period and, as such, additional purchase price adjustments may be recorded. The Company will record measurement period adjustments, if any, in the period in which the adjustments are recognized.

Pro forma financial results are not presented as it is impractical to obtain the necessary information. The seller did not operate the acquired assets as a standalone business and, therefore, historical financial information is not available. It is impractical to determine the revenue or net income (loss) included in the Consolidated Statements of Operations related to ClusterStor since the date of acquisition because ClusterStor has been fully integrated into the Company's storage and data management segment. The Company was also previously purchasing the same ClusterStor products from Seagate for resale that it acquired as part of the transaction. For these reasons, the operating results of ClusterStor cannot be separately identified.

The following are the estimated values of the assets acquired and the liabilities assumed (in thousands):

Cash	$	8,000
Receivable from Seagate		1,782
Inventory		4,120
Property and equipment		2,915
Deferred revenue		(12,168)
Deferred tax liabilities		(3,019)
Other liabilities		(500)
Net tangible assets		1,130
Trademarks		90
Developed technology		1,400
Customer relationships		260
Supply agreement		1,600
Total net assets acquired	$	4,480

The fair values of the major components of the intangible assets acquired and their estimated useful lives are as follows (in thousands):

Intangible Asset Class		Fair Value	Useful Life (in Years)
Trademarks	$	90	5
Developed technology	$	1,400	3
Customer relationships	$	260	10
Supply agreement	$	1,600	4

The carrying amount of the major components of intangible assets acquired are as follows as of December 31, 2017 (in thousands):

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Trademarks	$ 90	$ 5	$ 85
Developed technology	1,400	117	1,283
Customer relationships	260	7	253
Supply agreement	1,600	100	1,500
Total	$ 3,350	$ 229	$ 3,121

Aggregate amortization expense of these intangible assets expected for the years ending December 31 are as follows (in thousands):

2018	$ 911
2019	911
2020	794
2021	344
2022	40
Thereafter	121
Total	$ 3,121

NOTE 4 FAIR VALUE MEASUREMENTS

Under FASB Accounting Standards Codification Topic 820, *Fair Value Measurements and Disclosures*, based on the observability of the inputs used in the valuation techniques used to determine the fair value of certain financial assets and liabilities, the Company is required to provide the following information according to the fair value hierarchy. The fair value hierarchy ranks the quality and reliability of the information used to determine fair values.

In general, fair values determined by Level 1 inputs utilize quoted prices (unadjusted) in active markets for identical assets or liabilities. Fair values determined by Level 2 inputs utilize observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities. Fair values determined by Level 3 inputs are unobservable data points for the asset or liability, and include situations where there is little, if any, market activity for the asset or liability. The following table presents information about the Company's financial assets and liabilities that have been measured at fair value on a recurring basis as of December 31, 2017 and 2016, and indicates the fair value hierarchy of the valuation inputs utilized to determine such fair value (in thousands):

Description	Fair Value as of December 31, 2017	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)
Assets:			
Cash and cash equivalents and restricted cash	$ 140,320	$ 140,320	$ —
Available-for-sale investments (1)	6,997	6,997	—
Foreign currency exchange contracts (2)	3,251	—	3,251
Assets measured at fair value at December 31, 2017	$ 150,568	$ 147,317	$ 3,251
Liabilities:			
Foreign currency exchange contracts (3)	2,431	—	2,431
Liabilities measured at fair value at December 31, 2017	$ 2,431	$ —	$ 2,431

Description	Fair Value as of December 31, 2016	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)
Assets:			
Cash and cash equivalents and restricted cash	$ 224,617	$ 224,617	$ —
Foreign currency exchange contracts (2)	11,250	—	11,250
Assets measured at fair value at December 31, 2016	$ 235,867	$ 224,617	$ 11,250
Liabilities:			
Foreign currency exchange contracts (3)	41	—	41
Liabilities measured at fair value at December 31, 2016	$ 41	$ —	$ 41

(1) Included in "Short-term investments" on the Company's Consolidated Balance Sheets.

(2) Included in "Prepaid expenses and other current assets" and "Other non-current assets" on the Company's Consolidated Balance Sheets.

(3) Included in "Other accrued liabilities" and "Other non-current liabilities" on the Company's Consolidated Balance Sheets.

Foreign Currency Derivatives

The Company may enter into foreign currency derivatives to hedge future cash receipts on certain sales transactions that are payable in foreign currencies.

As of December 31, 2017 and 2016, the Company had outstanding foreign currency exchange contracts that were designated and accounted for as cash flow hedges of anticipated future cash receipts on sales contracts payable in foreign currencies. The outstanding notional amounts were approximately (in millions):

	December 31,	
	2017	2016
Euros (EUR)	2.1	1.5
Swiss Francs (CHF)	—	3.6
Japanese Yen (JPY)	4,345.6	—
Canadian Dollars (CAD)	56.0	54.4
New Zealand Dollars (NZD)	16.2	—

The Company had hedged foreign currency exposure related to these designated cash flow hedges of approximately $96.3 million and $46.9 million as of December 31, 2017 and 2016, respectively.

As of December 31, 2017 and 2016, the Company had outstanding foreign currency exchange contracts that had been dedesignated for the purposes of hedge accounting treatment. The Company dedesignates cash flow hedges when the receivable related to the hedged cash flow is recorded. The outstanding notional amounts were approximately (in millions):

	December 31,	
	2017	2016
British Pounds (GBP)	26.1	33.8
Euros (EUR)	4.7	8.0
Japanese Yen (JPY)	—	2,464.7
Canadian Dollars (CAD)	0.3	32.4
Swiss Francs (CHF)	2.6	—

The foreign currency exposure related to these contracts was approximately $46.9 million as of December 31, 2017 and $107.5 million as of December 31, 2016. Unrealized gains or losses related to these dedesignated contracts are recorded in other income (expense) in the Consolidated Statements of Operations and are generally offset by foreign currency adjustments on related receivables. These foreign currency exchange contracts are considered to be economic hedges.

Cash receipts associated with the hedged contracts are expected to be received from 2018 through 2022, during which time the revenue on the associated sales contracts is expected to be recognized, or in the case of receivables denominated in a foreign currency, the receivables balances will be collected. Any gain or loss on hedged foreign currency will be recognized at the time of customer acceptance, or in the case of receivables denominated in a foreign currency, each period during which hedged receivables denominated in a foreign currency are outstanding.

As of December 31, 2017 and 2016, the fair value of outstanding foreign currency exchange contracts totaled a net gain of $0.8 million and $11.2 million, respectively.

Fair values of derivative instruments, consisting of foreign currency exchange contracts, designated as cash flow hedges (in thousands):

Balance Sheet Location	December 31, 2017	December 31, 2016
Prepaid expenses and other current assets	$ 546	$ 71
Other non-current assets	—	367
Other accrued liabilities	(129)	(9)
Other non-current liabilities	(1,907)	(5)
Total fair value of derivative instruments designated as cash flow hedges	$ (1,490)	$ 424

As of December 31, 2017, unrecognized losses, net of tax, of $0.7 million were included in “Accumulated other comprehensive income” on the Company’s Consolidated Balance Sheets. As of December 31, 2016, unrecognized gains, net of tax, of $0.7 million, were included in “Accumulated other comprehensive income” on the Company’s Consolidated Balance Sheets.

