NATIONAL INSTRUMENTS CORP
Form 10-K
February 21, 2019
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K
[x] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended: December 31, 2018 or

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from ________________ to ________________

Commission file number: 0-25426

NATIONAL INSTRUMENTS CORPORATION
(Exact name of registrant as specified in its charter)

| | |
|---|---|
| Delaware | 74-1871327 |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification Number) |
| 11500 North MoPac Expressway | |
| Austin, Texas | 78759 |
| (address of principal executive offices) | (zip code) |

Registrant's telephone number, including area code: (512) 683-0100
Securities registered pursuant to Section 12(b) of the Act:

| Title of Each Class | Name of Each Exchange on Which Registered |
|---|---|
| Common Stock, $0.01 par value | The NASDAQ Stock Market, LLC |

Securities registered pursuant to Section 12(g) of the Act:
Preferred Stock Purchase Rights
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes [x] 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 [x]
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 [x] No
Indicate by check mark whether the registrant has submitted electronically 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 [x] 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. (Check one):
Large accelerated filer [x] Accelerated filer [ ] Non-accelerated filer [ ] Smaller reporting company [ ] Emerging growth company [ ]
If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. [ ]
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).  Yes [ ] No [x]
The aggregate market value of voting and non-voting common equity held by non-affiliates of the registrant at the close of business on June 30, 2018, was $2,970,344,772 based upon the last sales price reported for such date on the NASDAQ Stock Market. For purposes of this disclosure, shares of Common Stock held by persons who hold more than 5% of the outstanding shares of Common Stock and shares held by officers and directors of the registrant as of June 30, 2018, have been excluded in that such persons may be deemed to be affiliates. This determination is not necessarily conclusive.
At the close of business on February 15, 2019, the registrant had outstanding 132,241,482 shares of Common Stock.
DOCUMENTS INCORPORATED BY REFERENCE
Part III incorporates certain information by reference from the definitive proxy statement to be filed by the registrant for its Annual Meeting of Stockholders to be held on May 14, 2019 (the "Proxy Statement").

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PART I

This Form 10-K contains forward-looking statements within the meaning of 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”). Any statements contained herein regarding our future financial performance, operations, or other matters (including, without limitation, statements to the effect that we “believe,” “expect,” “plan,” “may,” “will,” “intend to”, “project,” “anticipate “continue,” or “estimate”; statements of "goals" or "visions"; or other variations thereof or comparable terminology or the negative thereof) should be considered forward-looking statements. Actual results could differ materially from those projected in the forward-looking statements as a result of a number of important factors including those set forth under Item 1 under the heading “Risk Factors” beginning on page 10, and elsewhere in this Form 10-K. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. You should not place undue reliance on these forward-looking statements. We disclaim any obligation to update information contained in any forward-looking statement.

## ITEM 1. BUSINESS

### Overview

For more than 40 years, National Instruments Corporation (the “Company”, “NI”, “we”, “us” or “our”) has enabled engineers and scientists around the world to accelerate productivity, innovation and discovery. Our software-centric platform provides an advanced approach through integration of software and modular hardware to create automated test and automated measurement systems. We believe our long-term track record for innovation and our differentiated platform helps support the success of our customers, employees, suppliers, and stockholders.

NI pioneered a software-based approach more than three decades ago that enables our customers to build systems that meet the unique test and measurement requirements for their applications. The differentiation of our software-based platform helps customers accelerate the design and testing of their next generation products. This delivers critical business value to our customers, such as helping them reduce cost and time to market in the validation and production testing of semiconductor technology, enable real-time simulation to accelerate the development of autonomous and electric vehicles, and create long life cycle test systems to support the development and operation of complex, systems in aerospace and defense.

Our overarching goal, which we call our core strategic vision, is to be the leader in software-defined automated test and automated measurement systems. This vision provides a framework to help us achieve our goals of strong profitability and revenue growth. In pursuing our vision, we have empowered our team to be deliberate about the market opportunities we pursue to fuel growth and provide significant value to our target customers.

NI is headquartered in Austin, Texas. We were incorporated under the laws of the State of Texas in May 1976 and were reincorporated in Delaware in June 1994. In March 1995, we completed an initial public offering of our common stock. Our common stock, $0.01 par value, is quoted on the NASDAQ Stock Market under the trading symbol NATI.

### Our Approach to Automated Test and Automated Measurement Systems

Our differentiated platform is a combination of software and modular hardware designed with an open infrastructure to enable connectivity and flexibility. NI’s open platform allows our customers to define systems needed to help them accelerate their application development, innovate faster, and continually integrate new technologies. Openness has been a hallmark of our approach to the market; evident in our integration with third-party hardware using technologies like instrument drivers to connect other common instruments in test and measurement, including open software interfaces for web and cloud connectivity as well as integration with Microsoft Visual Studio .NET languages, The MathWorks, Inc. MATLAB and Simulink software, and Python.

We have an expansive ecosystem of developers, partners, and third-party products that helps ensure that our customers have the tools, systems and expertise needed to build their automated test or automated measurement systems. The NI ecosystem includes an active community of software developers, over 8000 universities worldwide, support for over 10,000 third-party hardware devices, and over 1,000 Alliance Partners that provide integration services and consulting. NI’s support and services are an integral part of this ecosystem. With direct operations in approximately 50 countries, NI has local expertise, on-site services, and technical support to enable customer success.

Our goal is to help our customers achieve a competitive advantage by using our platform to shorten their time to market and reduce their total cost of test system ownership.

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Products, Technology, and Services

Our commitment to innovation and continuous improvement has been a core value for us for over 40 years. Below is an overview of our products, technology and services.

Software

NI software is the key differentiator of our platform. We have empowered hundreds of thousands of loyal application software developers through LabVIEW, a graphical application software package optimized for engineers. We have consistently invested to maintain and strengthen our software platform to provide a simplified user interface, faster time-to-test, modern web - and cloud-enabled capabilities, and the ability to quickly create application-specific software tools.

The NI software platform spans the full range of customer needs, from high-performance driver software for NI hardware to general-purpose development tools that allow customers to create their own IP to higher-level software products that directly meet targeted customer applications. A hallmark of the NI software platform is the integration of NI and third-party software and hardware. We recently demonstrated our commitment and discipline to software excellence by a major investment to modernize our software platform, which resulted in a refresh of our flagship software, LabVIEW, as well as a series of new software products that address higher-level customer needs.

NI provides a wide variety of software tools for programming automated test and automated measurement applications. This software offering includes, but is not limited to:

Programming Environments

- NI LabVIEW - a graphical programming approach that helps visualize every aspect of the application, including hardware configuration, measurement data, and debugging. This visualization makes it simple to integrate measurement hardware from various vendors, represent complex logic on the diagram, develop data analysis algorithms, and design custom engineering user interfaces.
- NI LabWindows/CVI - an ANSI C integrated development environment and engineering toolbox with built-in libraries for measurement, analysis, and engineering UI design.
- NI Measurement Studio - a suite of .NET tools designed for building engineering applications in Microsoft Visual Studio to acquire, analyze, and display measurement data.

Application Software

- NI TestStand - application software targeted for automated test and automated measurement applications in a manufacturing environment.
- NI VeriStand - a ready-to-use software environment for configuring real-time testing applications, including hardware-in-the-loop test systems.
- Flexlogger - application software optimized for quick sensor configuration and data logging of mixed signals to verify electromechanical systems.
- NI InsightCM Enterprise - a software solution with tightly integrated hardware options for monitoring ancillary rotating equipment.

Systems and Data Management

- NI DIAdem - configuration-based technical data management, analysis, and report generation tools to interactively mine and analyze engineering and measurement data.
- NI SystemLink - systems management software that enables the mass coordination of connected devices, software deployments, and data communications throughout a distributed system.

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Modular Hardware

We provide modular instrumentation that offers our customers the ability to create their own unique programmable, flexible and low-cost solutions. We believe our modular instrument approach enables us to grow our sales in the automated validation and automated production test market by delivering more test coverage and a lower-cost alternative for our customers. We offer two primary hardware form factors, PXI and NI C-series, both with a modular input/output ("I/O") approach in addition to industry standard PCI form factors. The NI PXI modular instrument platform, introduced in 1997, is a standard PC architecture in a rugged form factor with expansion slots and instrumentation extensions for timing, triggering and signal sharing. PXI combines mainstream PC software and PCI hardware with advanced instrumentation capabilities. The NI C-series platform, used in our CompactRIO and CompactDAQ products, is a rugged, high-performance I/O and processing platform used in a wide variety of data acquisition applications. We believe our C-series data acquisition and control products provide unique value where diverse I/O is needed, and we believe that we can expand our user base through new distributed and rugged products. The NI PXI and C-series platforms include field programmable gate array ("FPGA") technology, giving customers programmable hardware capability that provides high performance and is user-customizable with NI LabVIEW software.

Increasingly, our customers' applications demand more system capabilities that more closely match their application needs. We have continually evolved our offering to include highly innovative products and application-specific systems. One example in the semiconductor industry is our NI Semiconductor Test System ("STS") which combines NI modular instrumentation with NI software for RF and mixed-signal production testing. NI STS features fully production-ready test systems that use NI technology in a form factor suitable for a semiconductor production test environment. The STS combines the NI PXI hardware, TestStand test management software, and LabVIEW graphical programming software inside a fully enclosed test head. The compact STS design houses all the key components of a production tester while using a fraction of the floor space, power, and maintenance typically required by traditional automated test equipment. With the open, modular design, engineers can take advantage of the latest industry-standard PXI modules for more instrumentation and computing power.

Services

We provide global services and support as part of our commitment to our customers' success.

Software Maintenance Services

Software Services for End Users: Our Standard Service Program provides our end users with support services through a software maintenance contract. The Standard Service Program is designed to help ensure that our end users are successful with our products by providing the end user with regular product upgrades and service packs, professional technical support from local engineers, 24-hour-a-day access to self-paced online product training, and access to older versions of their licensed NI software.

Volume Licensing for Account-Level Services: Our NI Volume License Program ("VLP") and Enterprise Agreements ("EAs") are designed to meet the needs of the business in addition to the needs of each end user. In addition to access to the Standard Service Program for each end user, businesses that take advantage of the VLP and EAs receive account-level benefits designed to help effectively manage their software assets and lower their total cost of ownership.

Hardware Services and Maintenance

Warranty and Repair. We offer standard and extended warranties to help meet project life-cycle requirements and provide repair services for our products, express repair, and advance replacement services.

Calibration. To help our customers' calibration needs, NI provides calibration solutions, including recalibration services, manual calibration procedures, and automated calibration software. In 2011, the American Association for Laboratory Accreditation accredited NI Calibration Services Austin to one of the highest international calibration standards in the industry, ISO/IEC 17025:2005 ("17025"). We now offer 17025 calibration services for original equipment manufacturers ("OEMs") and other organizations seeking to maintain their compliance with governmental, medical, transportation and electronics regulations. The 17025-calibration service offering is designed for companies standardizing their automated test and measurement systems on PXI modular instrumentation, which provides some of the most advanced technology for addressing the latest engineering challenges.

System Configuration and Deployment: Our NI System Assurance Program provides a fast, easy way to get our customers' new NI systems up and running. Our trained technicians install software and hardware and configure our customers' PXI, and NI CompactRIO system to their specifications.

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Training and Certification

NI Training Program. NI training helps the customer build the skills to more efficiently develop robust, maintainable applications. We offer fee-based training classes and self-paced online training for many of our software and hardware products. On-site courses are quoted per customer requests and we include on-line course offerings with live teachers.

NI Certification Program. We offer programs to certify programmers and instructors for our products. Our certification program demonstrates our customers have the skills needed to create high-quality applications with NI software.

Markets and Applications

We believe the NI platform increasingly offers more value to our customers through system-level offerings especially in the semiconductor, transportation and aerospace, defense, and government ("ADG") industries. We believe our business continues to benefit from our innovative general-purpose platform investments and is focused on engineers and scientists in areas such as academia, electronics and manufacturing.

Semiconductor

Within the semiconductor industry, customers are facing a rapid increase in complexity and intense time to market pressures. NI platform advantages, including high-speed PXI data busses and high-performance computing technologies such as FPGAs, as well as semiconductor-specific test software and multi-core computing, help deliver faster test times and lower test cost.  NI pioneered the use of user-programmable FPGAs to prototype the next generation of communications systems in 5G wireless.  In the validation lab, NI's modular instruments feature a unique combination of best-in-class analog performance and high-performance computing capabilities. In production test applications, NI utilizes the same software and PXI instrumentation packaged within our innovative STS, a factory-ready, commercial automated test equipment ("ATE"), offering test throughput advantages to the production test floor.

For the semiconductor industry, the NI platform provides the following features:
- Common software and hardware from the laboratory to fabrication
- Helps users achieve faster measurement time
- Ability to add new measurements as requirements change

NI's focus applications in the semiconductor industry include:
- RF/wireless including 5G
- Analog/mixed signal
- Optoelectronics/sensors/Microelectromechanical systems ("MEMs")

Transportation

Vehicles of today are growing more and more complex as their electronic content increases. The electrification of vehicles and driver assist technologies, including automated driver assist systems ("ADAS"), has introduced more challenging test requirements than ever before. The NI platform delivers key differentiation to address the growing needs in transportation. Specifically, we believe the NI platform provides diversity in I/O connectivity, real-time software performance, and user-defined, open software programmability.

For the transportation industry, the NI platform provides the following features:
- Real-time software performance

- Ability to connect to many diverse I/O types and sensors (vision, LIDAR, ultrasonic and others)
- Flexibility to update the system quickly as requirements change

NI’s focus applications in the transportation industry include:

- ADAS
- Electrification
- Hardware-in-the-loop testing
- Electromechanic tests
- End of line vehicle tests

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Aerospace, Defense and Government

The NI platform has delivered significant value to its customers in the aerospace, defense and government industry for decades. The high density of test given the nature of the systems, need for highly iterative development, unique protocols, long product lifecycles, and proprietary algorithms that engineers in aerospace, defense, and government build makes the NI software-centric and modular hardware approach well suited for such markets.

For the aerospace, defense and government industry, the NI platform provides the following:

- Complete software tools for automated test
- Real-time software, FPGAs, software defined radio
- Broad measurement capabilities from electrical to physical, communications, actuation and more

NI's focus applications in the aerospace, defense and government industry include:

- Radar and spectrum record/playback
- Software-defined radios & transponders
- Production and maintenance ATE
- Embedded software and hardware-in-the-loop test

Customers

NI has a broad, diverse set of over 35,000 customer accounts worldwide, with no customer accounting for more than 3% of our revenues in any of 2018, 2017 or 2016. The NI offering serves a broad range of customers from small, innovative start-ups and individual engineers to large, multinational accounts. Any engineer or scientist looking to innovate, research, or reduce test time to get to market faster, could be a potential customer.

Sales and Distribution

We distribute and sell our products primarily through a direct sales organization. We also use independent distributors, OEMs, value-added resellers ("VARs"), system integrators and consultants to market and sell our products. We have sales and support offices in approximately 50 countries including markets such as the U.S., Germany and China. Sales outside of the U.S. accounted for approximately 63% of our revenues in 2018, 2017, and 2016. We believe the ability to provide comprehensive service and support to our customers is an important factor in our business. We generally permit customers to return products within 30 days from receipt for a refund of the purchase price less a restocking charge. Our hardware products are generally warranted against defects in materials and workmanship for one year from the date we ship the products to our customers. Historically, warranty costs and returns have not been material.

Our foreign operations are subject to certain risks set forth under Item 1A, Risk Factors, We are Subject to Various Risks Associated with International Operations and Foreign Economies

See discussion regarding fluctuations in our quarterly results and seasonality in Item 1A, Risk Factors, Our Revenues are Subject to Seasonal Variations.

We have one operating segment and one reporting unit. For information regarding revenue, results of operations, and total assets for each of our last three fiscal years, please refer to our financial statements included in this Form 10-K and Management's Discussion and Analysis of Financial Condition and Results of Operations included in Item 7 of this Form 10-K.

Marketing

We strive to educate engineers and scientists about the benefits of our platform-based approach, products and technology, highlighting the performance and cost advantages of our products. We reach our broad audience through scalable, digital tactics on our website at ni.com as well as through the wide distribution of content, including demonstration versions of our software, online webcasts, blogs, social media, participation in tradeshows, technical conferences, training and user seminars.

Competition

The markets in which we operate are characterized by competition from numerous competitors, some of which are divisions of large corporations. Several competitors offer box instrument hardware and software products that provide solutions that directly compete with modular hardware products, including PXI-based hardware and systems software. Key competitors include Advantest, Anritsu, Fortive, Keysight, Rohde & Schwarz, and Teradyne.

See further discussion regarding risks associated with our competitive environment in ITEM 1A, Risk Factors, We Operate in Intensely Competitive Markets.

## Research and Development

We believe that our long-term growth and success depends on delivering high quality software and hardware products on a timely basis. We focus our research and development efforts on enhancing existing products and developing new products that incorporate appropriate features and functionality to be competitive with respect to technology and price/performance characteristics. Our research and development staff strive to build quality into our products at the design stage. We believe this "quality first" mindset helps to reduce overall development and manufacturing costs and provide reliability in our end products.

Our research and development expenses were $261 million, $232 million and $236 million in 2018, 2017, and 2016, respectively.

## Intellectual Property

We rely on a combination of patent, trade secret, copyright and trademark law, contracts and technical measures to establish and protect our proprietary rights in our products. As of December 31, 2018, we held 862 U.S. patents (860 utility patents and 2 design patents) and 88 patents in foreign countries (77 patents registered in Europe, 5 patents in China, 5 patents in Japan, and 1 patent in Mexico), and had 60 patent applications pending in the U.S. and foreign countries. 257 of our issued U.S. patents are software patents related to LabVIEW, and cover fundamental aspects of the graphical programming approach used in LabVIEW. Our patents expire from 2019 to 2037. The expiration of any particular patent in the short term is not expected to have any significant negative impact on our business. No assurance can be given that our pending patent applications will result in the issuance of patents. We also own certain registered trademarks in the United States and abroad. See further discussion regarding risks associated with our patents in Item 1A, Risk Factors, Our Business Depends on Our Proprietary Rights and We Have Been Subject to Intellectual Property Litigation.

## Manufacturing and Suppliers

We manufacture substantially all of our product volume at our facilities in Debrecen, Hungary and Penang, Malaysia. Our product manufacturing operations can be divided into four areas: electronic circuit card and module assembly; chassis and cable assembly; technical manuals and product support documentation; and software duplication. Most of our electronic circuit card assemblies, modules and chassis are manufactured in house, although contractors are used from time to time. The majority of our electronic cable assemblies are produced by contractors; however, we do manufacture some on an exception basis. Our software duplication, technical manuals and product support documentation are primarily produced by contractors.

Our manufacturing processes use large volumes of high-quality components and subassemblies supplied by outside sources. Several of these components are only available through limited sources. Limited source items purchased include custom application specific integrated circuits ("ASICs"), chassis and other items. We have in the past experienced delays and quality problems in connection with limited source items, and there can be no assurance that these problems will not recur in the future. Accordingly, our failure to receive items from limited source item suppliers could result in a material adverse effect on our net sales and operating results. See "Our Business is Dependent on Key Suppliers" at page 15 for additional discussion of the risks associated with limited source suppliers.

We must comply with many different governmental regulations related to the use, storage, discharge, and disposal of toxic, volatile or otherwise hazardous chemicals used in our operations in the U.S., Hungary, and Malaysia. See Item 1A, Risk Factors, Our Operations are Subject to a Variety of Environmental Regulations and Costs at page 17 for further discussion of environmental matters as they may affect our business.

## Backlog

Backlog is a measure of orders that are received but that are not shipped to customers at the end of a quarter. We typically ship products shortly following the receipt of an order. Accordingly, our backlog typically represents less than 5 days sales. Backlog should not be viewed as an indicator of our future sales.

## Employees

As of December 31, 2018, we had 7,263 employees worldwide. None of our employees are represented by a labor union and we have never experienced a work stoppage. We consider our employee relations to be good.

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Corporate Responsibility

Our global employees embody the culture and the value of our brand by doing what we do best - accelerating productivity, discovery, and innovation for engineers and scientists. From inspiring future STEM leaders to reducing environmental impact, corporate responsibility is engrained in NI's company culture, goals, and business practices from product development to employee engagement.

At NI, we take our responsibility seriously. For more than four decades, we have worked together with our innovative customers to empower them with our platform to solve problems and improve everyday life around the globe. Our corporate social responsibility programs support this work. Through aligning our investments in academia, our employee mentor program, and our giving programs to further STEM education, we are investing in future discovery and innovation as well as a pipeline of diverse talent for STEM fields. Supporting our employees and our communities on a regular basis shows the true value of corporate responsibility and its central importance to the future of our business.

Available Information

Our website is www.ni.com. 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 and every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T are available through our Internet website as soon as reasonably practicable after we electronically file such materials with, or furnish them to, the SEC, or upon written request without charge. Our website and the information contained therein or connected thereto are not intended to be incorporated into this Annual Report on Form 10-K. The SEC maintains a website, www.sec.gov, which contains these reports and other information regarding issuers that file electronically.

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## ITEM 1A. RISK FACTORS

In addition to the other information set forth in this Form 10-K, you should carefully consider the risk factors discussed below. The risks described below are not the only risks that we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition, or operating results.

Uncertain Global Economic Conditions Could Materially Adversely Affect Our Business and Results of Operations. Our operations and performance are sensitive to fluctuations in general economic conditions, both in the U.S. and globally. Uncertainty about global and regional economic conditions poses a risk to us as businesses may decrease or postpone spending in response to events such as a US government shutdown, the impending Brexit, continued trade tensions between the US and China or other parts of the world, financial market volatility, tariffs or other trade restrictions, government austerity programs, government regulatory actions, negative financial news, geopolitical instability, declines in income or asset values, or other factors. In particular, during December 2018, we experienced weaker demand for some of our products in the APAC region, particularly for ADG applications in China. Negative trends or sentiments in worldwide and regional economic conditions have in the past and could again have a material adverse effect on demand for our products and services. In March 2018, the U.S. imposed steel, aluminum, and other tariffs on imports from various countries. These tariffs have increased international trade tensions and led to tariffs on U.S. exports to various countries. Even if resolved, this could have a broad negative impact on the global industrial economy, which could have a material adverse impact on our business and our results of operations. These factors as well as others we may not contemplate could have a material adverse effect on the spending patterns of businesses including our current and potential customers which could have a material adverse effect on our net sales and our results of operations. See “Current business outlook” in this Form 10-K for information regarding recent business conditions.

We Make Significant Investments in New Products that May Not Be Successful or Achieve Expected Returns. We plan to continue to make significant investments in research, development, and marketing for new and existing products and technologies. For example, in 2017 we launched LabVIEW NXG, the most recent version of our flagship software application. We have made and expect to make significant investments in software development related to the new and enhanced features of this product. These investments involve a number of risks as the commercial success of such efforts depend on many factors, including our ability to anticipate and respond to innovation, achieve the desired technological fit, and be effective with our marketing and distribution efforts. If our existing or potential customers do not perceive our latest product offerings as providing significant new functionality or value, or if we are late to market with a new product or technology, we may not achieve our expected return on our investments or be able recover the costs expended to develop new product offerings, which could have a material adverse effect on our operating results. Even if our new products are profitable, our operating margins for new products may not be as high as the margins we have experienced historically.

Our Success Depends on New Product Introductions and Market Acceptance of Our Products. The market for our products is characterized by rapid technological change, evolving industry standards, changes in customer needs and frequent new product introductions, and is therefore highly dependent upon timely product innovation. Our success is dependent on our ability to successfully develop and introduce new and enhanced products on a timely basis to replace declining revenues from older products, and on increasing penetration in domestic and international markets. As has occurred in the past and as may be expected to occur in the future, we have experienced significant delays between the announcement and the commercial availability of new products. Any significant delay in releasing new products could have a material adverse effect on the ultimate success of a product and other related products and could impede continued sales of predecessor products, any of which could have a material adverse effect on our operating results. There can be no assurance that we will be able to introduce new products in accordance with announced release dates, that our new products will achieve market acceptance or that any such acceptance will be sustained for any significant period. Failure of our new products to achieve or sustain market acceptance could have a material adverse effect on our operating results.

Our Reported Financial Results May be Adversely Affected by Changes in Accounting Principles Generally Accepted in the U.S. We prepare our financial statements in conformity with accounting principles generally accepted in the U.S. These accounting principles are subject to interpretation by the Financial Accounting Standards Board (“FASB”) and the Securities and Exchange Commission. Generally accepted accounting principles and accompanying accounting pronouncements, implementation guidelines and interpretations for many aspects of our business, such as revenue recognition, software capitalization, and income tax uncertainties, are complex and involve subjective judgments by management. A change in these policies or interpretations could have a significant effect on our reported financial results and our internal controls over financial reporting, may retroactively affect previously reported results, could cause unexpected financial reporting fluctuations, and may require us to make costly changes to our operational processes and accounting systems. For example, in May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers which, as amended, supersedes nearly all existing U.S. GAAP revenue recognition guidance and which became effective for us for our fiscal year beginning January 1, 2018. (See Note 1 - Operations and summary of significant accounting policies and Note 2 - Revenue for additional discussion of the accounting changes).

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We are Subject to Various Risks Associated with International Operations and Foreign Economies. Our international sales are subject to inherent risks, including, but not limited to:

- fluctuations in foreign currencies relative to the U.S. dollar;
- unexpected changes to currency policy or currency restrictions in foreign jurisdictions;
- delays in collecting trade receivable balances from customers in developing economies;
- tariffs and other trade barriers;
- unexpected changes in regulatory requirements;
- fluctuations in local economies;
- disparate and changing employment laws in foreign jurisdictions;
- difficulties in staffing and managing foreign operations;
- costs and risks of localizing products for foreign countries;
- government actions throughout the world; and,
- the burdens of complying with a wide variety of foreign laws.

Moreover, there can be no assurance that our international sales will continue at existing levels or grow in accordance with our efforts to increase foreign market penetration.

In many foreign countries, particularly in those with developing economies, it is common to engage in business practices that are prohibited by U.S. regulations applicable to us such as the Foreign Corrupt Practices Act. Although we have policies and procedures designed to ensure compliance with these laws, there can be no assurance that all of our employees, contractors and agents, including those based in or from countries where practices which violate such U.S. laws may be customary, will not take actions in violation of our policies. Any violation of foreign or U.S. laws by our employees, contractors or agents, even if such violation is prohibited by our policies, could have a material adverse effect on our business. We must also comply with various import and export regulations. The application of these various regulations depends on the classification of our products which can change over time as such regulations are modified or interpreted. As a result, even if we are currently in compliance with applicable regulations, there can be no assurance that we will not have to incur additional costs or take additional compliance actions in the future. Failure to comply with these regulations could result in fines or termination of import and export privileges, which could have a material adverse effect on our operating results. Additionally, the regulatory environment in some countries is very restrictive as their governments try to protect their local economy and value of their local currency against the U.S. dollar.

Our Manufacturing Capacity, and a Substantial Majority of our Warehousing and Distribution Capacity is Located Outside of the U.S. We manufacture substantially all of our product volume at our facilities in Debrecen, Hungary and Penang, Malaysia. In order to enable timely shipment of products to our customers we maintain the substantial majority of our inventory at our international locations. In addition to being subject to the risks of maintaining such a concentration of manufacturing capacity and global inventory, these facilities and their operations are also subject to risks associated with doing business internationally, including, but not limited to:

- the volatility of the Hungarian forint and the Malaysian ringgit relative to the U.S. dollar;
- changing and potentially unstable political environments;
- significant and frequent changes in corporate tax laws;
- difficulty in managing manufacturing operations in foreign countries;
- challenges in expanding capacity to meet increased demand;
- difficulty in achieving or maintaining product quality;
- interruption to transportation flows for delivery of components to us and finished goods to our customers;
- restrictive labor codes; and,

- increasing labor costs.

No assurance can be given that our efforts to mitigate these risks will be successful. Any failure to effectively deal with the risks above could result in an interruption in the operations of our facilities in Hungary or Malaysia which could have a material adverse effect on our operating results.

Our centralization of inventory and distribution from a limited number of shipping points is subject to inherent risks, including:

- burdens of complying with additional or more complex VAT and customs regulations; and,
- concentration of inventory increasing the risks associated with fire, natural disasters and logistics disruptions to customer order fulfillment.

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Any failure or delay in distribution from our facilities in Hungary and Malaysia could have a material adverse effect on our operating results.

Our Financial Performance is Subject to Risks Associated with Changes in the Value of the U.S. Dollar versus Local Currencies. The vast majority of our sales outside of the U.S. are denominated in local currencies, and accordingly, the U.S. dollar equivalent of these sales is affected by changes in the foreign currency exchange rates. If the local currencies in which we sell our products strengthen against the U.S. dollar, we have in the past, and in the future may need to, lower our prices in the local currency to remain competitive in our international markets. This could have a material adverse effect on our gross and net profit margins. If the local currencies in which we sell our products weaken against the U.S. dollar and if the local sales prices cannot be raised due to competitive pressures, we will experience a deterioration of our gross and net profit margins. In the past, we have noted that significant volatility in foreign currency exchange rates in the markets in which we do business has had a significant impact on the revaluation of our foreign currency denominated firm commitments, on our ability to forecast our U.S. dollar equivalent net sales and expenses and on the effectiveness of our hedging programs. In the past, these dynamics have also adversely affected our net sales growth in international markets and may pose similar challenges in the future. See “Results of Operations” in this Form 10-K for further discussion on the effect that changes in the foreign currency exchange rates have had on our operating results. See “Current business outlook” in this Form 10-K for information regarding recent business conditions.

Orders With a Value of Greater than One Million Dollars Expose Us to Significant Additional Business and Legal Risks that Could Have a Material Adverse Impact on our Business, Results of Operations and Financial Condition. We continue to make a concentrated effort to increase our net sales through the pursuit of orders with a value greater than $1.0 million. These types of orders expose us to significant additional business and legal risks compared to smaller orders. Our very large customers frequently require contract terms that vary substantially from our standard terms of sale. At times these orders include terms that impose critical delivery commitments and severe contractual liabilities if we fail to provide the required quantity of products at the required delivery times, impose product acceptance requirements and product performance evaluation requirements which create uncertainty with respect to the timing of our ability to recognize revenue from such orders, allow the customers to cancel or delay orders without liability, require us to develop specific product mitigation plans for product delivery constraints caused by unexpected or catastrophic situations to help assure quick production recovery, and that require most favored customer pricing, significant discounts, extended payment terms and volume rebates. At times these customers require broad indemnity obligations and large direct and consequential damage provisions in the event we breach our contracts with them. At times these contracts have supply constraint requirements which mandate that we allocate large product inventories for a specific contract. These inventory requirements expose us to higher risks of inventory obsolescence and can adversely impact our ability to provide adequate product supply to other customers.