Fair values of derivative instruments, consisting of foreign currency exchange contracts, not designated as cash flow hedges (in thousands):

Balance Sheet Location	December 31, 2017	December 31, 2016
Prepaid expenses and other current assets	$ 1,252	$ 5,344
Other non-current assets	1,453	5,468
Other accrued liabilities	(395)	(27)
Total fair value of derivative instruments not designated as cash flow hedges	$ 2,310	$ 10,785

NOTE 5 ACCUMULATED OTHER COMPREHENSIVE INCOME

The following table shows the impact on product revenue of reclassification adjustments from accumulated other comprehensive income resulting from hedged foreign currency transactions recorded by the Company for the years ended December 31, 2017, 2016 and 2015 (in thousands). The gross reclassification adjustments decreased product revenue for the year ended December 31, 2017 and increased product revenue for the years ended December 31, 2016 and 2015.

	Year Ended December 31,		
	2017	2016	2015
Gross of Tax Reclassifications	$ (146)	$ 22,207	$ 6,163
Net of Tax Reclassifications	$ (87)	$ 13,324	$ 3,698

The following tables show the changes in Accumulated Other Comprehensive Income by component for the years ended December 31, 2017 and 2016 (in thousands):

Year Ended December 31, 2017

	Unrealized Loss on Investments	Foreign Currency Translation Adjustments	Unrealized Gain (Loss) on Cash Flow Hedges	Accumulated Other Comprehensive Income
Beginning balance	$ —	$ 2,101	$ 681	$ 2,782
Current-period change, net of tax	(7)	(490)	(1,370)	(1,867)
Ending balance	$ (7)	$ 1,611	$ (689)	$ 915
Income tax expense (benefit) associated with current-period change	$ (3)	$ 1,110	$ (1,399)	$ (292)

Year Ended December 31, 2016

	Unrealized Loss on Investments	Foreign Currency Translation Adjustments	Unrealized Gain on Cash Flow Hedges	Accumulated Other Comprehensive Income
Beginning balance	$ (8)	$ 1,675	$ 5,975	$ 7,642
Current-period change, net of tax	8	426	(5,294)	(4,860)
Ending balance	$ —	$ 2,101	$ 681	$ 2,782
Income tax expense (benefit) associated with current-period change	$ 6	$ (152)	$ (2,425)	$ (2,571)

NOTE 6 INVESTMENTS

The Company's investments in debt securities with maturities at purchase greater than three months are classified as "available-for-sale." Changes in fair value are reflected in other comprehensive income (loss). The carrying amount of the Company's investments in available-for-sale securities are shown in the table below (in thousands):

	December 31, 2017
Short-term available-for-sale securities cost	$ 7,007
Short-term available-for-sale securities unrealized loss	(10)
Short-term available-for-sale securities fair value	$ 6,997

The Company's investments in debt securities were investment grade and carried a long-term rating of A2/A or higher.

NOTE 7 ACCOUNTS AND OTHER RECEIVABLES, NET

A summary of net accounts and other receivables follows (in thousands):

	December 31,	
	2017	2016
Trade accounts receivable	$ 131,151	$ 156,705
Unbilled receivables	9,321	17,264
Advance billings	3,569	1,915
Short-term investment in sales-type lease	10,684	8,683
Other receivables	7,337	13,395
	162,062	197,962
Allowance for doubtful accounts	(28)	(21)
Accounts and other receivables, net	$ 162,034	$ 197,941

Unbilled receivables represent amounts where the Company has recognized revenue in advance of the contractual billing terms. Advance billings represent billings made based on contractual terms for which revenue has not been recognized.

As of December 31, 2017 and 2016, accounts receivable included $45.3 million and $104.6 million, respectively, due from the U.S. Government. Of these amounts, $2.1 million and $1.4 million were unbilled as of December 31, 2017 and 2016, respectively, based upon contractual billing arrangements with these customers. As of December 31, 2017, two non-U.S. Government customers accounted for 38% of total accounts and other receivables. As of December 31, 2016, two non-U.S. Government customers accounted for 24% of total accounts and other receivables.

NOTE 8 SALES-TYPE LEASE

The Company has a sales-type lease with one non-U.S. Government customer, under which it will receive quarterly payments over the term of the lease, which expires in September 2020. The lease is denominated in British Pounds and the Company has entered into certain foreign currency exchange contracts that act as an economic hedge for the foreign currency exposure associated with this arrangement.

The following table shows the components of the net investment in the sales-type lease as of December 31, 2017 and 2016 (in thousands):

	December 31	
	2017	2016
Total minimum lease payments to be received	$ 42,268	$ 52,224
Less: executory costs	(6,831)	(10,139)
Net minimum lease payments receivable	35,437	42,085
Less: unearned income	(1,386)	(2,352)
Net investment in sales-type lease	34,051	39,733
Less: long-term investment in sales-type lease	(23,367)	(31,050)
Investment in sales-type lease included in accounts and other receivables	$ 10,684	$ 8,683

As of December 31, 2017, minimum lease payments for each of the succeeding three fiscal years were as follows (in thousands):

2018	$	15,197
2019		15,478
2020		11,593
Total minimum lease payments to be received	$	42,268

NOTE 9 INVENTORY

A summary of inventory follows (in thousands):

	December 31			
	2017		2016	
Components and subassemblies	$	37,219	$	31,695
Work in progress		59,456		39,894
Finished goods		89,632		16,665
	$	186,307	$	88,254

As of December 31, 2017 and 2016, $48.1 million and $10.5 million, respectively, of finished goods inventory was located at customer sites pending acceptance. At December 31, 2017, two customers accounted for $67.7 million of finished goods inventory and at December 31, 2016, two customers accounted for $11.9 million of finished goods inventory.

The Company did not write-off any inventory in 2017. During 2016 and 2015, the Company wrote-off $4.8 million and $0.5 million, respectively, of excess and obsolete inventory.

NOTE 10 PROPERTY AND EQUIPMENT, NET

A summary of property and equipment follows (in thousands):

	December 31,			
	2017		2016	
Land	$	203	$	498
Buildings		20,480		20,679
Furniture and equipment		13,219		11,740
Computer equipment		58,358		54,541
Leasehold improvements		9,961		2,976
		102,221		90,434
Accumulated depreciation and amortization		(65,598)		(59,814)
Property and equipment, net	$	36,623	$	30,620

Depreciation expense on property and equipment for 2017, 2016 and 2015 was $14.4 million, $12.5 million and $13.3 million, respectively.

NOTE 11 SERVICE SPARES, NET

A summary of service spares follows (in thousands):

	December 31, 2017	December 31, 2016
Service spares	$ 7,670	$ 6,503
Accumulated depreciation	(5,119)	(3,480)
Service spares, net	$ 2,551	$ 3,023

Depreciation expense on service spares for 2017, 2016 and 2015 was $1.6 million, $1.5 million and $1.1 million, respectively.