While we attempt to limit the number of contracts that contain the non-standard terms of sale described above and attempt to contractually limit our potential liability under such contracts, we have been, and expect to be, required to agree to some or all of such provisions to secure orders from very large customers and to continue to grow our business. These arrangements expose us to significant additional legal and operational risks which could result in a material adverse impact on our business, results of operations and financial condition. In addition, these larger orders are more volatile, are subject to greater discount variability and may contract at a faster pace during an economic downturn. We attempt to manage these risks but there can be no assurance that we will be successful in our efforts.

Revenue Derived from Large Orders Could Adversely Affect our Gross Margin and Could Lead to Greater Variability in our Quarterly Results.  We define our large order business as orders with a value greater than $100,000. These orders have been and may continue to be more sensitive to changes in the global industrial economy, subject to greater discount variability and such orders may be pushed-out or reduced at a faster pace during an economic downturn compared to orders valued at less than $100,000.  To the extent that the amount of our net sales derived from large orders increases in future periods, either in absolute dollars or as a percentage of our overall business, our gross margins could decline, and we could experience greater volatility and see a greater negative impact from future downturns in the global industrial economy. This dynamic may also have an impact on the historical seasonal pattern of our net sales and our results of operations. These types of orders also make managing inventory levels more difficult as we have in the past and may have to in the future build large quantities of inventory in anticipation of future demand that may not materialize.

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Our Product Revenues are Dependent on Certain Industries and Contractions in these Industries Could Have a Material Adverse Effect on Our Results of Operations. Sales of our products are dependent on customers in certain industries, particularly the telecommunications, semiconductor, consumer electronics, automotive, energy, automated test equipment, ADG industries. As we have experienced in the past, and as we may continue to experience in the future, downturns characterized by diminished product demand in any one or more of these industries may result in decreased sales and a material adverse effect on our operating results. We cannot predict when and to what degree contractions in these industries may occur; however, any sharp or prolonged contraction in one or more of these industries could have a material adverse effect on our business and results of operations.

Our Realignment Activities May be Disruptive to Our Operations and Negatively Impact Our Results of Operations. We are currently implementing changes within our organization designed to enhance our ability to pursue market opportunities, accelerate our technology development initiatives, and improve operational efficiencies. Specifically, we are in the process of aligning certain aspects of our operations with our strategic focus on industry-specific applications where we believe our product platform can add the most value to our customers. In the short-term, these actions may lead to business disruptions, decreased productivity and unanticipated employee turnover which may have an adverse impact on our business and results of operations.

Concentrations of Credit Risk and Uncertain Conditions in the Global Financial Markets May Adversely Affect Our Business and Results of Operations. By virtue of our holdings of cash, investment securities and foreign currency derivatives, we have exposure to many different counterparties, and routinely execute transactions with counterparties in the financial services industry, including commercial banks and investment banks. Many of these transactions expose us to credit risk in the event of a default of our counterparties. We continue to monitor the stability of the financial markets, particularly those in the emerging markets. We can give no assurance that we will not be negatively impacted by any adverse outcomes in those markets. There can be no assurance that any losses or impairments to the carrying value of our financial assets as a result of defaults by our counterparties would not materially and adversely affect our business, financial position and results of operations.

We Have Established a Budget and Variations From Our Budget Will Affect Our Financial Results. We have established an operating budget for our fiscal year. Our budget was established based on the estimated revenue from sales of our products which are based on anticipated economic conditions in the markets in which we do business as well as the timing and volume of our new products and the expected penetration of both new and existing products in the marketplace. If demand for our products during the remainder of our fiscal year is less than the demand we anticipated in setting our fiscal year budget, our operating results could be negatively impacted.

If we exceed our budgeted level of expenses or if we cannot reduce expenditures in response to a decrease in net sales, our operating results could be adversely affected. Our spending could exceed our budget due to a number of factors, including, but not limited to:

- continued foreign currency fluctuations;
- increased manufacturing costs resulting from component supply shortages or component price fluctuations;
- additional marketing costs for new product introductions or for conferences and tradeshows;
- the timing, cost or outcome of any future intellectual property litigation or commercial disputes;
- unanticipated costs related to acquisitions we may make; or
- increased component costs resulting from vendors increasing their sales prices.

We Operate in Intensely Competitive Markets. The markets in which we operate are characterized by intense competition from numerous competitors, some of which have larger market capitalization and resources than we do, and we may face further competition from new market entrants in the future. Key competitors are Advantest, Anritsu, Fortive, Keysight, Rohde & Schwarz, Teradyne, and others. These competitors offer hardware and software products that provide solutions that directly compete with our software defined automated test and automated measurement systems. Because these companies have strong position in the instrumentation business, new product introductions by them, changes in their marketing strategy or product offerings or aggressive pricing strategies by them to gain market share could have a material adverse effect on our operating results.

We believe our ability to compete successfully depends on a number of factors both within and outside our control, including, but not limited to:

- general market and economic conditions;
- our ability to maintain and grow our business with our very large customers;
- our ability to meet the volume and service requirements of our large customers;
- success in developing and selling new products;
- industry consolidation, including acquisitions by us or our competitors;
- capacity utilization and the efficiency of manufacturing operations;

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- timing of our new product introductions;
- new product introductions by competitors;
- product pricing, including the impact of currency exchange rates;
- the ability of competitors to more fully leverage low cost geographies for manufacturing or distribution;
- effectiveness of sales and marketing resources and strategies;
- adequate manufacturing capacity and supply of components and materials;
- strategic relationships with our suppliers;
- product quality and performance;
- protection of our products by effective use of intellectual property laws;
- the financial strength of our competitors;
- the outcome of any future litigation or commercial dispute;
- barriers to entry imposed by competitors with significant market power in new markets; and,
- government actions throughout the world.

There can be no assurance that we will be able to compete successfully in the future.

Our Quarterly Results are Subject to Fluctuations Due to Various Factors that May Adversely Affect Our Business and Results of Operations. Our quarterly operating results have fluctuated in the past and may fluctuate significantly in the future due to a number of factors, including, but not limited to:

- fluctuations in foreign currency exchange rates;
- changes in global economic conditions;
- changes in the amount of revenue derived from very large orders (including orders from our very large customers) and the pricing, margins, and other terms of such orders;
- changes in the capacity utilization including at our facility in Malaysia;
- changes in the mix of products sold;
- the availability and pricing of components from third parties (especially limited sources);
- the difficulty in maintaining margins, including the higher margins traditionally achieved in international sales;
- changes in pricing policies by us, our competitors or suppliers;
- the timing, cost or outcome of any future intellectual property litigation or commercial disputes;
- delays in product shipments caused by human error or other factors; or,
- disruptions in transportation channels.

Our Revenues are Subject to Seasonal Variations. In previous years, our revenues have been characterized by seasonality, with revenues typically growing from the first quarter to the second quarter, being relatively constant from the second quarter to the third quarter, growing in the fourth quarter compared to the third quarter and declining in the first quarter of the following year from the fourth quarter of the preceding year. This historical trend has been affected and may continue to be affected in the future by broad fluctuations in the global industrial economy as well as the timing of new product introductions or any acquisitions. In addition, revenue derived from very large orders, including those from our very large customers, have had a significant impact on our historical seasonal trends as these orders may be more sensitive to changes in the global industrial economy, may be subject to greater volatility in timing and amount, greater discount variability, lower gross margins, and may contract at a faster pace during economic downturns.

Our Tax Returns and Other Tax Matters are Subject to Examination by the U.S. Internal Revenue Service and Other Tax Authorities and Governmental Bodies and the Results of These Examinations Could Have a Material Adverse Effect on Our Financial Condition. We account for uncertainty in income taxes recognized in our financial statements using prescribed recognition thresholds and measurement attributes for financial statement disclosure of tax positions taken or expected to be taken on our tax returns. These uncertain tax positions are subject to examination by the U.S. Internal Revenue Service and other tax authorities. There can be no assurance as to the outcome of any future examinations. If the ultimate determination of our taxes owed is for an amount in excess of amounts previously accrued, our operating results, cash flows, and financial condition could be materially adversely affected. Our tax years 2009 through 2018 remain open to examination by the major taxing jurisdictions to which we are subject.

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Our Acquisitions are Subject to a Number of Related Costs and Challenges that Could Have a Material Adverse Effect on Our Business and Results of Operations. In past years, we have completed several acquisitions. Achieving the anticipated benefits of an acquisition depends upon whether the integration of the acquired business, products or technology is accomplished efficiently and effectively. In addition, successful acquisitions generally require, among other things, integration of product offerings, manufacturing operations and coordination of sales and marketing and R&D efforts. These difficulties can become more challenging due to the need to coordinate geographically separated organizations, the complexities of the technologies being integrated, and the necessities of integrating personnel with disparate business backgrounds and combining different corporate cultures. The integration of operations following an acquisition also requires the dedication of management resources, which may distract attention from our day-to-day business and may disrupt key R&D, marketing or sales efforts. Our inability to successfully integrate any of our acquisitions could harm our business. The existing products previously sold by entities we have acquired may be of a lesser quality than our products or could contain errors that produce incorrect results on which users rely or cause failure or interruption of systems or processes that could subject us to liability claims that could have a material adverse effect on our operating results or financial position. Furthermore, products acquired in connection with acquisitions may not gain acceptance in our markets, and we may not achieve the anticipated or desired benefits of such transactions.

Tax Law Changes in Hungary Could Have a Negative Impact on our Effective Tax Rate, Earnings and Results of Operations. The profit from our Hungarian operations benefits from the fact that it is subject to an effective income tax rate that is lower than the U.S. federal statutory tax rate. Our earnings in Hungary are subject to a statutory tax rate of 9%. In addition, effective January 1, 2010, certain qualified research and development expenses in Hungary became eligible for an enhanced tax deduction. These tax benefits may not be available in future years due to changes in political conditions in Hungary or changes in tax laws in Hungary or in the U.S. The reduction or elimination of these benefits in Hungary could result in an increase in our future effective income tax rate which could have a material adverse effect on our operating results. (See Note 10 - Income taxes of Notes to Consolidated Financial Statements for additional discussion regarding the impact of these matters on our income taxes).

Our Income Tax Rate Could be Adversely Affected by the Expiration of a Tax Holiday in Malaysia. Profits from our manufacturing facility in Penang, Malaysia are free of tax under a 15 year tax holiday effective January 1, 2013. If we fail to satisfy the conditions of the tax holiday, this tax benefit may be terminated early. The expiration of the tax holiday in Malaysia could have a material adverse effect on our operating results. (See Note 10 - Income taxes of Notes to Consolidated Financial Statements for additional discussion regarding the impact of this tax holiday on our income taxes).

Our Business is Dependent on Key Suppliers and Distributors and Disruptions in these Businesses Could Adversely Affect Our Business and Results of Operations. Our manufacturing processes use large volumes of high-quality components and subassemblies supplied by outside sources. Several of these items are only available through limited sources. Limited source items purchased include custom ASICs, chassis and other components. We have in the past experienced delays and quality problems in connection with limited source items, and there can be no assurance that these problems will not recur in the future. Accordingly, our failure to receive items from limited source item suppliers could result in a material adverse effect on our net sales and operating results. In the event that any of our limited source suppliers experience significant financial or operational difficulties due to adverse global economic conditions or otherwise, our business and operating results would likely be adversely impacted until we are able to secure another source for the required materials.

In some countries, we use distributors to support our sales channels. In the event that any of our distributors experience significant financial or operational difficulties due to adverse global economic conditions or if we experience disruptions in the use of these distributors, our business and operating results would likely be adversely impacted until we are able to secure another distributor or establish direct sales capabilities in the affected market.

We May Experience Component Shortages that May Adversely Affect Our Business and Result of Operations. As has occurred in the past and as may be expected to occur in the future, supply shortages of components used in our products, including limited source components, can result in significant additional costs and inefficiencies in manufacturing. If we are unsuccessful in resolving any such component shortages in a timely manner, we will experience a significant impact on the timing of revenue, a possible loss of revenue, or an increase in manufacturing costs, any of which would have a material adverse impact on our operating results.

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We Rely on Management Information Systems and Interruptions in our Information Technology Systems or Cyber-Attacks on our Systems Could Adversely Affect Our Business. We rely on the efficient and uninterrupted operation of complex information technology systems and networks, including cloud-based and other outsourced services, to operate our business. We rely on a primary global center for our management information systems and on multiple systems in branches not covered by our global center. As with any information system, unforeseen issues may arise that could affect our ability to receive adequate, accurate and timely financial information, which in turn could inhibit effective and timely decisions. Furthermore, it is possible that our global center for information systems or our branch operations could experience a complete or partial shutdown. A significant system or network disruption could be the result of new system implementations, facility issues, energy blackouts, and computer viruses, cyber-attacks, or security breaches, some of which may remain undetected for an extended period. Threats to our information technology security can take a variety of forms and individuals or groups of hackers or sophisticated organizations including state-sponsored organizations, may take steps that pose threats to our customers and our infrastructure. If we were to experience a shutdown, disruption or attack, it would adversely impact our product shipments and net sales, as order processing and product distribution are heavily dependent on our management information systems. Such an interruption could also result in a loss of our intellectual property or the release of sensitive competitive information or partner, customer or employee personal data. Any loss of such information could harm our competitive position, result in a loss of customer confidence, and cause us to incur significant costs to remedy the damages caused by the disruptions or security breaches. In addition, changing laws and regulations governing our responsibility to safeguard private data could result in a significant increase in operating or capital expenditures needed to comply with these new laws or regulations. Accordingly, our operating results in such periods would be adversely impacted. From time to time, we have experienced attempts to breach our security and attempts to introduce malicious software into our information technology systems; however, such attacks have not previously resulted in any material damage to us.

We are continually working to maintain reliable systems to control costs and improve our ability to deliver our products in our markets worldwide. Our efforts include, but are not limited to the following: firewalls, antivirus protection, patches, log monitors, routine backups with offsite retention of storage media, system audits, data partitioning and routine password modifications. Our internal information technology systems environment continues to evolve and our business policies and internal security controls may not keep pace as new threats emerge. No assurance can be given that our efforts to continue to enhance our systems will be successful. Although we maintain insurance, there can be no assurance that such insurance or the contractual limitations used by us to limit our liability will be sufficient to cover or limit any claims which may occur.

We are Subject to Risks Associated with Our Website. We devote significant resources to maintaining our website, ni.com, as a key marketing, sales and support tool and expect to continue to do so in the future. Failure to properly maintain our website may interrupt our normal operations, including our ability to provide quotes, process orders, ship products, provide services and support to our customers, bill and track our customers, fulfill contractual obligations and otherwise run our business, which would have a material adverse effect on our results of operations. We host our website internally. Any failure to successfully maintain our website or any significant downtime or outages affecting our website could have a material adverse impact on our operating results.