NOTE 12 DEFERRED REVENUE

A summary of deferred revenue follows (in thousands):

	December 31 2017	December 31 2016
Deferred product revenue	$ 22,245	$ 14,274
Deferred service revenue	96,496	96,113
Total deferred revenue	118,741	110,387
Less long-term deferred revenue	(38,622)	(27,258)
Deferred revenue in current liabilities	$ 80,119	$ 83,129

As of December 31, 2017 and 2016, the U.S. Government accounted for $32.5 million and $60.3 million, respectively, of total deferred revenue. As of December 31, 2017 and 2016, no non-U.S. Government customers accounted for more than 10% of total deferred revenue.

NOTE 13 COMMITMENTS AND CONTINGENCIES

The Company has recorded rent expense under leases for buildings or office space, which were accounted for as operating leases, in 2017, 2016 and 2015 of $8.7 million, $8.4 million, and $5.9 million, respectively. The 2016 rent expense includes a $2.3 million lease termination fee for the Company's St. Paul facility.

Minimum contractual commitments as of December 31, 2017, were as follows (in thousands):

	Operating Leases	Development Agreements
2018	$ 7,461	$ 19,930
2019	6,918	5,116
2020	6,232	15
2021	6,271	—
2022	6,342	—
Thereafter	20,709	—
Minimum contractual commitments	$ 53,933	$ 25,061

In its normal course of operations, the Company engages in development arrangements under which it hires outside engineering resources to augment its existing internal staff in order to complete research and development projects, or parts thereof. For the years ended December 31, 2017, 2016 and 2015, the Company incurred $17.5 million, $15.6 million and $14.3 million, respectively, for such arrangements.

Litigation

From time to time, the Company is subject to various legal proceedings that arise in the ordinary course of business. Other than as outlined below, none of these legal proceedings are deemed to be material to the Company's business.

The Company is subject to patent lawsuits brought by Raytheon Company (Raytheon). The first suit was brought by Raytheon on September 25, 2015 in the Eastern District of Texas (Civil Action No. 2:15-cv-1554) asserting infringement of four patents owned by Raytheon. Two of the asserted patents relate to computer hardware alleged to be encompassed by Cray's current and past products, and the two remaining asserted patents relate to features alleged to be performed by certain third-party software that Cray optionally includes as part of its product offerings. A second suit was brought by Raytheon on April 22, 2016 in the Eastern District of Texas (Civil Action No. 2:16-cv-423) asserting infringement of five patents owned by Raytheon. In this second suit, all five asserted patents relate to features alleged to be performed by certain third-party software that Cray optionally includes as part of its product offerings. As of July 18, 2017, trial in the first action has been stayed by the trial court until further notice from the court. The United States Court of Appeals for the Federal Circuit granted Cray's petition for writ of mandamus and overturned the trial court's determination that venue was proper in the Eastern District of Texas. The Federal Circuit also remanded so the district court could determine where the case should be transferred, but the trial court has not yet ruled on that issue. Trial in the second action is currently stayed pending resolution of the first action. The Company is vigorously defending these actions. The probable outcome of either litigation cannot be determined, nor can the Company estimate a range of potential loss. Based on its review of the matters to date, the Company believes that it has valid defenses and claims in each of the two lawsuits. As a result, the Company considers the likelihood of a material loss related to these matters to be remote.

NOTE 14 INCOME TAXES

Income taxes are recognized for the amount of taxes payable for the current year and for the impact of deferred tax assets and liabilities, which represent consequences of events that have been recognized differently in the financial statements under GAAP than for tax purposes.

On December 22, 2017, the President of the United States signed into law H.R. 1, "An Act to Provide for Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018" (the "Tax Cuts and Jobs Act"). ASC Topic 740, Accounting for Income Taxes, requires companies to recognize the effect of tax law changes in the period of enactment. The Tax Cuts and Jobs Act made significant changes to existing U.S. tax law, including, but not limited to, a permanent reduction to the U.S. federal corporate income tax rate from 35% to 21%, imposition of a one-time tax on deferred foreign income ("Repatriation Transition Tax"), adoption of a participation exemption system with respect to the taxation of future dividends received from foreign corporations, and repeal of the corporate alternative minimum tax system. Other significant changes in the Tax Cuts and Jobs Act include taxing payments made to foreign related parties that are deemed to be excessive, imposing a minimum tax on certain foreign earnings, requiring (beginning after December 31, 2021) the capitalization and subsequent amortization of certain research and development related expenses, and placing additional limits on the use of net operating losses and the deductibility of certain executive compensation.

Given the significance of the Tax Cuts and Jobs Act, the Securities and Exchange Commission ("SEC") issued Staff Accounting Bulletin 118 ("SAB 118") that expresses the views of the SEC regarding ASC Topic 740 in the reporting period that includes the date of enactment. The SEC staff issuing SAB 118 recognized that a company's review of the income tax effects attributable to the enactment of the Tax Cuts and Jobs Act may be incomplete at the time financial statements are issued for the reporting period that included the date of enactment and allows a company to record provisional amounts during a one year measurement period similar to the principles adopted in ASC Topic 805, Business Combinations. During the measurement period, income tax effects attributable to the enactment of the Tax Cuts and Jobs Act are expected to be recorded at the time a reasonable estimate for all or a portion of the effects can be made, and provisional amounts can be adjusted and recognized, as a discreet item in the applicable reporting period, as information becomes available, prepared or analyzed. The measurement period is

deemed to have ended when the company has obtained, prepared and analyzed the information necessary to finalize its accounting.

SAB 118 summarizes a three-step process to be applied to each reporting period to account for and qualitatively disclose income tax effects attributable to the enactment of the Tax Cuts and Jobs Act: (1) the effects of the change in tax law for which accounting is complete; (2) provisional amounts (including subsequent adjustments to those amounts) for the effects of the tax law where accounting is not complete, but that a reasonable estimate has been determined; and (3) a reasonable estimate cannot yet be made and therefore taxes are reflected in accordance with the law prior to the enactment of the Tax Cuts and Jobs Act.

Amounts recorded by the Company during the year ended December 31, 2017 where the accounting is considered to be complete relate to a reduction, in the amount of $28.9 million, in the carrying value of the Company's U.S. deferred tax assets resulting from the Tax Cuts and Jobs Act's reduction in the U.S. federal corporate income tax rate from 35% to 21%. The Tax Cuts and Jobs Act also includes a Repatriation Transaction Tax on the net accumulated and previously untaxed earnings and profits of a U.S. taxpayer's foreign subsidiaries. As of December 31, 2017, the Company has recorded provisional tax expense, in the amount of $0.3 million, attributable to the Repatriation Transition Tax and provisional tax expense, in the amount of $0.3 million, as a result of the Company's decision to no longer consider the undistributed earnings of its foreign subsidiaries to be permanently reinvested outside of the U.S. The Company has not had sufficient time to obtain, prepare and analyze historical tax returns, financial statements and related accounts that is required to finalize its accounting with respect to the items for which provisional tax expense has been recorded

A majority of the Company's deferred tax assets result from net operating loss carryforwards and research and development tax credits. As of December 31, 2017, the Company had U.S. federal net operating loss carryforwards of approximately $72.6 million and U.S. federal research and development tax credit carryforwards of approximately $36.0 million. Upon the adoption of ASU 2016-09, Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting in March of 2016, the Company recognized $16.6 million in deferred tax benefits from approximately $47.4 million of federal net operating losses attributable to share-based income tax deductions that exceeded amounts that had been recognized for financial reporting purposes. These deferred tax benefits were recorded as a cumulative-effect adjustment to accumulated deficit. The federal net operating loss carryforwards will expire from 2019 through 2037, and the federal research and development tax credits will expire from 2021 through 2037 if not utilized. Utilization of $21.2 million of the Company's federal net operating loss carryforwards generated prior to May 10, 2001 is limited under Section 382 of the Internal Revenue Code to $4.3 million per year. As of December 31, 2017, the Company had approximately $7.1 million of foreign net operating loss carryforwards in various jurisdictions. Most of the Company's foreign net operating losses can be carried forward indefinitely, with certain amounts expiring from 2018 to 2027.