Our Products are Complex and May Contain Bugs, Vulnerabilities, Errors, or Design Flaws. As has occurred in the past and as may be expected to occur in the future, our hardware products, software products and third-party components or operating systems on which our products are based may contain bugs, vulnerabilities, or errors. Our products operate in conjunction with third-party products and components across a broad ecosystem. As has occurred in the past and as may be expected to occur in the future, our products, or products or components in conjunction with which they operate, may contain design flaws. These bugs, vulnerabilities, errors or design flaws, or fixes to these issues, may have a negative impact on the performance of our products, which could result in additional costs, liability claims, reduced revenue, or harm to our reputation or competitive position, any of which could have a material adverse impact on our operating results. Although we maintain insurance, there can be no assurance that such insurance or the contractual limitations used by us to limit our liability will be sufficient to cover or limit any claims which may occur.

We Are Subject to the Risk of Product Liability Claims. Our products are designed to provide information upon which users may rely. Our products are also used in “real time” applications requiring extremely rapid and continuous processing and constant feedback. Such applications give rise to the risk that a failure or interruption of the system or application could result in economic damage, bodily harm or property damage. We attempt to assure the quality and accuracy of the processes contained in our products, and to limit our product liability exposure through contractual limitations on liability, limited warranties, express disclaimers and warnings as well as disclaimers contained in our “shrink wrap” and electronically displayed license agreements with end-users. If our products contain errors that produce incorrect results on which users rely or cause failure or interruption of systems or processes, customer acceptance of our products could be adversely affected. Further, we could be subject to liability claims that could have a material adverse effect on our operating results or financial position. Although we maintain insurance, there can be no assurance that such insurance or the contractual limitations used by us to limit our liability will be sufficient to cover or limit any claims which may occur.

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Compliance With Sections 302 and 404 of the Sarbanes-Oxley Act of 2002 is Costly and Challenging. As required by Section 302 of the Sarbanes-Oxley Act of 2002, this Form 10-K contains our management's certification of adequate disclosure controls and procedures as of December 31, 2018. This annual report on Form 10-K also contains a report by our management on our internal control over financial reporting including an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2018 and an attestation and report by our external auditors with respect to the effectiveness of our internal control over financial reporting under Section 404. While these assessments and reports did not reveal any material weaknesses in our internal control over financial reporting, compliance with Sections 302 and 404 is required for each future fiscal year end. We expect that the ongoing compliance with Sections 302 and 404 will continue to be both very costly and very challenging and there can be no assurance that material weaknesses will not be identified in future periods. Any adverse results from such ongoing compliance efforts could result in a loss of investor confidence in our financial reports and have an adverse effect on our stock price.

Our Business Depends on Our Proprietary Rights and We Have Been Subject to Intellectual Property Litigation. Our success depends on our ability to obtain and maintain patents and other proprietary rights relative to the technologies used in our principal products. Despite our efforts to protect our proprietary rights, unauthorized parties may have in the past infringed or violated certain of our intellectual property rights. We from time to time engage in litigation to protect our intellectual property rights. In monitoring and policing our intellectual property rights, we have been and may be required to spend significant resources. We from time to time may be notified that we are infringing certain patent or intellectual property rights of others. There can be no assurance that any future intellectual property dispute or litigation will not result in significant expense, liability, injunction against the sale of some of our products, and a diversion of management's attention, any of which may have a material adverse effect on our operating results.

Our Business Depends on the Continued Service of Our Key Management and Technical Personnel. Our success depends upon the continued contributions of our key management, sales, marketing, research and development and operational personnel including Alex Davern, our Chief Executive Officer, Eric Starkloff, our President and Chief Operating Officer, and other members of our senior management and key technical personnel. Our key employees may voluntarily terminate their employment with us at any time. The loss of the services of one or more of our key employees in the future could have a material adverse effect on our operating results. We also believe our future success will depend upon our ability to attract and retain additional highly skilled management, technical, marketing, research and development, and operational personnel with experience in managing large and rapidly changing companies, as well as training, motivating and supervising employees. The market for hiring and retaining certain technical personnel, including software engineers, has become more competitive and intense in recent years. Failure to attract and retain a sufficient number of qualified technical personnel, including software engineers, or retain our key personnel could have a material adverse effect on our operating results.

Our Operations are Subject to a Variety of Environmental Regulations and Costs that May Have a Material Adverse Effect on Our Business and Results of Operations. We must comply with many different governmental regulations related to the use, storage, discharge and disposal of toxic, volatile or otherwise hazardous chemicals used in our operations in the U.S., Hungary, and Malaysia. Although we believe that our activities conform to presently applicable environmental regulations, our failure to comply with present or future regulations could result in the imposition of fines, suspension of production or a cessation of operations. Any such environmental regulations could require us to acquire costly equipment or to incur other significant expenses to comply with such regulations. Any failure by us to control the use of or adequately restrict the discharge of hazardous substances could subject us to future liabilities.

Provisions in Our Charter Documents and Delaware Law May Delay or Prevent an Acquisition of Us. Our certificate of incorporation and bylaws and Delaware law contain provisions that could make it more difficult for a third party to acquire us without the consent of our Board of Directors. These provisions include a classified Board of Directors, prohibition of stockholder action by written consent, prohibition of stockholders to call special meetings and the requirement that the holders of at least 80% of our shares approve any business combination not otherwise approved by two-thirds of our Board of Directors. Delaware law also imposes some restrictions on mergers and other business combinations between us and any holder of 15% or more of our outstanding common stock. In addition, our Board of Directors has the right to issue preferred stock without stockholder approval, which could be used to dilute the stock ownership of a potential hostile acquirer.

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ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We own approximately 145 acres of land in the Austin, Texas area. Our principal corporate and research and development activities are conducted in three buildings we own in Austin, Texas; 232,000 square foot and 140,000 square foot office facilities, and a 380,000 square foot research and development facility. We also own a 136,000 square foot office building in Austin, Texas which is being leased to third parties.

Our principal manufacturing activities are conducted in Debrecen, Hungary and Penang, Malaysia. We own a 306,000 square foot manufacturing, distribution and general and administrative facility in Debrecen, Hungary and a 314,000 square foot manufacturing, research and development, and general and administrative facility in Penang, Malaysia. In total, we hold a 99 year lease on approximately 23 acres of land comprised of two tracts in an industrial park in Penang, Malaysia.

Our German subsidiary, National Instruments Engineering GmbH & Co. KG, owns a 25,500 square foot office building in Aachen, Germany in which a majority of its activities are conducted. National Instruments Engineering owns another 19,375 square foot office building in Aachen, Germany, which is partially leased to third-parties.

National Instruments Corporation (UK) Limited, United Kingdom, owns a 29,270 square foot office building in Newbury, UK, in which a majority of its activities are conducted.

As of December 31, 2018, we also leased a number of sales and support offices in the U.S. and various countries throughout the world. We believe our existing facilities are adequate to meet our current requirements.

ITEM 3. LEGAL PROCEEDINGS

We are not currently a party to any material litigation. However, in the ordinary course of our business, we have in the past, are currently and will likely become involved in various legal proceedings, claims, and regulatory, tax or government inquiries and investigations, and could incur uninsured liability in any one or more of them. We also periodically receive notifications from various third parties related to alleged infringement of patents or intellectual property rights, commercial disputes or other matters. No assurances can be given with respect to the extent or outcome of any investigation, litigation or dispute.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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PART II

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

Our common stock began trading on The NASDAQ Stock Market under the symbol NATI effective March 13, 1995. At the close of business on February 5, 2019, there were approximately 310 holders of record of our common stock and approximately 47,666 beneficial holders of our common stock.

We believe factors such as quarterly fluctuations in our results of operations, announcements by us or our competitors, changes in earnings estimates by analysts or changes in our financial guidance, technological innovations, new product introductions, governmental regulations, actions, or litigation, may cause the market price of our common stock to fluctuate, perhaps substantially. In addition, stock prices for many technology companies fluctuate widely for reasons that may be unrelated to their operating results. These broad market and industry fluctuations may adversely affect the market price of our common stock.

Our cash dividend payments for the two most recent fiscal years, on a per share basis, are indicated in the following table. The dividends were paid on the dates set forth below:

| | Dividend Amount |
|---|---|
| 2018 | |
| March 5, 2018 | $ 0.23 |
| June 4, 2018 | $ 0.23 |
| September 4, 2018 | $ 0.23 |
| December 3, 2018 | $ 0.23 |
| | |
| 2017 | |
| March 6, 2017 | $ 0.21 |
| June 5, 2017 | $ 0.21 |
| September 5, 2017 | $ 0.21 |
| December 4, 2017 | $ 0.21 |

Our policy as to whether any future dividends will be paid, and if so, the amount, will be based on, among other considerations, our balance of available cash, our ability to obtain external financing through our line of credit, or by selling equity or debt securities to the public or to selected investors, our views on changes in tax rates applied to dividend income, potential future capital requirements related to research and development, expansion into new market areas, strategic investments and business acquisitions, share dilution management, legal risks, and challenges to our business model. Future dividends are subject to approval and declaration by our Board of Directors.

On January 23, 2019, our Board of Directors declared a quarterly cash dividend of $0.25 per common share, payable on March 4, 2019, to stockholders of record on February 11, 2019.

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Performance Graph

The following graph compares the cumulative total return to holders of NI’s common stock from December 31, 2013 to December 31, 2018 to the cumulative return over such period of the (i) Nasdaq Composite Index, (ii) Russell 2000 Index and (iii) Russell 2500 Index.

The graph assumes that $100 was invested on December 31, 2013 in NI’s common stock and in each of the other three indices and the reinvestment of all dividends, if any. Stockholders are cautioned against drawing any conclusions from the data contained therein, as past results are not necessarily indicative of future performance.

| | 12/31/2013 | 12/31/2014 | 12/31/2015 | 12/31/2016 | 12/31/2017 | 12/31/2018 |
|---|---|---|---|---|---|---|
| National Instruments | 100 | 99 | 94 | 104 | 143 | 159 |
| Nasdaq | 100 | 115 | 123 | 134 | 174 | 169 |
| Russell 2500 | 100 | 107 | 104 | 122 | 143 | 128 |
| Russell 2000 | 100 | 105 | 100 | 122 | 139 | 124 |

The information contained in the Performance Graph shall not be deemed to be “soliciting material” or to be “filed” with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933, as amended (the “Securities Act”), or the Exchange Act, except to the extent that NI specifically incorporates it by reference into any such filing. The graph is presented in accordance with SEC requirements.

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Issuer Purchase of Equity Securities

| Period | Total number of shares purchased | Average price paid per share | Total number of shares purchased as part of publicly announced plans or programs | Maximum number of shares that may yet be purchased under the plans or programs (1) |
|---|---|---|---|---|
| October 1, 2018 to October 31, 2018 | - | - | - | 1,134,247 |
| November 1, 2018 to November 30, 2018 | - | - | - | 1,134,247 |
| December 1, 2018 to December 31, 2018 | - | - | - | 1,134,247 |
| Total | - | - | - | 1,134,247 |

(1) For the past several years, we have maintained various stock repurchase programs. At December 31, 2018, there were 1,134,247 shares available for repurchase under the plan approved on April 21, 2010. This repurchase plan does not have an expiration date.

Unregistered Sales of Equity Securities

None.

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ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with our consolidated financial statements, including the Notes to Consolidated Financial Statements contained in this Form 10-K. The information set forth below is not necessarily indicative of the results of our future operations. The information should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations."

| | For the years ended December 31, (in thousands, except per share data) | | | | |
|---|---|---|---|---|---|
| | 2018 (1) | 2017 | 2016 | 2015 | 2014 |
| Statements of Income Data: | | | | | |
| Net sales: | | | | | |
| Americas | $538,388 | $504,626 | $482,039 | $496,746 | $495,951 |
| EMEIA | 432,977 | 408,625 | 389,843 | 409,119 | 412,401 |
| APAC | 387,767 | 376,135 | 356,297 | 319,591 | 335,510 |
| Consolidated net sales | 1,359,132 | 1,289,386 | 1,228,179 | 1,225,456 | 1,243,862 |
| Cost of sales: | 333,727 | 328,324 | 313,121 | 316,956 | 318,132 |
| Gross profit | 1,025,405 | 961,062 | 915,058 | 908,500 | 925,730 |
| Operating expenses: | | | | | |
| Sales and marketing | 482,576 | 477,921 | 461,236 | 452,262 | 461,845 |
| Research and development | 261,072 | 231,761 | 235,706 | 225,131 | 227,433 |
| General and administrative | 108,878 | 105,602 | 98,390 | 93,935 | 91,265 |
| Total operating expenses | 852,526 | 815,284 | 795,332 | 771,328 | 780,543 |
| Operating income | 172,879 | 145,778 | 119,726 | 137,172 | 145,187 |
| Other income (expense): | | | | | |
| Interest income | 5,896 | 2,276 | 1,122 | 1,403 | 1,133 |
| Net foreign exchange (loss) gain | (3,423) | 892 | (4,632) | (7,075) | (2,250) |
| Other income (expense), net | 1,101 | (1,566) | (1,581) | (221) | (69) |
| Income before income taxes | 176,453 | 147,380 | 114,635 | 131,279 | 144,001 |
| Provision for income taxes | 21,396 | 94,969 | 31,901 | 36,017 | 17,668 |
| Net income | $155,057 | $52,411 | $82,734 | $95,262 | $126,333 |
| Basic earnings per share | $1.17 | $0.40 | $0.64 | $0.74 | $0.99 |
| Weighted average shares outstanding - basic | 131,987 | 130,300 | 128,453 | 127,997 | 127,030 |
| Diluted earnings per share | $1.16 | $0.40 | $0.64 | $0.74 | $0.99 |
| Weighted average shares outstanding - diluted | 133,274 | 131,387 | 129,008 | 128,668 | 127,997 |
| Cash dividends declared per common share | $0.92 | $0.84 | $0.80 | $0.76 | $0.60 |

(1) On January 1, 2018, we adopted the new revenue standard using the modified retrospective method of adoption. Prior periods have not been adjusted. See Note 1 - Operations and Summary of Significant Accounting Policies to the Consolidated Financial Statements for additional information.

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| | December 31, (in thousands) | | | | |
|---|---|---|---|---|---|
| | 2018 | 2017 | 2016 | 2015 | 2014 |
| Balance Sheet Data: | | | | | |
| Cash and cash equivalents | $259,386 | $290,164 | $285,283 | $251,129 | $274,030 |
| Short-term investments | 271,396 | 121,888 | 73,117 | 81,789 | 197,163 |
| Working capital (1) | 739,236 | 624,835 | 574,572 | 559,525 | 700,163 |
| Total assets | 1,671,235 | 1,566,434 | 1,496,564 | 1,453,856 | 1,455,491 |
| Long-term debt, net of current portion | — | — | 25,000 | 37,000 | — |
| Total stockholders' equity | 1,238,358 | 1,128,021 | 1,114,219 | 1,081,721 | 1,117,496 |

(1) Effective December 31, 2015, our working capital includes the effects of the adoption of ASU No. 2015-17, Balance Sheet Classification of Deferred Taxes, requiring all deferred tax assets and liabilities and any related valuation allowance to be classified as non-current on our Consolidated Balance Sheets. Prior periods were not retrospectively adjusted.

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

The following “Management’s Discussion and Analysis of Financial Condition and Results of Operations” contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. Any statements contained herein regarding our future financial performance, operations, or other activities (including, without limitation, statements to the effect that we “believe,” “expect,” “plan,” "intend to,” “may,” “will,” “project,” “anticipate”, “continue,” or “estimate”; statements of "goals" or visions"; or other variations thereof or comparable terminology or the negative thereof) should be considered forward-looking statements. Actual results could differ materially from those projected in the forward-looking statements as a result of a number of important factors including those set forth under the heading “Risk Factors” beginning on page 10, and elsewhere in this Form 10-K. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. You should not place undue reliance on these forward-looking statements. We disclaim any obligation to update information contained in any forward-looking statement.