Income (loss) before income taxes consisted of the following (in thousands):

	Year Ended December 31,		
	2017	2016	2015
United States	$ (53,201)	$ 2,648	$ 38,362
International	311	7,273	4,415
Total	$ (52,890)	$ 9,921	$ 42,777

The tax provision (benefit) for income taxes related to operations consisted of the following (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Current provision (benefit):			
Federal	$ 445	$ 3	$ 725
State	310	(279)	1,389
Foreign	1,735	1,443	1,023
Total current provision	2,490	1,167	3,137
Deferred provision (benefit):			
Federal	77,152	(2,127)	12,198
State	1,185	416	(52)
Foreign	112	(150)	(43)
Total deferred provision (benefit)	78,449	(1,861)	12,103
Total provision (benefit) for income taxes	$ 80,939	$ (694)	$ 15,240

The tax provision (benefit) differs from the amount computed by applying the federal statutory income tax rate as follows (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Income tax provision (benefit) at statutory rate	$ (18,511)	$ 3,472	$ 14,972
State taxes, net of federal benefit	(1,066)	89	897
Foreign income taxes	135	(407)	(12)
Additional increases (deductions) from share-based compensation	1,036	(1,815)	—
Deemed dividends for U.S. income tax purposes	—	329	407
Nondeductible expenses	222	231	283
Disallowed compensation	60	331	455
Audit accrual (settlement)	1,156	(297)	—
Research and development tax credit	(3,827)	(2,470)	(1,733)
Tax effect of repatriation transition tax on unremitted earnings	605	—	—
Gain on strategic transaction	(1,568)	—	—
Deferred tax impact from tax rate change	28,907	—	—
Effect of change in valuation allowance on deferred tax assets	73,790	(157)	(29)
Effective income tax provision (benefit)	$ 80,939	$ (694)	$ 15,240

Significant components of the Company's deferred income tax assets and liabilities follow (in thousands):

	December 31,	
	2017	2016
Deferred Income Tax Assets		
Inventory	$ 6,495	$ 4,127
Accrued compensation	262	511
Deferred revenue	8,285	14,742
Research and development credit carryforwards	32,218	28,241
Net operating loss carryforwards	22,775	38,348
Property and equipment	4,136	8,188
Goodwill	289	106
Research and development expenses	9,944	—
Share-based compensation	4,124	7,016
Other	2,592	12,939
Gross deferred tax assets	91,120	114,218
Valuation allowance	(82,875)	(8,727)
Deferred tax assets	8,245	105,491
Deferred Income Tax Liabilities		
Investment in sales-type lease, net	(3,084)	(13,728)
Intangible assets	(205)	(421)
Other	(3,850)	(5,729)
Deferred tax liabilities	(7,139)	(19,878)
Net deferred tax asset	$ 1,106	$ 85,613

The Company recorded income tax expense of $80.9 million during the year ended December 31, 2017, an income tax benefit of $0.7 million during the year ended December 31, 2016 and income tax expense of $15.2 million during the year ended December 31, 2015. The difference between the income tax benefit at the statutory rate and the Company's effective income tax expense for the year ended December 31, 2017 was primarily attributable to the reduction in the U.S. federal corporate income tax rate as a result of the Tax Cuts and Jobs Act and its impact on the carrying value of the Company's U.S. deferred tax assets and the Company's decision after the Tax Cuts and Jobs Act was enacted to increase the valuation allowance held against its U.S. deferred tax assets, offset, in part, by research and development tax credits. The difference between the income tax provision at the statutory rate and the Company's effective income tax benefit for the year ended December 31, 2016 was the result of research and development tax credits and additional tax deductions from share-based compensation, sometimes referred to as excess tax benefits, partially offset by state taxes, non-deductible expenses and other permanent items. Excess tax benefits arise when tax deductions recognized by the Company with respect to share-based compensation exceed the compensation cost attributable to share-based compensation that was recognized in the Company's consolidated financial statements. The difference between the income tax provision at the statutory rate and the Company's effective income tax provision for the year ended December 31, 2015 was the result of state taxes, non-deductible expenses and other permanent items, partially offset by research and development tax credits.

The valuation allowance on deferred tax assets increased by $74.1 million in 2017 and decreased by $0.8 million and $0.7 million in 2016 and 2015, respectively. Substantially all of the increase in the valuation allowance during 2017 was attributable to the Company's decision to increase the valuation allowance held against its U.S. deferred tax assets on December 31, 2017.

The Company's assessment of its ability to utilize its U.S. deferred tax assets was based upon all available positive and negative evidence, which included, among other things, the Company's recent results of operations, forecasted domestic and international earnings over a number of years, all known business risks and industry trends, and applicable tax planning strategies. The Company considers its actual historical results over several years to have stronger weight than other more subjective indicators, including forecasts, when considering whether to establish or reduce a valuation allowance on deferred tax assets. The Company has significant difficulty projecting future results due to the nature of its business and the industry in which it operates. As of December 31, 2017, the Company had experienced a significant decline in revenue, gross profit, and operating income since 2015, had reported a cumulative pre-tax loss in recent years and is currently forecasting to a report a pre-tax loss for the year ending December 31, 2018. If the Company had determined that it was appropriate to increase the valuation allowance held against our U.S. deferred tax assets prior to enactment of the Tax Cuts and Jobs Act total tax expense for the year ended December 31, 2017 would not have changed. The decrease in the carrying value of our U.S. deferred tax assets as a result of the reduction in the U.S. federal corporate income tax rate would have been completely offset by a reduction in the valuation allowance that would have been previously established against those deferred tax assets.

The Company's conclusion about the realizability of its deferred tax assets, and therefore the appropriateness of the valuation allowance, is reviewed quarterly and could change in future periods depending on the Company's future assessment of all available evidence in support of the likelihood of realization of its deferred tax assets. If the Company's conclusion about the realizability of its deferred tax assets and therefore the appropriateness of its valuation allowance changes in a future period, it could record a substantial tax benefit in the Consolidated Statements of Operations when that occurs.

The following table summarizes changes in the amount of the Company's unrecognized tax benefits for uncertain tax positions for the three years ended December 31, 2017, 2016 and 2015 (in thousands):

Balance at December 31, 2014	$	5,630
Increase related to prior year income tax positions		151
Increase related to current year income tax positions		433
Balance at December 31, 2015	$	6,214
Increase related to prior year income tax positions		53
Decrease related to prior year income tax positions		(365)
Increase related to current year income tax positions		565
Balance at December 31, 2016	$	6,467
Increase related to prior year income tax positions		1,440
Increase related to current year income tax positions		673
Balance at December 31, 2017	$	8,580

Included in the balance of unrecognized tax benefits as of December 31, 2017 was $1.2 million of tax benefits that, if recognized, would affect the effective tax rate. It is not anticipated that the balance of unrecognized tax benefits will significantly change over the next twelve months.