### Overview

For more than 40 years, we have enabled engineers and scientists around the world to accelerate productivity, innovation and discovery. Our software-centric platform provides an advanced approach through integration of software and modular hardware to create automated test and automated measurement systems. We believe our long-term track record of innovation and our differentiated platform helps support the success of our customers, employees, suppliers and shareholders. We have been profitable in every year since 1990. We sell to a large number of customers in a wide variety of industries. No single customer accounted for more than 3% of our sales in each of the years ended 2018, 2017, and 2016.

The key strategies that we focus on in running our business are the following:

#### Expanding our broad customer base

We strive to increase our already broad customer base and to grow our large-order business by serving a large market on many computer platforms, through a global marketing and distribution network. We also seek to acquire new technologies and expertise from time to time to open new opportunities for our existing product portfolio.

#### Maintaining a high level of customer satisfaction

To maintain a high level of customer satisfaction we strive to offer innovative, modular and integrated products through a global sales and support network. We strive to maintain a high degree of backwards compatibility across different platforms to preserve the customer’s investment in our products. In this time of intense global competition, we believe it is crucial that we continue to offer products with high quality and reliability, and that our products provide cost-effective solutions for our customers.

#### Leveraging external and internal technology

Our product strategy is to provide superior products by leveraging generally available technology, supporting open architectures on multiple platforms and by leveraging our core technologies across multiple products.

We sell into test and measurement and industrial/embedded applications in a broad range of industries and are subject to the economic and industry forces that drive those markets. It has been our experience that the performance of these industries and our performance are impacted by general trends in industrial production for the global economy and by the specific performance of certain vertical markets that are intensive consumers of measurement technologies. Examples of these markets are advanced research, automated test equipment, automotive, consumer electronics, commercial aerospace, computers and electronics, continuous process manufacturing, education, government/defense, medical research/pharmaceutical, power/energy, semiconductors, and telecommunications.

#### Leveraging a worldwide sales, distribution and manufacturing network

We distribute and sell our software and hardware products primarily through a direct sales organization. We also use independent distributors, OEMs, VARs, system integrators and consultants to market and sell our products. We have sales offices in the U.S. and sales offices and distributors in key international markets. Sales outside of the Americas accounted for approximately 60% of our revenues in 2018, and 61% of our revenues in each of 2017 and 2016. The vast majority of our foreign sales are denominated in the customers’ local currency, which exposes us to the effects of changes in foreign currency exchange rates. We expect that a significant portion of our total revenues will continue to be derived from international sales. (See Note 2 – Revenue and Note 14 - Segment information of Notes to Consolidated Financial Statements for details concerning the geographic breakdown of our net sales and long-lived assets, respectively).

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We manufacture substantially all of our product volume at our facilities in Debrecen, Hungary and Penang, Malaysia. Our product manufacturing operations can be divided into four areas: electronic circuit card and module assembly; chassis and cable assembly; technical manuals and product support documentation; and software duplication. Most of our electronic circuit card assemblies, modules and chassis are manufactured in house, although contractors are used from time to time. The majority of our electronic cable assemblies are produced by contractors; however, we do manufacture some on an exception basis. Our software duplication, technical manuals and product support documentation are primarily produced by contractors.

Delivering high quality, reliable products

We believe that our long-term growth and success depend on delivering high quality software and hardware products on a timely basis. Accordingly, we focus significant efforts on research and development. We focus our research and development efforts on enhancing existing products and developing new products that incorporate appropriate features and functionality to be competitive with respect to technology, price and performance. Our success also depends on our ability to obtain and maintain patents and other proprietary rights related to technologies used in our products. We have engaged in litigation and where necessary, will likely engage in future litigation to protect our intellectual property rights. In monitoring and policing our intellectual property rights, we have been and may be required to spend significant resources.

Our operating results fluctuate from period to period due to changes in global economic conditions and a number of other factors. As a result, we believe our historical results of operations should not be relied upon as indications of future performance. There can be no assurance that our net sales will grow or that we will remain profitable in future periods.

Current business outlook

Many of the industries we serve have historically been cyclical and have experienced periodic downturns. In assessing our business, we consider the trends in the Global Purchasing Managers' Index ("PMI"), global industrial production as well as industry reports on the specific vertical industries that we target. In the three month period ended December 31, 2018, the average of the PMI was 51.8 and the average of the new order element of the PMI was 51.7, both indicating expansion, but at a slower rate than during the first nine months of 2018. For January 2019, the most recent PMI reading was 50.7, below the most recent quarterly average and below the December 2018 reading of 51.4. For January 2019, the new order element of the PMI was 50.1, also below the most recent quarterly average. During the three month period ended December 31, 2018, the PMI in the U.S. and the Eurozone maintained readings above 50. We are unable to predict whether the industrial economy, as measured by the PMI, will remain above the neutral reading of 50, strengthen or contract during 2019.

During 2018, we continued to see growth in the industrial economy. During most of 2018, we saw revenue growth across our software-defined automated test and automated measurement platform, and across most geographies where we do business. We also saw a moderate impact on our results of operations from currency fluctuations. We delivered record revenue for 2018 while improving our operating profitability compared to 2017. During 2018, we took steps to reduce our overall employee headcount by approximately 2% in an effort to improve efficiencies and rebalance our resources on higher return activities. We incurred $11 million in severance and other restructuring-related charges, net of tax. The timing and scope of any future headcount reductions will vary.

During December 2018, we experienced weaker demand for some of our products in the APAC region, particularly for ADG applications in China. We believe that recent trade tensions coupled with a weakening PMI and disruptions in the mobile device market contributed to the economic uncertainty we experienced in APAC. Although we remain cautious about certain macroeconomic indicators heading into 2019, we are optimistic about our long-term position in the industry through the sustained differentiation we deliver to our customers through our platform-based approach.

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Results of Operations

The following table sets forth, for the periods indicated, the percentage of net sales represented by geographic region and by certain items reflected in our Consolidated Statements of Income:

| | Years ended December 31, | | |
|---|---|---|---|
| | 2018 | 2017 | 2016 |
| Net sales: | | | |
| Americas | 39.6 % | 39.1 % | 39.2 % |
| EMEIA | 31.9 | 31.7 | 31.7 |
| APAC | 28.5 | 29.2 | 29.1 |
| Consolidated net sales | 100.0 | 100.0 | 100.0 |
| Cost of sales | 24.6 | 25.5 | 25.5 |
| Gross profit | 75.4 | 74.5 | 74.5 |
| Operating expenses: | | | |
| Sales and marketing | 35.5 | 37.1 | 37.6 |
| Research and development | 19.2 | 18.0 | 19.2 |
| General and administrative | 8.0 | 8.2 | 8.0 |
| Total operating expenses | 62.7 | 63.3 | 64.8 |
| Operating income | 12.7 | 11.3 | 9.7 |
| Other income (expense): | | | |
| Interest income | 0.4 | 0.2 | 0.1 |
| Net foreign exchange gain (loss) | (0.3 ) | 0.1 | (0.4 ) |
| Other expense, net | 0.1 | (0.1 ) | (0.1 ) |
| Income before income taxes | 13.0 | 11.4 | 9.3 |
| Provision for income taxes | 1.6 | 7.4 | 2.6 |
| Net income | 11.4 % | 4.1 % | 6.7 % |

Figures may not sum due to rounding.

Results of Operations for the years ended December 31, 2018, 2017, and 2016

Net Sales. The following table sets forth our net sales for the years ended December 31, 2018, 2017, and 2016 along with the percent changes between the corresponding periods.

| | Years ended December 31, | | | | |
|---|---|---|---|---|---|
| ($ in millions) | 2018 | Change | 2017 | Change | 2016 |
| Product sales | $1,220.0 | 4.0% | $1,173.5 | 5.1% | $1,116.7 |
| Software maintenance sales | 139.1 | 20.0% | 115.9 | 3.9% | 111.5 |
| Total net sales | $1,359.1 | 5.4% | $1,289.4 | 5.0% | $1,228.2 |

In 2018 and 2017, product and software maintenance sales increased compared to 2017 and 2016, respectively. The increases in product sales during these periods are attributable to increased sales volume, particularly for orders greater than $20,000, across all geographic regions. The increases in those orders are discussed in more detail below. The increases in software maintenance sales during 2018 and 2017 can primarily be attributed to increased adoption of our software platform and increased recurring revenues related to software maintenance renewals.

We do not typically maintain a large amount of order backlog as orders typically translate to sales quickly. As such, any weakness in orders typically has a pronounced impact on our net sales in the short term.

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Orders with a value greater than $20,000 increased by 13% year over year during 2018 compared to a year over year increase of 8% in 2017. Orders with a value greater than $20,000 were 58%, 56%, and 54% of our total orders for the years ended December 31, 2018, 2017, and 2016, respectively. A significant factor in the continued expansion of these orders in the year ended December 31, 2018, compared to 2017, was strong demand for our system-level offerings. Orders with a value greater than $20,000, particularly those orders with a value greater than $100,000, are more volatile, are subject to greater discount variability and may contract at a faster pace during an economic downturn.

The following table sets forth our net sales by geographic region for the years ended December 31, 2018, 2017, and 2016 along with the changes between the corresponding periods and the region's percentage of total net sales.

| | Years ended December 31, | | | | |
|---|---|---|---|---|---|
| ($ in millions) | 2018 | Change | 2017 | Change | 2016 |
| Americas | $538.4 | 6.7% | $504.6 | 4.7% | $482.1 |
| Percentage of total net sales | 40 % | | 39 % | | 39 % |
| EMEIA | $433.0 | 6.0% | $408.6 | 4.8% | $389.8 |
| Percentage of total net sales | 32 % | | 32 % | | 32 % |
| APAC | $387.8 | 3.1% | $376.1 | 5.6% | $356.3 |
| Percentage of total net sales | 28 % | | 29 % | | 29 % |

We expect sales outside of the Americas to continue to represent a significant portion of our revenue. We intend to continue to expand our international operations by increasing our presence in existing markets, adding a presence in some new geographical markets and continuing the use of distributors to sell our products in some countries.

Almost all of the sales made by our direct sales offices in the Americas (excluding the U.S.), EMEIA, and APAC are denominated in local currencies, and accordingly, the U.S. dollar equivalent of these sales is affected by changes in foreign currency exchange rates. In order to provide a framework for assessing how our underlying business performed excluding the effects of foreign currency fluctuations between periods, we compare the percentage change in our results from period to period using constant currency calculations. To calculate the change in constant currency, current and comparative prior period results for entities reporting in currencies other than U.S. Dollars are converted into U.S. Dollars at constant exchange rates (i.e. the average rates in effect during the years ended December 31, 2017 and 2016, respectively). The following tables present this information, along with the impact of changes in foreign currency exchange rates on sales denominated in local currencies, for the years ended December 31, 2018 and 2017, respectively.

| | Year Ended December 31, 2017 | Change in Constant Dollars | | Impact of changes in foreign currency exchange rates on net sales | | Year Ended December 31, 2018 |
|---|---|---|---|---|---|---|
| ($ In millions) | GAAP Net Sales | Dollars | Percentage | Dollars | Percentage | GAAP Net Sales |
| Americas | $ 504.6 | $33.0 | 6.5% | $0.8 | 0.2% | $ 538.4 |
| EMEIA | 408.6 | 10.5 | 2.6% | 13.9 | 3.4% | 433.0 |
| APAC | 376.1 | 4.3 | 1.1% | 7.4 | 2.0% | 387.8 |
| Total net sales | $ 1,289.4 | $47.7 | 3.7% | $22.1 | 1.7% | $ 1,359.1 |

Figures may not sum due to rounding.

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| ($ In millions) | Year Ended December 31, 2016 GAAP Net Sales | Change in Constant Dollars Dollars | Percentage | Impact of changes in foreign currency exchange rates on net sales Dollars | Percentage | Year Ended December 31, 2017 GAAP Net Sales |
|---|---|---|---|---|---|---|
| Americas | $ 482.1 | $22.2 | 4.6% | $0.3 | 0.1% | $ 504.6 |
| EMEIA | 389.8 | 20.0 | 5.1% | (1.2 ) | (0.3)% | 408.6 |
| APAC | 356.3 | 20.7 | 5.8% | (0.9 ) | (0.2)% | 376.1 |
| Total net sales | $ 1,228.2 | $62.9 | 5.1% | $(1.8) | (0.1)% | $ 1,289.4 |

Figures may not sum due to rounding.

To help protect against changes in the U.S. dollar equivalent value caused by fluctuations in foreign currency exchange rates of forecasted foreign currency cash flows resulting from international sales, we hedge portions of our forecasted revenue denominated in foreign currencies with average rate forward contracts. (See Note 5 - Derivative instruments and hedging activities of Notes to Consolidated Financial Statements for further discussion regarding our cash flow hedging program and its related impact on our consolidated sales for 2018 and 2017).

Gross Profit. The following table sets forth our gross profit and gross profit as a percentage of net sales for the years ended December 31, 2018, 2017, and 2016 along with the percentage changes in gross profit for the corresponding periods. We continue to focus on cost control and cost reduction measures throughout our manufacturing cycle.

| | Years Ended December 31, | | | | |
|---|---|---|---|---|---|
| ($ in millions) | 2018 | Change | 2017 | Change | 2016 |
| Gross Profit | $1,025.4 | 6.7% | $961.1 | 5.0% | $915.1 |
| Gross Profit as a percentage of net sales | 75.4 % | | 74.5 % | | 74.5 % |

The improvement in our gross profit as a percentage of sales during the year ended December 31, 2018 can be attributed to the increase in software maintenance revenues, as discussed above. During the years ended December 31, 2018 and 2017, the change in exchange rates had the effect of increasing our cost of sales by $3.2 million and decreasing our cost of sales $0.8 million, respectively. To help protect against changes in our cost of sales caused by a fluctuation in foreign currency exchange rates of forecasted foreign currency cash flows, we hedge portions of our forecasted costs of sales denominated in foreign currencies with average rate forward contracts. During the years ended December 31, 2018 and 2017, these hedges had the effect of decreasing our cost of sales by $0.7 million and increasing our cost of sales by $1.2 million, respectively. (See Note 5 - Derivative instruments and hedging activities of Notes to Consolidated Financial Statements for further discussion regarding our cash flow hedging program and its related impacted on our consolidated sales for 2018 and 2017).

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Operating Expenses. The following table sets forth our operating expenses for the years ended December 31, 2018, 2017, and 2016 along with the percentage changes between the corresponding periods and the line item as a percentage of total net sales.

| | Years Ended December 31, | | | | |
|---|---|---|---|---|---|
| ($ in thousands) | 2018 | Change | 2017 | Change | 2016 |
| Sales and marketing | $482,576 | 1% | $477,921 | 4% | $461,236 |
| Percentage of total net sales | 36 % | | 37 % | | 38 % |
| Research and development | $261,072 | 13% | $231,761 | (2)% | $235,706 |
| Percentage of total net sales | 19 % | | 18 % | | 19 % |
| General and Administrative | $108,878 | 3% | $105,602 | 7% | $98,390 |
| Percentage of total net sales | 8 % | | 8 % | | 8 % |
| Total operating expenses | $852,526 | 5% | $815,284 | 3% | $795,332 |
| Percentage of total net sales | 63 % | | 63 % | | 65 % |

The increase in our operating expenses during 2018 was primarily related to the following:

- a $29 million increase in research and development expenses, primarily attributable to a decrease in software development costs eligible for capitalization, as described in more detail below.
- a $10 million increase in higher personnel costs, primarily attributable to an $8 million increase related to our equity compensation costs due to higher stock prices. Additionally, increases in variable compensation costs to be more competitive with market levels were partially offset by lower salary and benefits costs, primarily related to headcount reductions.
- a $8 million increase related to the year over year impact of changes in foreign currency exchange rates.
- a $7 million decrease related to reductions in travel, outside services, and building and equipment costs. The decrease in cash expenditures related to travel and outside services is consistent with our continued focus on disciplined expense management and cost optimization.