The Company or its subsidiaries file income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. The Company defines its major tax jurisdictions to include United Kingdom and the United States. The Company is no longer subject to income tax examinations with respect to periods before 2016 in the United Kingdom and before 2014 in the United States, although in the United States net operating loss and tax credit carryforwards generated in a year are subject to examination and adjustment for at least three years following the year in which such losses or credits are actually used to offset taxable income.

Estimated interest and penalties are recorded as a component of interest expense and other expense, respectively. Such amounts were not material for 2017, 2016 and 2015.

NOTE 15 CREDIT FACILITIES

As of December 31, 2017, the Company had a $50.0 million revolving line of credit (Credit Facility) with Wells Fargo Bank, National Association, designed to be used for general corporate purposes, including working capital requirements and capital expenditures. The Credit Facility also supports the issuance of letters of credit. The Credit Facility is secured by a first priority lien in all of the Company's accounts receivable and other rights to payment, general intangibles, inventory and equipment.

Any borrowings under the Credit Facility bear interest at either a fluctuating rate equal to the daily one month LIBOR rate plus a margin of 1.25% or a fixed interest rate for one, three or six months equal to the LIBOR rate for the applicable period plus a margin of 1.25%. The Company is also required to pay the lender customary letter of credit fees, and a commitment fee of 0.18% per annum in respect of the unutilized commitment amount under the Credit Facility. The Credit Facility requires that the Company maintain certain financial ratios and restricts its ability to incur additional indebtedness, pay dividends or distributions, create liens on assets, and engage in certain other activities. The Company was in compliance with all of its financial covenants as of the end of each quarter for the year ended December 31, 2017. The Credit Facility matures in March 2018. The Company has begun discussions with the bank that may result in changes to the size and terms of this arrangement.

The Company made no draws and had no outstanding cash borrowings on the credit facility as of December 31, 2017.

As of December 31, 2017, the Company had $15.0 million in USD equivalent value in outstanding letters of credit and $3.0 million in restricted cash associated with certain letters of credit to secure customer prepayments and other customer related obligations.

NOTE 16 SHAREHOLDERS' EQUITY

Preferred Stock: The Company has 5,000,000 shares of undesignated preferred stock authorized, and no shares of preferred stock outstanding.

Common Stock: The Company has 75,000,000 authorized shares of common stock with a par value of $0.01 per share.

Stock Plans: As of December 31, 2017, the Company had one active equity incentive plan that provides shares available for option, restricted stock and restricted stock unit grants to employees, directors, executives and others.

Stock Options: In determining the fair value of stock options, the Company uses the Black-Scholes option pricing model. The following key weighted average assumptions were employed in the calculation for the indicated years ended December 31:

	2017	2016	2015
Risk-free interest rate	1.64%	1.12%	1.31%
Expected dividend yield	—%	—%	—%
Volatility	54.14%	50.92%	50.55%
Expected life (in years)	4.0	4.0	4.0
Weighted average Black-Scholes value of options granted	$ 7.91	$ 13.16	$ 11.23

The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant. The Company does not anticipate declaring dividends in the foreseeable future. Volatility is based on historical data. The expected life of an option is based on the assumption that options will be exercised, on average, about two years after vesting occurs. The Company recognizes compensation expense for only the portion of options that are expected to vest. Therefore, management applies an estimated forfeiture rate that is derived from historical employee termination data and adjusted for expected future employee turnover rates.

The estimated forfeiture rates applied to the Company's stock option grants for the years ended December 31, 2017, 2016 and 2015 was 8.0%. If the actual number of forfeitures differs from those estimated by management, additional adjustments to compensation expense may be required in future periods. The Company's stock price volatility, option lives and expected forfeiture rates involve management's best estimates at the time of such determination, which impact the fair value of the option calculated under the Black-Scholes methodology and, ultimately, the expense that will be recognized over the vesting period or requisite service period of the option. The Company typically issues stock options with a four-year vesting period (the requisite service period) and amortizes the fair value of stock options (share-based compensation cost) ratably over the requisite service period. Options to purchase shares expire no later than ten years after the date of grant.

A summary of the Company's stock option activity and related information follows:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)
Outstanding at January 1, 2015	1,930,990	$ 12.34	
Granted	307,450	27.86	
Exercised	(229,118)	9.99	
Canceled and forfeited	(60,847)	20.00	
Outstanding at December 31, 2015	1,948,475	14.83	
Granted	240,075	32.65	
Exercised	(168,825)	12.57	
Canceled and forfeited	(30,588)	26.60	
Outstanding at December 31, 2016	1,989,137	16.99	
Granted	324,500	18.36	
Exercised	(157,257)	8.51	
Canceled and forfeited	(121,906)	27.02	
Outstanding at December 31, 2017	2,034,474	17.26	5.2
Exercisable at December 31, 2017	1,532,691	15.39	4.0
Available for grant at December 31, 2017	3,107,064		

Outstanding and exercisable options by price range as of December 31, 2017, were as follows:

	Outstanding Options			Exercisable Options	
Range of Exercise Prices per Share	Number Outstanding	Weighted Average Remaining Life (Years)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
$ 0.00 - $ 10.00	673,584	1.9	$ 5.49	673,584	$ 5.49
$ 10.01 - $ 20.00	619,941	6.7	16.78	327,941	15.71
$ 20.01 - $ 30.00	507,844	6.6	26.30	411,552	26.15
$ 30.01 - $ 42.40	233,105	7.5	32.86	119,614	33.34
$ 0.00 - $ 42.40	2,034,474	5.2	17.26	1,532,691	15.39

As of December 31, 2017, there was $17.4 million of aggregate intrinsic value of outstanding stock options, including $15.5 million of aggregate intrinsic value of exercisable stock options. Intrinsic value represents the total pretax intrinsic value for all "in-the-money" options (i.e., the difference between the Company's closing stock price on the last trading day of 2017 and

the exercise price, multiplied by the number of shares of common stock underlying the stock options) that would have been received by the option holders if all option holders had exercised their options on December 31, 2017. This amount changes, based on the fair market value of the Company's stock. Total intrinsic value of options exercised was $1.8 million, $4.0 million, and $5.0 million for the years ended December 31, 2017, 2016 and 2015, respectively.

Restricted Stock: During 2017, 2016 and 2015, the Company issued an aggregate of 44,002, 9,893, and 45,175 shares of restricted stock, respectively, to certain directors, executives and other employees. The grant date fair value of these grants was approximately $0.8 million, $0.3 million, and $1.4 million for 2017, 2016 and 2015, respectively. Share-based compensation expense is recorded over the vesting period, which is generally one year for non-employee directors and four years for officers and employees of the Company.