The increase in research and development costs during 2018 was primarily related to a $28 million decrease in software development costs eligible for capitalization. In the second quarter of 2018, we began moving toward more frequent releases for many of our software products. Specifically, for many of our software development projects we started applying agile development methodologies which are characterized by a more dynamic development process with more frequent and iterative revisions to a product's features and functions as the software is being developed. Due to the shorter development cycle and focus on rapid production associated with agile development, we expect that for a significant majority of our software development projects the costs incurred subsequent to the achievement of technological feasibility will be immaterial in future periods and we expect to record significantly less capitalized software development costs than under our historical software development approaches. Consequently, a larger portion of our software development expenditures will be recognized as operating expenses in the future. We also expect amortization of previously capitalized software development costs to steadily decline as previously capitalized software development costs become fully amortized over the next four years.

The increase in our operating expenses in 2017 was primarily the result of $34 million in higher personnel-related expenses due to increased variable compensation in regions with strong sales growth, accrual of an expected payment under our annual company profit sharing program, an increase in our employer matching contribution for our defined contribution retirement plan, and $16 million in severance and other related costs associated with our restructuring initiative. Building and equipment costs also increased by $4 million compared to 2016. These increases were partially offset by a decrease in software development costs of $10 million due to an increase in capitalization of software development costs compared to the year ending December 31, 2016 and a $6 million decrease in marketing and outside services. Additionally, the year over year change in exchange rates had the effect of decreasing our operating expenses by $1.4 million.

We believe that our long-term growth and success depends on developing high quality software and hardware products on a timely basis. We are focused on leveraging recent investments in research and development and in our field sales force and taking actions to help ensure that those resources are focused in areas and initiatives that will contribute to future growth in our business.

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Operating Income. For the years ended December 31, 2018, 2017, and 2016, operating income was $173 million, $146 million and $120 million, respectively, an increase of 19% in 2018, following an increase of 22% in 2017. As a percentage of net sales, operating income was 13%, 11% and 10%, respectively, over the three year period. The changes in operating income in absolute dollars and as a percent of sales in 2017 and 2018 are attributable to the factors discussed in Net Sales, Gross Profit and Operating Expenses above.

Interest Income. Interest income was $5.9 million, $2.3 million and $1.1 million for the years ended December 31, 2018, 2017, and 2016, respectively, an increase of 159% in 2018, following an increase of 103% in 2017.We saw continued improvement in yields for investment grade alternatives that comply with our corporate investment policy. The improving yields coupled with the $119 million increase in our cash, cash equivalents, and short-term investments during 2018 resulted in the increase in interest income for 2018.

Net Foreign Exchange (Loss)/Gain. Net foreign exchange (loss)/gain was $(3.4) million, $0.9 million, and $(4.6) million for the years ended December 31, 2018, 2017, and 2016, respectively. These results are attributable to movements in the foreign currency exchange rates between the U.S. dollar and foreign currencies in subsidiaries for which our functional currency is not the U.S. dollar. During most of 2018, we saw continued volatility in the exchange rates between the U.S. dollar and many of the currency markets where we have exposure, primarily in China and some emerging markets. As of the date of this filing, the U.S. dollar index, as tracked by the St. Louis Federal Reserve, remains near its ten year high. During 2017, there was a moderately stronger U.S. dollar during the first nine months of the year and a moderately weaker U.S. dollar during the last three months of the year when compared year over year to 2016, resulting in a modest decrease in our U.S. dollar equivalent revenues and expenses in 2017, when compared year over year to 2016. During 2016, there was sharp volatility in the exchange rates between the U.S. dollar and most of the major currencies in the markets in which we do business and such volatility was characterized by a broad and sharp strengthening of the U.S. dollar against most currencies. We cannot predict the direction or degree of future volatility in these exchange rates. In the past, we have noted that significant volatility in foreign currency exchange rates in the markets in which we do business has had a significant impact on the revaluation of our foreign currency denominated firm commitments, on our ability to forecast our U.S. dollar equivalent revenues and expenses and on the effectiveness of our hedging programs. In the past, these dynamics have also adversely affected our revenue growth in international markets and may pose similar challenges in the future. We recognize the local currency as the functional currency in virtually all of our international subsidiaries.

We utilize foreign currency forward contracts to hedge our foreign denominated net foreign currency balance sheet positions to help protect against the change in value caused by a fluctuation in foreign currency exchange rates. We typically hedge up to 90% of our outstanding foreign denominated net receivable or payable positions and typically limit the duration of these foreign currency forward contracts to approximately 90 days. The gain or loss on these derivatives as well as the offsetting gain or loss on the hedged item attributable to the hedged risk is recognized in current earnings under the line item “Net foreign exchange Gain/loss”. Our hedging strategy decreased our foreign exchange losses by $0.3 million, decreased our foreign exchange gains by $5.9 million, and decreased our foreign exchange losses by $1.9 million in 2018, 2017, and 2016, respectively. (See Note 5 - Derivative instruments and hedging activities of Notes to Consolidated Financial Statements for a further description of our derivative instruments and hedging activities).

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Provision for Income Taxes. For the years ended December 31, 2018, 2017, and 2016, our provision for income taxes reflected an effective tax rate of 12%, 64% and 28%, respectively. The factors that caused our effective tax rates to change year-over-year are detailed in the table below:

| | Years ended December 31, | |
|---|---|---|
| Effective tax rate for 2017 | 64 | % |
| Change in U.S. federal tax rate | (14 | ) |
| Increased profits in foreign jurisdictions with reduced income tax rates | 8 | |
| Change in enhanced deduction for certain research and development expenses | (1 | ) |
| Change in intercompany prepaid tax asset | 2 | |
| Change in state income taxes, net of federal benefit | 2 | |
| Remeasurement of U.S. deferred tax balance | 10 | |
| Transition tax on deferred foreign income | (55 | ) |
| Global intangible low-taxed income deferred ("GILTI") | (2 | ) |
| Foreign tax on undistributed earnings | (3 | ) |
| Foreign-derived intangible income deduction | (1 | ) |
| Global intangible low-taxed income inclusion | 2 | |
| Effective tax rate for 2018 | 12 | % |

| | Years ended December 31, | |
|---|---|---|
| Effective tax rate for 2016 | 28 | % |
| Increased profits in foreign jurisdictions with reduced income tax rates | (5 | ) |
| Change in enhanced deduction for certain research and development expenses | (1 | ) |
| Change in intercompany prepaid tax assed | (3 | ) |
| Change in state income taxes, net of federal benefit | (1 | ) |
| Change in employee share-based compensation | (1 | ) |
| Remeasurement of U.S. deferred tax balance | (10 | ) |
| Transition tax on deferred foreign income | 54 | |
| Foreign tax on undistributed earnings | 3 | |
| Effective tax rate for 2017 | 64 | % |

The Tax Cuts and Jobs Act (the "Act") was enacted on December 22, 2017. The Act reduced the US federal corporate tax rate from 35% to 21%, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and creates new taxes on certain foreign sourced earnings. As of December 31, 2018, we have completed our accounting for the tax effects of enactment of the Act. We recognized a provisional amount of $69.9 million, which was included as a component of income tax expense from continuing operations during the twelve months ended December 31, 2017. As of December 31, 2018, we recognized a ($4.2) million adjustment to the provisional amounts recorded at December 31, 2017, primarily related to recognizing the effects of electing to account for GILTI in deferred taxes.

For additional discussion about our income taxes including the effect of the Tax Cuts and Jobs Act, components of income before income taxes, our provision for income taxes charged to operations, components of our deferred tax assets and liabilities, a reconciliation of income taxes at the U.S. federal statutory rate to our effective tax rate, and other tax matters, see Note 10 - Income taxes of Notes to Consolidated Financial Statements.

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Quarterly results of operations

The following quarterly results have been derived from our unaudited consolidated financial statements that, in the opinion of management, reflect all adjustments (consisting only of normal recurring adjustments) necessary for a fair presentation of such quarterly information. The operating results for any quarter are not necessarily indicative of the results to be expected for any future period. You should read the following tables presenting our quarterly results of operations in conjunction with the consolidated financial statements and related notes contained elsewhere in this Annual Report on Form 10-K. The unaudited quarterly financial data for each of the eight quarters in the two years ended December 31, 2018 and December 31, 2017 are as follows:

| | Three months ended (in thousands, except per share data) | | | |
|---|---|---|---|---|
| | March 31, 2018 | June 30, 2018 | September 30, 2018 | December 31, 2018 |
| Net sales | $311,897 | $341,009 | $346,127 | $360,099 |
| Gross profit | 237,374 | 258,850 | 257,112 | 272,070 |
| Operating income | 28,137 | 36,912 | 46,010 | 61,821 |
| Net income | 24,268 | 31,054 | 43,194 | 56,541 |
| Basic earnings per share | $0.19 | $0.24 | $0.33 | $0.43 |
| Diluted earnings per share | $0.18 | $0.23 | $0.32 | $0.42 |
| Dividends declared per share | $0.23 | $0.23 | $0.23 | $0.23 |

| | Three months ended (in thousands, except per share data) | | | |
|---|---|---|---|---|
| | March 31, 2017 | June 30, 2017 | September 30, 2017 | December 31, 2017 |
| Net sales | $300,106 | $318,609 | $320,921 | $349,751 |
| Gross profit | 223,582 | 236,149 | 237,170 | 264,160 |
| Operating income | 22,318 | 28,631 | 37,515 | 57,312 |
| Net income (loss) | 18,148 | 25,155 | 33,389 | (24,282) |
| Basic earnings per share | $0.14 | $0.19 | $0.26 | $(0.19) |
| Diluted earnings per share | $0.14 | $0.19 | $0.25 | $(0.19) |
| Dividends declared per share | $0.21 | $0.21 | $0.21 | $0.21 |

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Other operational information

We believe that the following additional unaudited operational metrics assist investors in assessing our operational performance relative to others in our industry and to our historical results. The following tables provide details with respect to the amount of GAAP charges related to stock-based compensation, amortization of acquisition intangibles, acquisition related transaction costs, restructuring charges, tax reform charges and capitalization and amortization of software development costs that were recorded in the line items indicated below (in thousands).

| | Three Months Ended December 31, | | Years Ended December 31, | |
|---|---|---|---|---|
| (In thousands) | 2018 | 2017 | 2018 | 2017 |
| Stock-based compensation | | | | |
| Cost of sales | $816 | $714 | $3,231 | $2,628 |
| Sales and marketing | 3,810 | 3,035 | 14,218 | 11,559 |
| Research and development | 3,489 | 2,462 | 12,580 | 9,014 |
| General and administrative | 2,010 | 1,585 | 7,587 | 5,944 |
| Provision for income taxes | (1,707 ) | (2,934 ) | (7,822 ) | (10,322 ) |
| Total | $8,418 | $4,862 | $29,794 | $18,823 |

| | Three Months Ended December 31, | | Years Ended December 31, | |
|---|---|---|---|---|
| (In thousands) | 2018 | 2017 | 2018 | 2017 |
| Amortization of acquisition intangibles | | | | |
| Cost of sales | $810 | $1,444 | $3,258 | $6,092 |
| Sales and marketing | 505 | 529 | 2,085 | 2,009 |
| Research and development | 28 | 204 | 113 | 1,017 |
| Provision for income taxes | (163 ) | (491 ) | (681 ) | (2,148 ) |
| Total | $1,180 | $1,686 | $4,775 | $6,970 |

| | Three Months Ended December 31, | | Years Ended December 31, | |
|---|---|---|---|---|
| (In thousands) | 2018 | 2017 | 2018 | 2017 |
| Acquisition transaction costs, restructuring charges, and other | | | | |
| Cost of sales | $244 | $222 | $2,057 | $1,210 |
| Sales and marketing | 2,300 | 2,972 | 10,654 | 10,990 |
| Research and development | 297 | 1,693 | 2,092 | 3,509 |
| General and administrative | 341 | 1,097 | 1,879 | 1,900 |
| Other income (loss), net | — | — | 709 | — |
| Provision for income taxes | 237 | (1,754 ) | (3,749 ) | (5,407 ) |
| Total | $3,419 | $4,230 | $13,642 | $12,202 |

| | Three Months Ended December 31, | | Years Ended December 31, | |
|---|---|---|---|---|
| (In thousands) | 2018 | 2017 | 2018 | 2017 |
| Capitalization and amortization of internally developed software costs | | | | |
| Cost of sales | $6,557 | $4,929 | $25,293 | $20,450 |
| Research and development | (1,056 ) | (7,256 ) | (14,208 ) | (41,662 ) |
| Provision for income taxes | (1,155 ) | 815 | (2,328 ) | 7,424 |

| | | | | |
|---|---|---|---|---|
| Total | $4,346 | $(1,512) | $8,757 | $(13,788) |

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## Liquidity and Capital Resources

### Overview

At December 31, 2018, we had $531 million in cash, cash equivalents and short-term investments. Our cash and cash equivalent balances are held in numerous financial institutions throughout the world, including substantial amounts held outside of the U.S., however, all of our short-term investments that are located outside of the U.S. are denominated in the U.S. dollar with the exception of $5 million U.S. dollar equivalent of corporate bonds that are denominated in Euro. Our short-term investments do not include any foreign sovereign debt. The following table presents the geographic distribution of our cash, cash equivalents, and short-term investments as of December 31, 2018 (in millions):

| | Domestic | International | Total |
|---|---|---|---|
| Cash and Cash Equivalents | $76.2 | $183.2 | $259.4 |
| | 29% | 71% | |
| Short-term Investments | $236.9 | $34.5 | $271.4 |
| | 87% | 13% | |
| Cash, Cash Equivalents and Short-term Investments | $313.1 | $217.7 | $530.8 |
| | 59% | 41% | |

We utilize a variety of tax planning and financing strategies with the objective of having our worldwide cash available in the locations in which it is needed. The following table presents our working capital, cash and cash equivalents and short-term investments:

| (In thousands) | December 31, 2018 | December 31, 2017 | Increase/ (Decrease) |
|---|---|---|---|
| Working capital | $739,236 | $624,835 | $114,401 |
| Cash and cash equivalents (1) | 259,386 | 290,164 | (30,778 ) |
| Short-term investments (1) | 271,396 | 121,888 | 149,508 |
| Total cash, cash equivalents and short-term investments | $530,782 | $412,052 | $118,730 |

(1) Included in working capital

Our principal sources of liquidity include cash, cash equivalents, and marketable securities, as well as the cash flows generated from our operations. The primary drivers of the net increase in working capital between December 31, 2017 and December 31, 2018 were:

- Cash, cash equivalents, and short-term investments increased by $119 million. Additional analysis of the changes in our cash flows for the year ended December 31, 2018 compared to the year ended December 31, 2017 are discussed below.
- "Accounts receivable, net" decreased by $6 million. Days sales outstanding decreased to 65 days at December 31, 2018, compared to 68 days at December 31, 2017.
- Inventory increased by $10 million to $194 million at December 31, 2018, from $185 million at December 31, 2017. Inventory turns increased to 1.8 at December 31, 2018, compared to 1.7 at December 31, 2017. The increase in inventory is primarily attributable to lower than expected demand, primarily in the APAC region, during the fourth quarter of 2018.
- Prepaid expenses and other current assets increased by $6 million which was primarily related to a $3 million increase in the fair value of our foreign currency forward exchange contracts and the timing of prepaid insurance and maintenance.
- Accrued compensation increased by $3 million which was primarily related to accruals of variable compensation related to the year over year increase in net sales.

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- The current portion of deferred revenue increased by $7 million, which was primarily related to a $19 million increase related to additional software maintenance billings and a one-time shift in the timing of certain enterprise-wide software licensing agreements. This increase was partially offset by a $9 million decrease due to the adoption of the new revenue standard on January 1, 2018 and a $3 million decrease related to changes in foreign currency exchange rates.
- Other current liabilities increased by $2 million which was primarily related to changes in the fair value of our foreign currency forward exchange contracts offset by increases in the amount of current income taxes payable.
- Other taxes payable increased by $4 million primarily related to the timing of payments for VAT and other indirect taxes.

Analysis of Cash Flow

The following table summarizes the proceeds and (uses) of cash:

| (In thousands) | December 31, | | |
|---|---|---|---|
| | 2018 | 2017 | 2016 |
| Cash provided by operating activities | $274,580 | $224,442 | $200,199 |
| Cash used by investing activities | (209,996 ) | (122,410 ) | (70,503 ) |
| Cash used by financing activities | (90,843 ) | (106,299 ) | (91,625 ) |
| Effect of exchange rate changes on cash | (4,519 ) | 9,148 | (3,917 ) |
| Net change in cash equivalents | (30,778 ) | 4,881 | 34,154 |
| Cash and cash equivalents at beginning of year | 290,164 | 285,283 | 251,129 |
| Cash and cash equivalents at end of year | $259,386 | $290,164 | $285,283 |

Operating Activities Cash provided by operating activities for the year ended December 31, 2018 increased by $50 million compared to the same period in 2017. This increase was primarily due to the $103 million increase in our net income, which was partially offset by a decrease in cash provided by operating assets and liabilities.

Investing Activities Cash used for investing activities for the year ended December 31, 2018 increased by $88 million compared to the same period in 2017. This was primarily attributable to a net purchase of short-term investments of $150 million compared to a net purchase of short-term investments of $48 million during the same period in 2017, to take advantage of favorable increases in the yields offered by short-term investments that comply with our investment policy. Cash outflows related to capitalized software development also decreased by $27 million which was partially offset by an increase in capital expenditures of $4 million compared to the same period in 2017.

Financing Activities Cash used by financing activities decreased by $15 million for the year ended December 31, 2018 compared to the same period in 2017. This was primarily due to a $25 million decrease in cash outflows related to a repayment under our loan agreement in 2017, which was partially offset by a $12 million increase in cash outflows related to the increase in our quarterly dividend. From time to time, our Board of Directors has authorized various programs for our repurchase of shares of our common stock depending on market conditions and other factors. Under the current program, we did not repurchase any shares during the year ended December 31, 2018. (See Note 12 – Authorized shares of common and preferred stock and stock-based compensation plans of Notes to Consolidated Financial Statements for additional discussion about our equity compensation plans and share repurchase program).

Contractual Cash Obligations. The following summarizes our contractual cash obligations as of December 31, 2018:

| | Payments due by period | | | | | | |
|---|---|---|---|---|---|---|---|
| (In thousands) | Total | 2019 | 2020 | 2021 | 2022 | 2023 | Beyond |
| Tax payable (1) | 81,646 | 7,100 | 7,100 | 7,100 | 7,100 | 13,312 | 39,934 |
| Capital lease obligations | — | — | — | — | — | — | — |
| Operating leases | 61,148 | 19,597 | 12,180 | 7,986 | 4,866 | 3,869 | 12,650 |
| Total contractual obligations | $142,794 | $26,697 | $19,280 | $15,086 | $11,966 | $17,181 | $52,584 |

(1) Represents one-time transition tax payable related to known amounts of cash taxes payable in future years as a result of the Tax Act. For further information, refer to Note 10 - Income

taxes of Notes to Consolidated Financial Statements

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We have commitments under non-cancelable operating leases primarily for office facilities throughout the world. Certain leases require us to pay property taxes, insurance and routine maintenance, and include escalation clauses. As of December 31, 2018, we had non-cancelable operating lease obligations of approximately $61 million compared to $77 million at December 31, 2017. Rent expense under operating leases was $21 million for the year ended December 31, 2018 and $20 million for each of the years ended December 31, 2017, and 2016.

The following summarizes our other commercial commitments as of December 31, 2018:

| (In thousands) | Total | 2019 | 2020 | 2021 | 2022 | 2023 | Beyond |
|---|---|---|---|---|---|---|---|
| Purchase obligations | 7,578 | 7,578 | — | — | — | — | — |
| Total commercial commitments | $7,578 | $7,578 | $ — | $ — | $ — | $ — | $ — |

Purchase obligations primarily represent purchase commitments for customized inventory and inventory components. As of December 31, 2018, we had non-cancelable purchase commitments with various suppliers of customized inventory and inventory components totaling approximately $7.6 million over the next twelve months. At December 31, 2017, we had non-cancelable purchase commitments with various suppliers of customized inventory and inventory components totaling approximately $9.1 million.

At December 31, 2018, we had no outstanding guarantees for payment of customs and foreign grants. At December 31, 2017, we had outstanding guarantees for payment of customs, foreign grants and potential customer disputes totaling approximately $2.6 million.

Loan Agreement. On May 9, 2013, we entered into a Loan Agreement (the “Loan Agreement”) with Wells Fargo Bank (the “Lender”). On October 29, 2015, we entered into a First Amendment to Loan Agreement (the “Amendment”) with the Lender, which amended our Loan Agreement to among other things, (i) increase the unsecured revolving line of credit from $50 million to $125 million, (ii) extend the maturity date of the line of credit from May 9, 2018 to October 29, 2020, and (iii) provide us with an option to request increases to the line of credit of up to an additional $25 million in the aggregate, subject to consent of the Lender and terms and conditions to be mutually agreed between us and the Lender. On April 27, 2018, we entered into a Second Amendment to Loan Agreement (the "Second Amendment") which amended the Loan Agreement, as amended by the Amendment to, among other things, (i) reduce the revolving line of credit from $125.0 million to $5.0 million, (ii) reduce the letter of credit sublimit under the line of credit from $10.0 million to $5.0 million, and (iii) require us and our subsidiaries to comply with certain of the affirmative and negative covenants under the Loan Agreement only if loans are outstanding under the Loan Agreement or if we have not reimbursed any drawing under a letter of credit issued under the Loan Agreement within five business days following the request of the Lender. Proceeds of loans made under the Loan Agreement may be used for working capital and other general corporate purposes. We may prepay the loans under the Loan Agreement in whole or in part at any time without premium or penalty. Certain of our existing and future material domestic subsidiaries are required to guaranty our obligations under the Loan Agreement. (See Note 15 – Debt of Notes to Consolidated Financial Statements for additional details on our revolving line of credit.)

Off-Balance Sheet Arrangements. We do not have any off-balance sheet debt. At December 31, 2018, we did not have any relationships with any unconsolidated entities or financial partnerships, such as entities often referred to as structured finance entities, which would have been established for the purpose of facilitating off-balance sheet arrangements. As such, we are not exposed to any financing, liquidity, market or credit risk that could arise if we were engaged in such relationships.

Prospective Capital Needs. We believe that our existing cash, cash equivalents and short-term investments, together with cash generated from operations as well as from the purchase of common stock through our employee stock purchase plan will be sufficient to cover our working capital needs, capital expenditures, investment requirements, commitments, payment of dividends to our stockholders and repurchases of our common stock for at least the next 12 months. We may also seek to pursue additional financing or to raise additional funds by seeking an increase in our unsecured revolving line of credit under our Loan Agreement or selling equity or debt to the public or in private transactions from time to time. If we elect to raise additional funds, we may not be able to obtain such funds on a timely basis or on acceptable terms, if at all. If we raise additional funds by issuing additional equity or convertible debt securities, the ownership percentages of our existing stockholders would be reduced. In addition, the equity or debt securities that we issue may have rights, preferences or privileges senior to those of our common stock.

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Although we believe that we have sufficient capital to fund our operating activities for at least the next 12 months, our future capital requirements may vary materially from those now planned. We anticipate that the amount of capital we will need in the future will depend on many factors, including:

- payment of dividends to our stockholders;
- required levels of research and development and other operating costs;
- our business, product, capital expenditure and research and development plans, and product and technology roadmaps;
- acquisitions of other businesses, assets, products or technologies;
- the overall levels of sales of our products and gross profit margins;
- the levels of inventory and accounts receivable that we maintain;
- general economic and political uncertainty and specific conditions in the markets we address, including any volatility in the industrial economy in the various geographic regions in which we do business;
- the inability of certain of our customers who depend on credit to have access to their traditional sources of credit to finance the purchase of products from us, which may lead them to reduce their level of purchases or to seek credit or other accommodations from us;
- capital improvements for facilities;
- repurchases of our common stock;
- our relationships with suppliers and customers; and
- the level of stock purchases under our employee stock purchase plan.

Recently Issued Accounting Pronouncements

See Note 1 – Operations and summary of significant accounting policies for discussion regarding recently issued accounting pronouncements.

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Critical Accounting Policies and Estimates

The preparation of our financial statements in conformity with generally accepted accounting principles requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses and related disclosures of contingent assets and liabilities. We base our estimates on past experience and other assumptions that we believe are reasonable under the circumstances, and we evaluate these estimates on an ongoing basis. Our critical accounting policies are those that affect our financial statements materially and involve difficult, subjective or complex judgments by management. Although these estimates are based on management's best knowledge of current events and actions that may impact the company in the future, actual results may be materially different from the estimates.

Our critical accounting policies and estimates are as follows:

- Revenue recognition

Our contracts with customers often include promises to transfer multiple products and services to a customer. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment.

Judgment is required to determine the stand-alone selling price (“SSP") for each distinct performance obligation. We use a range of amounts to estimate SSP when we sell each of our products and services separately and need to determine whether there is a discount to be allocated based on the relative SSP of the various products and services. In instances where SSP is not directly observable, such as when we do not sell the product or service separately, we determine the SSP using information that may include market conditions, historical pricing relationships (such as software licenses available under either a perpetual and term license period), and other observable inputs. We typically have more than one SSP for individual products and services due to the stratification of those products and services by customers and circumstances. In these instances, we may use information such as the geographic region in determining the SSP.

Due to the various benefits from and the nature of software licenses sold under enterprise-wide licensing program, judgment is required to identify the distinct performance obligations, determine the SSP for certain performance obligations that is not directly observable, and assess the pattern of delivery, including the exercise pattern of certain benefits across our portfolio of customers.

Our products are generally sold with a right of return, and occasionally we may provide other credits or incentives, which are accounted for as variable consideration when determining the amount of revenue to recognize. Returns and credits are estimated at contract inception and updated at the end of each reporting period if additional information becomes available. We analyze historical returns, current economic trends, and changes in customer demand and acceptance of our products when evaluating the adequacy of our sales returns allowance. Significant judgments and estimates must be made and used in connection with establishing the sales returns allowance in any accounting period. Changes to our estimated variable consideration were not material for the periods presented.

Refer to Note 1 - Operations and summary of significant accounting policies and Note 2 - Revenue for further discussion of our current revenue recognition policies and the impact of adopting the new revenue standard on our financial statements for the year ended December 31, 2018.

- Estimating allowances, specifically the allowance for doubtful accounts and the adjustment for excess and obsolete inventories

We also make estimates about the uncollectability of our accounts receivable and the net realizable value of our inventory. We specifically analyze accounts receivable and analyze historical bad debts, customer concentrations, customer credit-worthiness and current economic trends when evaluating the adequacy of our allowance for doubtful accounts. Our allowance for doubtful accounts was $3.5 million and $2.9 million at December 31, 2018 and 2017, respectively. We also write down our inventory for estimated obsolescence or unmarketable inventory equal to the difference between the cost of inventory and estimated net realizable value based on assumptions of future demand and market conditions. Our allowance for excess and obsolete inventories was $15.4 million and $16.4 million at December 31, 2018 and 2017, respectively. Significant judgments and estimates must be made and used in connection with establishing these allowances. Material differences may result in the amount and timing of our bad debt and inventory obsolescence if we made different judgments or utilized different estimates or if actual results varied materially from our estimates.

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• Accounting for costs of computer software

We capitalize costs related to the development and acquisition of certain software products. Capitalization of costs begins when technological feasibility has been established and ends when the product is available for general release to customers. Technological feasibility for our products is established when the product is available for beta release. Judgment is required in determining when technological feasibility of a product is established. Amortization is computed on an individual product basis for those products available for market and has been recognized based on the product’s estimated economic life, generally three years. At each balance sheet date, the unamortized costs are reviewed by management and reduced to net realized value when necessary. As of December 31, 2018 and 2017, unamortized capitalized software development costs were $75 million and $86 million, respectively.

During the second quarter of 2018, we started applying agile development methodologies to certain software development projects, which are characterized by a more dynamic development process with more frequent and iterative revisions to a product release's features and functions as the software is being developed. Due to the shorter development cycle and focus on rapid production associated with agile development, we expect that for a significant majority of our agile development projects the costs incurred subsequent to the achievement of technological feasibility will be immaterial in future periods and we expect to record significantly less capitalized software development costs than under our historical software development approaches. Prior capitalized costs will continue to be amortized on the basis of each product's estimated useful life.

• Valuation of long-lived and intangible assets

We assess the impairment of identifiable intangibles, long-lived assets and related goodwill whenever events or changes in circumstances indicate that the carrying value may not be recoverable. In accordance with FASB ASC 350, Intangibles – Goodwill and Other (FASB ASC 350), goodwill is tested for impairment on an annual basis, and between annual tests if indicators of potential impairment exist, using a fair-value-based approach based on the market capitalization of the reporting unit. Our annual impairment test was performed as of November 30, 2018. No impairment of goodwill and long-lived and intangible assets was identified during 2018 and 2017. Goodwill is deductible for tax purposes in certain jurisdictions. We have one operating segment and one reporting unit. Factors considered important which could trigger an impairment review include the following:

- significant underperformance relative to expected historical or projected future operating results;
- significant changes in the manner of our use of the acquired assets or the strategy for our overall business;
- significant negative industry or economic trends; and,
- our market capitalization relative to net book value.

When it is determined that the carrying value of intangibles, long-lived assets and related goodwill may not be recoverable based upon the existence of one or more of the above indicators of impairment, the measurement of any impairment is determined and the carrying value is reduced as appropriate. As of December 31, 2018 and 2017, we had goodwill of approximately $265 million and $267 million, respectively.

• Accounting for income taxes

We account for income taxes under the asset and liability method. Deferred tax assets and liabilities are recognized for the expected tax consequences of temporary differences between the tax bases of assets and liabilities and their reported amounts. Valuation allowances are established when necessary to reduce deferred tax assets to amounts which are more likely than not to be realized. We had a valuation allowance of $80 million and $78 million at December 31, 2018 and December 31, 2017, respectively. A majority of the valuation allowance is related to the deferred tax assets of National Instruments Hungary Kft. (“NI Hungary”).