A summary of the Company's unvested restricted stock grants and changes during the indicated years ended December 31 is as follows:

	Service Vesting Restricted Shares		Performance Vesting Restricted Shares		Total Restricted Shares	
	Shares	Weighted Average Grant Date Fair Value	Shares	Weighted Average Grant Date Fair Value	Shares	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2015	1,033,602	$ 19.48	817,000	$ 15.41	1,850,602	$ 17.68
Granted	45,175	30.44	—	—	45,175	30.44
Forfeited	(48,998)	24.00	(219,000)	15.60	(267,998)	17.14
Vested	(513,336)	15.34	(12,500)	28.20	(525,836)	15.64
Outstanding at December 31, 2015	516,443	24.12	585,500	15.07	1,101,943	19.31
Granted	9,893	34.86	—	—	9,893	34.86
Forfeited	(18,685)	24.73	(72,000)	15.57	(90,685)	17.46
Vested	(250,849)	22.14	—	—	(250,849)	22.14
Outstanding at December 31, 2016	256,802	26.43	513,500	15.00	770,302	18.81
Granted	44,002	17.55	—	—	44,002	17.55
Forfeited	(32,207)	28.15	(513,500)	15.00	(545,707)	15.78
Vested	(156,272)	25.25	—	—	(156,272)	25.25
Outstanding at December 31, 2017	112,325	24.09	—	—	112,325	24.09

The estimated forfeiture rates applied to the Company's service vesting restricted stock grants during the years ended December 31, 2017, 2016 and 2015 was 8.0%. The aggregate fair value of restricted shares vested during 2017, 2016 and 2015 was $2.9 million, $7.7 million, and $14.2 million, respectively. There are no longer any performance vesting restricted shares outstanding.

Restricted Stock Units: During 2017, 2016 and 2015, the Company issued an aggregate of 825,000, 244,160 and 984,850 restricted stock and performance vesting restricted stock units, respectively, to certain executives and other employees. The grant date fair value of these grants was approximately $15.2 million, $8.0 million and $29.5 million for 2017, 2016 and 2015, respectively. Restricted stock units have similar vesting characteristics as restricted stock but are not outstanding shares and do not have any voting or dividend rights. The Company records share-based compensation expense over the vesting period. At the time of vesting, a share of common stock representing each restricted stock unit vested will be issued by the Company.

A summary of the Company's unvested restricted stock unit grants and changes during the indicated years ended December 31 is as follows:

	Service Vesting Restricted Stock Units		Performance Vesting Restricted Stock Units		Total Restricted Stock Units	
	Units	Weighted Average Grant Date Fair Value	Units	Weighted Average Grant Date Fair Value	Units	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2015	—	$ —	—	$ —	—	$ —
Granted	285,550	29.78	699,300	30.04	984,850	29.97
Forfeited	(12,500)	30.48	(66,600)	30.04	(79,100)	30.11
Vested	—	—	—	—	—	—
Outstanding at December 31, 2015	273,050	29.75	632,700	30.04	905,750	29.95
Granted	220,575	31.89	23,585	42.65	244,160	32.93
Forfeited	(7,700)	29.44	—	—	(7,700)	29.44
Vested	(60,204)	29.57	—	—	(60,204)	29.57
Outstanding at December 31, 2016	425,721	30.89	656,285	30.49	1,082,006	30.65
Granted	799,000	18.40	26,000	20.25	825,000	18.46
Forfeited	(95,001)	25.75	(199,800)	30.04	(294,801)	28.66
Vested	(141,697)	30.91	—	—	(141,697)	30.91
Outstanding at December 31, 2017	988,023	21.29	482,485	30.13	1,470,508	24.19

The estimated forfeiture rates applied to the Company's service vesting restricted stock unit grants during the years ended December 31, 2017, 2016 and 2015 was 8.0%. The aggregate fair value of restricted stock units vested during 2017 and 2016 was $2.7 million and $1.9 million, respectively. The performance vesting restricted stock units are subject to performance measures that are currently not considered "probable" of attainment and as such, no compensation cost has been recorded for these units. The performance vesting restricted stock units are eligible to vest between 2018 and 2020.

Share-based Compensation Expense: Including performance-based equity awards, the Company had $33.0 million of total unrecognized compensation cost related to unvested stock options, unvested restricted stock and unvested restricted stock units as of December 31, 2017. Excluding the $14.5 million of unrecognized compensation cost related to unvested restricted stock units that are subject to performance measures that are currently not considered "probable" of attainment, unrecognized compensation cost is $18.5 million. No compensation expense is recognized for unvested restricted stock or unvested restricted stock units subject to performance measures that are not considered "probable" of attainment. Unrecognized compensation cost related to unvested stock options, unvested non-performance-based restricted stock and unvested non-performance-based restricted stock units is expected to be recognized over a weighted average period of 2.9 years.

The following table sets forth the gross share-based compensation cost resulting from stock options, unvested restricted stock and unvested restricted stock units that were recorded in the Company's Consolidated Statements of Operations for the indicated years ended December 31 (in thousands):

	2017	2016	2015
Cost of product revenue	$ 294	$ 320	$ 254
Cost of service revenue	290	211	276
Research and development	3,759	3,113	3,770
Sales and marketing	2,432	3,710	3,047
General and administrative	4,074	3,797	4,006
Total share-based compensation expense	$ 10,849	$ 11,151	$ 11,353

Employee Stock Purchase Plan (ESPP): The Company's non-compensatory employee stock purchase plan was discontinued in the third quarter of 2017. The maximum number of shares of the Company's common stock that employees could acquire under the ESPP was 1,750,000 shares. Eligible employees were permitted to acquire shares of the Company's common stock through payroll deductions not exceeding 15% of base wages. The purchase price per share under the ESPP was 95% of the closing market price on the fourth business day after the end of each offering period. As of December 31, 2017, 2016 and 2015, an aggregate of 1,118,151, 1,098,085 and 1,070,343 shares, respectively, had been issued under the ESPP.

NOTE 17 BENEFIT PLANS

401(k) Plan

For the three years ended December 31, 2017, the Company's retirement plan covered substantially all U.S. employees and provided for voluntary salary deferral contributions on a pre-tax basis in accordance with Section 401(k) of the Internal Revenue Code of 1986, as amended. The Company matches a portion of employee contributions. The 2017, 2016 and 2015 Company match expense was $3.0 million, $2.9 million and $2.6 million, respectively.

Pension Plan

The Company's German subsidiary maintains a defined benefit pension plan. At December 31, 2017, the excess of plan assets over the projected benefit obligation of $2.0 million was $0.2 million. At December 31, 2016, the excess of plan assets over the projected benefit obligation of $2.0 million was $0.2 million. Plan assets are invested in insurance policies payable to employees. Net pension expense was not material for any period. Contributions to the plan are not expected to be significant to the financial position of the Company.

NOTE 18 SEGMENT INFORMATION

The Company has the following reportable segments: Supercomputing, Storage and Data Management, Maintenance and Support, and Engineering Services and Other. The Company's reportable segments represent components of the Company for which separate financial information is available that is utilized on a regular basis by the Chief Executive Officer, who is the Chief Operating Decision Maker, in determining how to allocate the Company's resources and evaluate performance. The segments are determined based on several factors, including the Company's internal operating structure, the manner in which the Company's operations are managed, client base, similar economic characteristics and the availability of separate financial information.

Supercomputing

Supercomputing includes a suite of highly advanced, tightly integrated and cluster supercomputer systems which are used by large research and engineering centers in universities, government laboratories, and commercial institutions. Supercomputing also includes the ongoing maintenance of these systems as well as system analysts.

Storage and Data Management

Storage and Data Management offers Cray DataWarp and ClusterStor, as well as other third-party storage products and their ongoing maintenance as well as system analysts.

Maintenance and Support

Maintenance and Support provides ongoing maintenance of Cray supercomputers, big data storage and analytics systems, as well as system analysts.

Engineering Services and Other

Included within Engineering Services and Other are the Company's analytics and artificial intelligence businesses and Custom Engineering.

The following table presents revenues and gross margin for the Company's operating segments for the indicated years ended December 31 (in thousands):

	2017	2016	2015
Revenue:			
Supercomputing	$ 282,217	$ 510,403	$ 581,733
Storage and Data Management	63,620	89,438	112,862
Maintenance and Support	124,840	107,795	97,091
Engineering Services and Other	46,672	29,968	30,094
Elimination of inter-segment revenue	(124,840)	(107,795)	(97,091)
Total revenue	$ 392,509	$ 629,809	$ 724,689
Gross Profit:			
Supercomputing	$ 93,272	$ 173,245	$ 177,048
Storage and Data Management	20,288	34,125	37,181
Maintenance and Support	61,305	43,147	41,487
Engineering Services and Other	17,144	12,845	11,454
Elimination of inter-segment gross profit	(61,305)	(43,147)	(41,487)
Total gross profit	$ 130,704	$ 220,215	$ 225,683

Revenue and cost of revenue is the only discrete financial information the Company prepares for its segments. Other financial results or assets are not separated by segment.

The Company's geographic operations outside the United States include sales and service offices in Europe and the Middle East, South America, Asia Pacific and Canada. The following data represents the Company's revenue and long-lived assets for the United States and all other countries (in thousands):

	United States	All Other Countries	Total
For the year ended December 31, 2017:			
Product revenue	$ 159,279	$ 90,916	$ 250,195
Service revenue	$ 96,406	$ 45,908	$ 142,314
Long-lived assets	$ 48,989	$ 28,009	$ 76,998
For the year ended December 31, 2016:			
Product revenue	$ 251,317	$ 248,115	$ 499,432
Service revenue	$ 88,208	$ 42,169	$ 130,377
Long-lived assets	$ 39,933	$ 36,555	$ 76,488
For the year ended December 31, 2015:			
Product revenue	$ 373,494	$ 227,800	$ 601,294
Service revenue	$ 88,956	$ 34,439	$ 123,395
Long-lived assets	$ 39,014	$ 23,238	$ 62,252

Long-lived assets as of December 31, 2017, 2016 and 2015, included $23.4 million, $31.1 million and $18.3 million, respectively, of long-term investment in sales-type lease which was held by the Company's United Kingdom subsidiary.

Revenue derived from the U.S. Government totaled approximately $206.1 million, $296.9 million and $338.5 million in 2017, 2016 and 2015, respectively. In 2017, one non-U.S. Government customer accounted for 11% of total revenue. In 2016, one non-U.S. Government customer accounted for 10% of total revenue. In 2015, no non-U.S. Government customers accounted for more than 10% of total revenue. Revenue attributed to foreign countries is derived from sales to customers located outside the United States. In general, concentrations of revenue by customer encompass all segments. In 2017, revenue in India accounted for 11% of total revenue. In 2016, revenue in the United Kingdom accounted for 17% of total revenue. In 2015, no foreign countries accounted for more than 10% of total revenue.

NOTE 19 RESEARCH AND DEVELOPMENT

Details for the Company's net research and development expenses for the indicated years ended December 31 follows (in thousands):

	2017	2016	2015
Gross research and development expenses	$ 141,289	$ 130,006	$ 126,060
Less: Amounts included in cost of revenue	(9,473)	(12,621)	(16,515)
Less: Reimbursed research and development (excludes amounts in revenue)	(33,039)	(5,255)	(12,982)
Net research and development expenses	$ 98,777	$ 112,130	$ 96,563

NOTE 20 INTEREST INCOME (EXPENSE)

The detail of interest income (expense) for the indicated years ended December 31 follows (in thousands):

	2017	2016	2015
Interest income	$ 3,386	$ 2,120	$ 1,465
Interest expense	(110)	27	(57)
Net interest income	$ 3,276	$ 2,147	$ 1,408

Interest income is earned by the Company on cash and cash equivalents, investment balances and the investment in sales-type lease.

NOTE 21 RESTRUCTURING

In the third quarter of 2017, the Company implemented a restructuring plan intended to reduce the Company's operating costs and better align its workforce with long-term business strategies. The restructuring plan involved reducing the Company's workforce by approximately 190 employees, with the vast majority of such terminations effective in July 2017. For the year ended December 31, 2017, the Company recorded $8.6 million in expense in connection with the restructuring plan, primarily related to employee severance. The majority of the cash payments related to the restructuring charges were paid in 2017. The actions associated with the restructuring plan are expected to be completed by the end of the first half of 2018. Restructuring charges associated with the restructuring plan were included in restructuring on the company's Consolidated Statements of Operations.

NOTE 22 QUARTERLY DATA (UNAUDITED)

The following table presents unaudited quarterly financial information for the two years ended December 31, 2017. In the opinion of management, this information contains all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation thereof.

The operating results are not necessarily indicative of results for any future periods. Quarter-to-quarter comparisons should not be relied upon as indicators of future performance. The Company's business is driven by a few significant contracts and, as a result, the Company's operating results are subject to very large quarterly fluctuations. The Company's earnings per share for the full year may not equal the sum of the four quarterly earnings per share amounts because of common share activity during the year.

CRAY INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

(In thousands, except per share data)

	2017				2016			
For the Quarter Ended	**3/31**	**6/30**	**9/30**	**12/31**	**3/31**	**6/30**	**9/30**	**12/31**
Revenue	$ 59,031	$ 87,135	$ 79,700	$ 166,643	$ 105,549	$ 100,235	$ 77,451	$ 346,574
Cost of revenue	35,222	58,792	51,208	116,583	65,587	64,074	53,850	226,083
Gross profit	23,809	28,343	28,492	50,060	39,962	36,161	23,601	120,491
Research and development, net	32,640	17,325	26,626	22,186	25,840	27,399	29,084	29,807
Sales and marketing	14,653	15,247	13,392	16,602	16,001	15,380	15,010	18,502
General and administrative	8,797	7,205	7,022	6,089	7,338	9,019	7,968	9,728
Restructuring	—	—	7,653	915	—	—	—	—
Net income (loss)	(19,215)	(6,840)	(10,232)	(97,542)	(5,013)	(13,126)	(23,021)	51,775
Net income (loss) per common share, basic	$ (0.48)	$ (0.17)	$ (0.25)	$ (2.42)	$ (0.13)	$ (0.33)	$ (0.58)	$ 1.30
Net income (loss) per common share, diluted	$ (0.48)	$ (0.17)	$ (0.25)	$ (2.42)	$ (0.13)	$ (0.33)	$ (0.58)	$ 1.27

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors

Cray Inc.

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Cray Inc. and Subsidiaries ("the Company") as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive income (loss), shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2017, and the related notes and financial statement schedule listed in the index at item 15(a)(2) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2017 and 2016, and the consolidated results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2017, in conformity with accounting principles generally accepted in the United States.

We have also 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, 2017, 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 15, 2018, expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's 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.

/S/ PETERSON SULLIVAN LLP

We have served as the Company's auditor since 2005.

Seattle, Washington
February 15, 2018

Schedule II — Valuation and Qualifying Accounts(1)

December 31, 2017
(In thousands)

Description	Balance at Beginning of Period	Charge to Expense	Deductions [2]	Balance at End of Period
Year ended December 31, 2015:				
Allowance for doubtful accounts	$ 97	$ —	$ (78)	$ 19
Year ended December 31, 2016:				
Allowance for doubtful accounts	$ 19	$ 2	$ —	$ 21
Year ended December 31, 2017:				
Allowance for doubtful accounts	$ 21	$ 7	$ —	$ 28

(1) The Company does not have any warranty liabilities.

(2) Deductions represent uncollectible accounts written off, net of recoveries.

INVESTOR INFORMATION

BOARD OF DIRECTORS

Stephen C. Kiely, Chairman
Retired Chief Executive Officer

Prithviraj Banerjee
Senior Client Partner
Korn/Ferry International

Catriona M. Fallon
Senior Vice President, Networks Segment
Itron Inc.

Sally G. Narodick
Retired Chief Executive Officer

Daniel C. Regis
General Partner
Regis Investments, LP

Max L. Schireson
Executive in Residence
Battery Ventures

Brian V. Turner
Retired Chief Financial Officer

Peter J. Ungaro
President and Chief Executive Officer
Cray Inc.

KEY COMPANY EXECUTIVES

Peter J. Ungaro
President and Chief Executive Officer

Brian C. Henry
Executive Vice President and Chief Financial Officer

Charles D. Fairchild
Vice President, Corporate Controller and
Chief Accounting Officer

Frederick A. Kohout
Senior Vice President Products and Chief Marketing
Officer

Charles A. Morreale
Senior Vice President, Field Operations

Efstathios Papaefstathiou
Senior Vice President, Research and Development

Michael C. Piraino
Senior Vice President Administration,
General Counsel and Corporate Secretary

Steven L. Scott
Senior Vice President and Chief Technology Officer

SHAREHOLDER SERVICES

Computershare Inc., our transfer agent and registrar, can be contacted as indicated below to help you with a variety of shareholder-related services, including:

- Change of address
- Lost stock certificates
- Transfer of stock to another person
- Additional administrative services
- Account consolidation

Computershare Inc. Shareholder Relations
P.O. Box 505000
Louisville, KY 40233
or
462 South 4th Street, Suite 1600
Louisville, KY 40202
www.computershare.com/investor

Shareholder online inquiries
https://www-us.computershare.com/investor/Contact

Telephone: 877-522-7762
TDD for Hearing Impaired: 800-490-1493
International Shareholders: 201-680-6578
TDD International Shareholders: 781-575-2394

AVAILABLE INFORMATION

Our Annual Report on Form 10-K, our other SEC reports and filings, our Code of Business Conduct, Corporate Governance Guidelines, the charters of our Board committees and other governance documents and information are available on our website, www.cray.com, under "Company"

You may also obtain a copy of our Form 10-K filed with the SEC and other Company information without charge, by writing or calling:

Cray Inc.
Investor Relations
901 Fifth Avenue
Suite 1000
Seattle, WA 98164
Telephone: 866-729-2729

Shareholders who own Cray Inc. stock through a brokerage account and receive multiple copies of this annual report can contact their broker to request consolidation of their accounts

CRAY ANNUAL MEETING

JUNE 12, 2018 – 3:00 P.M. PT
901 Fifth Avenue
Fifth Avenue Conference Room
Seattle, WA 98164

CORPORATE HEADQUARTERS
Cray Inc.
901 Fifth Avenue, Suite 1000
Seattle, WA 98164
206-701-2000
206-701-2500 fax

OTHER PRINCIPAL OFFICES
2131 Lindau Lane, Suite 1000
Bloomington, MN 55425

1050 Lowater Road
Chippewa Falls, WI 54729

INTERNET
E-Mail: ir@cray.com
Website: www.cray.com

LEGAL COUNSEL
Fenwick & West LLP
Seattle, WA

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
Peterson Sullivan LLP
Seattle, WA

STOCK MARKET INFORMATION
Cray Inc. common stock is traded on the Nasdaq Global Market under the Symbol CRAY

EQUAL OPPORTUNITY
Cray is an equal opportunity employer

Safe Harbor Statement
This Annual Report contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934 and Section 27A of the Securities Act of 1933, including, but not limited to, statements related to Cray's financial guidance and expected operating results, Cray's competitive position in the high-end supercomputing market and the timing of a rebound in that market, Cray's ability to grow in the future, and its product development, sales and delivery plans. These statements involve current expectations, forecasts of future events and other statements that are not historical facts. Inaccurate assumptions and estimates as well as known and unknown risks and uncertainties can affect the accuracy of forward-looking statements and cause actual results to differ materially from those anticipated by these forward-looking statements. Factors that could affect actual future events or results include, but are not limited to, the risk that Cray does not achieve the operational or financial results that it expects, the risk that Cray will not be able to secure orders for Cray products and systems to be accepted in the future when or at the levels expected, the risk that the segments of the high-end of the supercomputing market that Cray targets do not recover from the current downturn as early or as completely as expected or at all, the risk that the systems ordered by customers are not delivered when expected, do not perform as expected once delivered or have technical issues that must be corrected before acceptance, the risk that the acceptance process for delivered systems is not completed, or customer acceptances are not received, when expected or at all, the risk that Cray is not able to successfully sell products and services in the big data analytics, high performance storage, artificial intelligence and commercial markets as expected or at all, the risk that Cray is not able to expand and penetrate its addressable market as expected or at all, the risk that government funding for research and development projects is less than expected, the risk that new third-party processors and other components for our systems are not available with the anticipated performance, timing or pricing, the risk that Cray is not able to realize the expected benefits of the Seagate transaction and partnership, the risk that Cray is not able to reach new customers through cloud services offerings as expected or at all, the risk that the expense and/or effort to address Cray systems at customer sites that have issues with third party components or with Cray components, including issues related to the "Spectre" and "Meltdown" processor security vulnerabilities, is material, the risk that Cray is not able to successfully complete its planned product development efforts in a timely fashion or at all, the risk that Cray is not able to achieve anticipated gross margin or expense levels and such other risks as identified in Cray's Annual Report on Form 10-K for the year ended December 31, 2017, and from time to time in other reports filed by Cray with the U.S. Securities and Exchange Commission. You should not rely unduly on these forward-looking statements, which apply only as of the date of this Annual Report. Cray undertakes no duty to publicly announce or report revisions to these statements as new information becomes available that may change Cray's expectations.

CRAY, the stylized CRAY mark, and URIKA are registered trademarks of Cray Inc. in the United States and other countries. The CS and XC families of supercomputers, Chapel, ClusterStor, CS-Storm, DataWarp and other Cray technologies are all trademarks of Cray Inc. Other trade names, trademarks, and service marks of other companies used in this Annual Report are the property of their respective owners.

CRAY

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