Judgment is required in assessing the future tax consequences of events that have been recognized in our financial statements or tax returns. Variations in the actual outcome of these future tax consequences could materially impact our financial position or our results of operations. In estimating future tax consequences, all expected future events are considered other than enactments of changes in tax laws or rates. We account for uncertainty in income taxes recognized in our financial statements using prescribed recognition thresholds and measurement attributes for financial statement disclosure of tax positions taken or expected to be taken on our tax returns. Our continuing policy is to recognize interest and penalties related to income tax matters in income tax expense.

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Our earnings in Hungary are subject to a statutory tax rate of 9%. In addition, our research and development activities in Hungary continue to benefit from a tax law in Hungary that provides for an enhanced deduction for qualified research and development expenses. The tax position of our Hungarian operations resulted in income tax benefits of $12.8 million and $16.1 million for the years ended December 31, 2018 and 2017, respectively. Earnings from our operations in Malaysia are free of tax under a tax holiday effective January 1, 2013. This tax holiday expires in 2027. If we fail to satisfy the conditions of the tax holiday, this tax benefit may be terminated early. The tax holiday resulted in income tax benefits of $4.0 million and $5.5 million for the years ended December 31, 2018 and 2017, respective1y. The impact of the tax holiday on a per share basis for the years ended December 31, 2018 and 2017 was a benefit of $0.03 and $0.04 per share, respectively.

No other taxing jurisdictions had a significant impact on our effective tax rate. We have not entered into any advanced pricing or other agreements with the Internal Revenue Service with regard to any foreign jurisdictions.

Our effective tax rate was lower than the U.S. federal statutory rate during 2018 and 2017 primarily due to earnings taxed at lower rates in foreign jurisdictions. The Tax Cuts and Jobs Act, which was enacted in December 2017, had a substantial impact on our income tax expense for the year ended December 31, 2017. For additional discussion about our income taxes including the effect of the Tax Cuts and Jobs Act, components of income before income taxes, our provision for income taxes charged to operations, components of our deferred tax assets and liabilities, a reconciliation of income taxes at the U.S. federal statutory rate to our effective tax rate and other tax matters, see Note 10 – Income taxes of Notes to Consolidated Financial Statements.

- Loss contingencies

We accrue for probable losses from contingencies including legal defense costs, on an undiscounted basis, when such costs are considered probable of being incurred and are reasonably estimable. We periodically evaluate available information, both internal and external, relative to such contingencies and adjust this accrual as necessary. Disclosure of a contingency is required if there is at least a reasonable possibility that a loss has been incurred. In determining whether a loss should be accrued we evaluate, among other factors, the degree of probability of an unfavorable outcome and our ability to make a reasonable estimate of the amount of loss. Changes in these factors could materially impact our financial position or our results of operation.

- Accounting for costs related to exit or disposal activities

Costs related to exit or disposal activities incurred as part of our recent restructuring activities may consist of voluntary or involuntary severance-related charges, asset-related charges and other costs related to exit activities. We recognize voluntary termination benefits when the employee accepts the offered benefit arrangement. We recognize involuntary severance-related charges depending on whether the termination benefits are provided under an ongoing benefit arrangement or under a one-time benefit arrangement. If the former, we recognize the charges once they are probable and the amounts are estimable. If the latter, we recognize the charges once the benefits have been communicated to employees.

Restructuring activities associated with assets would be recorded as an adjustment to the basis of the asset, not as a liability. When we commit to a plan to abandon a long-lived asset before the end of its previously estimated useful life, we accelerate the recognition of depreciation to reflect the use of the asset over its shortened useful life.

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## ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

### Financial Risk Management

Our international sales are subject to inherent risks, including fluctuations in local economies; fluctuations in foreign currencies relative to the U.S. dollar; difficulties in staffing and managing foreign operations; greater difficulty in accounts receivable collection; costs and risks of localizing products for foreign countries; unexpected changes in regulatory requirements, tariffs and other trade barriers; and burdens of complying with a wide variety of foreign laws.

The vast majority of our sales outside of the U.S. are denominated in local currencies, and accordingly, the U.S. dollar equivalent of these sales is affected by changes in the foreign currency exchange rates. The change in exchange rates had the effect of increasing our consolidated sales by $22.1 million in the year ended December 31, 2018, and decreasing our consolidated sales by $1.8 million in the year ended December 31, 2017. Because most of our international operating expenses are also incurred in local currencies, the change in exchange rates had the effect of increasing our consolidated operating expenses by $8 million in the year ended December 31, 2018, and decreasing our consolidated operating expenses by $1.4 million in the year ended December 31, 2017.

During 2018, there was a weaker U.S. dollar during the first half of the year, approximately 8% weaker when compared to the first half of 2017 and a moderately stronger U.S. dollar during the second half of the year, approximately 2% stronger when compared to the second half of 2017, resulting in a net favorable impact to net sales of approximately 2%. In the past, we have noted that significant volatility in foreign currency exchange rates in the markets in which we do business has had a significant impact on the revaluation of our foreign currency denominated firm commitments, on our ability to forecast our U.S. dollar equivalent revenues and expenses and on the effectiveness of our hedging programs. In recent periods, these dynamics have also adversely affected our revenue growth in international markets and will likely pose similar challenges in the near future. We recognize the local currency as the functional currency in virtually all of our international subsidiaries.

If the local currencies in which we sell our products strengthen against the U.S. dollar, we may need to lower our prices in the local currency to remain competitive in our international markets which could have a material adverse effect on our gross and net profit margins. If the local currencies in which we sell our products weaken against the U.S. dollar and if the local sales prices cannot be raised due to competitive pressures, we will experience a deterioration of our gross and net profit margins. To help protect against the change in the value caused by a fluctuation in foreign currency exchange rates of forecasted foreign currency cash flows resulting from international sales and expenses over the next one to two years, we have a foreign currency cash flow hedging program. We hedge portions of our forecasted revenue, cost of sales and operating expenses denominated in foreign currencies with foreign currency forward contracts. For forward contracts, when the dollar strengthens significantly against the foreign currencies, the change in the present value of future foreign currency cash flows may be offset by the change in the fair value of the forward contracts designated as hedges. We purchase foreign currency forward contracts for up to 100% of our forecasted exposures in selected currencies (primarily in Euro, Japanese yen, Chinese yuan, British pound, Malaysian ringgit, Korean won and Hungarian forint) and limit the duration of these contracts to 40 months or less. As a result, our hedging activities only partially address our risks from foreign currency transactions, and there can be no assurance that this strategy will be successful. We do not enter into derivative contracts for speculative purposes.

During the year ended December 31, 2018, our hedges had the effect of decreasing our consolidated sales by $0.2 million, decreasing our cost of sales by $0.7 million, and decreasing our operating expenses by $0.9 million. During the year ended December 31, 2017, our hedges had the effect of decreasing our consolidated sales by $0.5 million, increasing our cost of sales by $1.2 million, and increasing our operating expenses by $1.2 million. (See Note 5 - Derivative instruments and hedging activities of Notes to Consolidated Financial Statements for further discussion regarding our cash flow hedging program and its related impacted on our consolidated sales, cost of sales and operating expenses for the years ended December 31, 2018 and 2017).

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Inventory Management

The markets for our products dictate that many of our products be shipped very quickly after an order is received. As a result, we are required to maintain significant inventories. Therefore, inventory obsolescence is a risk for us due to frequent engineering changes, shifting customer demand, the emergence of new industry standards and rapid technological advances including the introduction by us or our competitors of products embodying new technology. However, our risk of obsolescence may be mitigated as many of our products have interchangeable parts and many have long lives. While we adjust for excess and obsolete inventories and we monitor the valuation of our inventories, there can be no assurance that our valuation adjustments will be sufficient. In recent years, we have made a concentrated effort to increase our revenue through the pursuit of orders with a value greater than $1.0 million. Fulfillment of these contracts can severely challenge our supply chain capabilities at the component acquisition, assembly and delivery stages. These contracts can also require us to develop specific product mitigation plans for product delivery constraints caused by unexpected or catastrophic situations to help assure timely production recovery and to comply with critical delivery commitments where severe contractual liabilities can be imposed on us if we fail to provide the quantity of products at the required delivery times. In order to help mitigate the risks associated with these contractual requirements, we may build inventory levels for certain parts or systems. Because our contracts with such customers may allow the customer to cancel or delay orders without liability, such actions expose our business to increased risk of inventory obsolescence.

Market Risk

We are exposed to a variety of risks, including foreign currency fluctuations and changes in the market value of our investments. In the normal course of business, we employ established policies and procedures to manage our exposure to fluctuations in foreign currency values and changes in the market value of our investments.

Cash, Cash Equivalents and Short-Term Investments

At December 31, 2018, we had $531 million in cash, cash equivalents and short-term investments. See Liquidity and Capital Resources above for further discussion regarding our cash, cash equivalents and short-term investments.

We report our available-for-sale short-term investments at fair value. (See Note 4 – Fair value measurements of Notes to Consolidated Financial Statements for a further description of the fair value measurement of our short term investments).

The goal of our investment policy is to manage our investment portfolio to preserve principal and liquidity while maximizing the return on our investment portfolio through the full investment of available funds. We place our cash investments in instruments that meet credit quality standards, as specified in our corporate investment policy guidelines. These guidelines also limit the amount of credit exposure to any one issue, issuer or type of instrument. Our cash equivalents and short-term investments carried ratings from the major credit rating agencies that were in accordance with our corporate investment policy. Our investment policy allows investments in the following: government and federal agency obligations, repurchase agreements, certificates of deposit and time deposits, corporate obligations, medium term notes and deposit notes, commercial paper including asset-backed commercial paper, puttable bonds, general obligation and revenue bonds, money market funds, taxable commercial paper, corporate notes/bonds, municipal notes, municipal obligations and tax exempt commercial paper. All such instruments must carry minimum ratings of A1/P1/F1, MIG1/VMIG1/SP1 and A2/A/A, as applicable, all of which are considered “investment grade.” Our investment policy for marketable securities requires that all securities mature in five years or less, with a weighted average maturity of no longer than 24 months with at least 10% maturing in 90 days or less.

We account for our investments in debt and equity instruments under FASB ASC 320 Investments – Debt and Equity Securities (FASB ASC 320). Our investments are classified as available-for-sale and accordingly are reported at fair value, with unrealized gains and losses reported as other comprehensive income, a component of stockholders’ equity. Unrealized losses are charged against income when a decline in fair value is determined to be other-than-temporary. Investments with maturities beyond one year are classified as short-term based on their highly liquid nature and because such marketable securities represent the investment of cash that is available for current operations. The fair value of our short-term investments at December 31, 2018 and 2017 was $271 million and $122 million, respectively. This increase was due to our net purchase of $150 million of short-term investments.

We follow the guidance provided by FASB ASC 320 to assess whether our investments with unrealized loss positions are other than temporarily impaired. Realized gains and losses and declines in value judged to be other-than-temporary are determined based on the specific identification method and are reported in other income (expense), net, in our Consolidated Statements of Income.

Interest Expense Risk

We are exposed to interest rate fluctuations in the normal course of our business, including through our Loan Agreement, if we borrow under our loan agreement, such borrowing would be subject to a variable interest rate.

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Interest Income Risk

Investments in both fixed rate and floating rate instruments carry a degree of interest rate risk. Fixed rate securities may have their market value adversely impacted due to an increase in interest rates, while floating rate securities may produce less income than expected if interest rates fall. Due to these factors, our future investment income may fall short of expectations due to changes in interest rates or if the decline in the fair value of our publicly traded debt investments is judged to be other-than-temporary. We may suffer losses in principal if we are forced to sell securities that have declined in market value due to changes in interest rates. However, because any debt securities we hold are classified as available-for-sale, no gains or losses are realized in our income statement due to changes in interest rates unless such securities are sold prior to maturity or unless declines in value are determined to be other-than-temporary. These securities are reported at fair value with the related unrealized gains and losses included in accumulated other comprehensive income (loss), a component of stockholders' equity, net of tax.

In a rising interest rate environment, as short-term investments mature, reinvestment occurs at more favorable market rates. Given the short-term nature of certain of our investments, the current interest rate environment of rising rates may favorably impact our investment income.

In order to assess the interest rate risk associated with our investment portfolio, we performed a sensitivity analysis to determine the impact a change in interest rates would have on the value of our investment portfolio assuming a 100 basis point parallel shift in the yield curve. Based on our investment positions as of December 31, 2018, a 100 basis point increase or decrease in interest rates across all maturities would have resulted in approximately a $3.1 million increase or decrease in the fair market value of our portfolio. As of December 31, 2017, a similar 100 basis point increase or decrease in interest rates across all maturities would result in approximately a $2.8 million increase or decrease in the fair market value of our portfolio. Such losses would only be realized if we sold the investments prior to maturity or if there is an other-than-temporary impairment. Actual future gains and losses associated with our investments may differ from the sensitivity analyses performed as of December 31, 2018, due to the inherent limitations associated with predicting the changes in the timing and level of interest rates and our actual exposures and positions.

We continue to monitor the stability of the financial markets, particularly those in the developing economies and have taken steps to limit our direct and indirect exposure to these markets; however, we can give no assurance that we will not be negatively impacted by any adverse outcomes in those markets. We also continue to weigh the benefit of the higher yields associated with longer maturities against the interest rate risk and credit rating risk, also associated with these longer maturities when making these decisions. We cannot predict when or to what degree interest rates and investment yields will rise. If yields rise modestly, our investment income may be favorably impacted.

Exchange Rate Risk

Our objective in managing our exposure to foreign currency exchange rate fluctuations is to reduce the impact of adverse fluctuations in such exchange rates on our earnings and cash flow. Accordingly, we utilize purchased foreign currency option and forward contracts to hedge our exposure on anticipated transactions and firm commitments. There can be no assurance that our foreign currency hedging activities will substantially offset the impact of fluctuations in currency exchanges rates on our results of operations and financial position. Based on the foreign exchange instruments outstanding at December 31, 2018 and December 31, 2017, an adverse change (defined as 20% in the Asian currencies and 10% in all other currencies) in exchange rates would result in a decline in the aggregate settlement value of all of our instruments outstanding of approximately $23 million and $25 million, respectively. Given recent uncertainty around the impending Brexit, we also considered the impact of an adverse change of 20% in the British pound. This alternative scenario (defined as 20% in the British pound and Asian currencies, and 10% in all other currencies) would result in a decline in the aggregate settlement value of all of our instruments outstanding of approximately $24 million as of December 31, 2018. However, as we utilize foreign currency instruments for hedging anticipated and firmly committed transactions, we believe that a loss in settlement value for those instruments will be substantially offset by increases in the value of the underlying exposure. (See Note 5 - Derivative instruments and hedging activities of Notes to Consolidated Financial Statements for a further description of our derivative instruments and hedging activities).

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this item is incorporated by reference to the Consolidated Financial Statements and Notes to Consolidated Financial Statements beginning on page F-1 hereof. Also see “Quarterly results of operations” on page 32.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Based on an evaluation under the supervision and with the participation of our management, our Chief Executive Officer, Alex Davern, and our Chief Financial Officer, Karen Rapp, have concluded that our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), were effective as of December 31, 2018 to provide reasonable assurance that information required to be disclosed by us in reports that we file or submit under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms and