TERADYNE, INC Form 10-K February 27, 2015

# **UNITED STATES**

# **SECURITIES AND EXCHANGE COMMISSION**

**WASHINGTON, D.C. 20549** 

# **FORM 10-K**

ANNUAL REPORT

**PURSUANT TO SECTIONS 13 OR 15(d)** 

## OF THE SECURITIES EXCHANGE ACT OF 1934

(MARK ONE)

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

For the fiscal year ended December 31, 2014

OR

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

Commission file number 001-06462

# TERADYNE, INC.

(Exact Name of Registrant as Specified in Its Charter)

MASSACHUSETTS (State or Other Jurisdiction of

04-2272148 (I.R.S. Employer

**Incorporation or Organization)** 

**Identification Number)** 

600 RIVERPARK DRIVE

NORTH READING, MASSACHUSETTS

01864

(Address of Principal Executive Offices) (Zip Code)
Registrant s telephone number, including area code: (978) 370-2700

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

#### **Title of Each Class**

Name of Each Exchange on Which Registered

Common Stock, par value \$0.125 per share

New York Stock Exchange
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 Exchange 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 and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (232.405 of this chapter) during the proceeding 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) is not contained herein, and will not be contained to the best of the registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or in 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, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act (check one):

Large accelerated filer x Accelerated filer " Non-accelerated filer " Smaller reporting company "

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

The aggregate market value of the voting stock held by non-affiliates of the registrant as of June 27, 2014 was approximately \$3.8 billion based upon the closing price of the registrant s Common Stock on the New York Stock Exchange on that date.

The number of shares outstanding of the registrant s only class of Common Stock as of February 20, 2015 was 217,783,809 shares.

## DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant s proxy statement in connection with its 2015 annual meeting of shareholders are incorporated by reference into Part III of this Form 10-K.

# TERADYNE, INC.

# INDEX

|          |  | Page No. |
|----------|--|----------|
|          | PART I.  |          |
| Item 1.  | Business   | 1        |
| Item 1A. | Risk Factors   | 8        |
| Item 1B. | Unresolved Staff Comments  | 16       |
| Item 2.  | Properties   | 16       |
| Item 3.  | Legal Proceedings  | 16       |
| Item 4.  | Mine Safety Disclosure   | 17       |
|          | PART II.   |          |
| Item 5.  | Market for Registrant s Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities | 18       |
| Item 6.  | Selected Financial Data  | 19       |
| Item 7.  | Management s Discussion and Analysis of Financial Condition and Results of Operation                         | 19       |
| Item 7A. | Quantitative and Qualitative Disclosures about Market Risk   | 37       |
| Item 8.  | Financial Statements and Supplementary Data  | 38       |
| Item 9.  | Changes in and Disagreements with Accountants on Accounting and Financial Disclosure                         | 92       |
| Item 9A. | Controls and Procedures  | 92       |
| Item 9B. | Other Information  | 92       |
|          | PART III.  |          |
| Item 10. | Directors, Executive Officers and Corporate Governance   | 93       |
| Item 11. | Executive Compensation   | 93       |
| Item 12. | Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters               | 93       |
| Item 13. | Certain Relationships and Related Transactions, and Director Independence                                    | 93       |
| Item 14. | Principal Accountant Fees and Services   | 93       |
|          | PART IV.   |          |
| Item 15. | Exhibits and Financial Statement Schedule  | 94       |
|          | Signatures   | 100      |

#### TERADYNE, INC.

#### FORM 10-K

#### SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act and Section 21E of the Securities Exchange Act. When used herein, the words will, would, believe, anticipate, plan, expect, estimate, project, intend, may, see, target and other words and terms of similar meaning are intended to forward-looking statements although not all forward looking statements contain these identifying words. Forward looking statements involve risks and uncertainties, including, but not limited to, those discussed in the section entitled Risk Factors of this annual report on Form 10-K and elsewhere, and in other reports we file with the Securities and Exchange Commission. Readers are cautioned not to place undue reliance on these forward-looking statements which reflect management s analysis only as of the date hereof and are subject to risks and uncertainties that could cause actual results to differ materially from those stated or implied. Teradyne assumes no obligation to update these forward-looking statements for any reason, except as may be required by law.

#### PART I

#### Item 1: Business

Teradyne, Inc. (the Company or Teradyne ) was founded in 1960 and is a leading global supplier of automatic test equipment.

We design, develop, manufacture and sell automatic test systems and solutions used to test semiconductors, wireless products, hard disk drives, solid state disks and circuit boards in the consumer electronics, wireless, automotive, industrial, computing, communications and aerospace and defense industries. Our automatic test equipment products and services include:

semiconductor test ( Semiconductor Test ) systems;

wireless test ( Wireless Test ) systems; and

defense/aerospace ( Defense/Aerospace ) test instrumentation and systems, storage test ( Storage Test ) systems, and circuit-board test and inspection ( Production Board Test ) systems (collectively these products represent System Test ).

We have a broad customer base which includes integrated device manufacturers ( IDMs ), outsourced semiconductor assembly and test providers ( OSATs ), wafer foundries, fabless companies that design, but contract with others for the manufacture of, integrated circuits ( ICs ), developers of wireless devices and consumer electronics, manufacturers of circuit boards, automotive suppliers, wireless product manufacturers, storage device manufacturers, and aerospace and military contractors.

In 2014, we acquired Avionics Interface Technologies LLC ( AIT ), a supplier of equipment for testing state-of-the-art data communication buses. The acquisition of AIT complements our Defense/Aerospace line of bus test instrumentation for commercial and defense avionics systems. AIT is included in our System Test segment. The total purchase price for AIT was approximately \$21 million.

In 2013, we acquired ZTEC Instruments Inc. ( ZTEC ), a supplier of modular wireless test instruments. The acquisition of ZTEC expands our Wireless Test segment into the design verification test of wireless components and chipsets. The total purchase price for ZTEC was approximately \$17 million.

In 2011, we acquired LitePoint Corporation ( LitePoint ) to expand our product portfolio of test equipment in the wireless test sector. LitePoint designs, develops, and supports advanced wireless test solutions for the

manufacturing of wireless devices, including smart phones, tablets, notebooks, laptops, personal computer peripherals, and other Wi-Fi, Bluetooth and cellular enabled devices. The total purchase price for LitePoint was approximately \$646 million. LitePoint and ZTEC represent our Wireless Test segment.

#### **Investor Information**

We are a Massachusetts corporation incorporated on September 23, 1960. We are subject to the informational requirements of the Securities Exchange Act of 1934 (Exchange Act ). We file periodic reports, proxy statements and other information with the Securities and Exchange Commission (SEC). Such reports, proxy statements and other information may be obtained by visiting the Public Reference Room of the SEC at 100 F Street, N.E., Washington, DC 20549 or by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an internet site (http://www.sec.gov) that contains reports, proxy and information statements and other information regarding issuers that file documents electronically.

You can access financial and other information, including the charters of our Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee, our Corporate Governance Guidelines and Code of Conduct, by clicking the Investors link on our web site at www.teradyne.com. We make available, free of charge, copies of our filings with the SEC, including 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 through our web site as soon as reasonably practicable after filing such material electronically or otherwise furnishing it to the SEC.

#### **Products**

#### Semiconductor Test

We design, manufacture, sell and support Semiconductor Test products and services on a worldwide basis. The test systems we provide are used both for wafer level and device package testing. These chips are used in automotive, industrial, communications, consumer, and computer and electronic game applications, among others. Semiconductor devices span a broad range of functionality, from very simple low-cost devices such as appliance microcontrollers, operational amplifiers or voltage regulators to complex digital signal processors, microprocessors and high-density as well as high-speed memory devices. Semiconductor Test products and services are sold to integrated device manufacturers (IDMs) that integrate the fabrication of silicon wafers into their business, Fabless companies that outsource the manufacturing of silicon wafers, Foundries that cater to the processing and manufacturing of silicon wafers, and outsourced semiconductor assembly and test providers (OSATs) that provide test and assembly services for the final packaged devices to both Fabless companies and IDMs. Fabless companies perform the design of integrated circuits without manufacturing capabilities, and use Foundries for wafer manufacturing and OSATs for test and assembly. These customers obtain the overall benefit of comprehensively testing devices and reducing the total costs associated with testing by using our Semiconductor Test systems to:

improve and control product quality;
measure and improve product performance;
reduce time to market; and

increase production yields.

Our FLEX Test Platform architecture advances our core technologies to produce test equipment that is designed for high efficiency multi-site testing. Multi-site testing involves the simultaneous testing of many devices and functions in parallel. Leading semiconductor manufacturers are using multi-site testing to significantly improve their Cost of Test economics. The FLEX Test Platform architecture addresses customer requirements through the following key capabilities:

1) A high efficiency multi-site architecture that eliminates tester overhead such as instrument setup, synchronization and data movement, and signal processing;

- 2) The IG-XL software operating system which provides fast program development, including instant conversion from single to multi-site test; and
- 3) Broad technology coverage by instruments designed to cover the range of test parameters, coupled with a universal slot test head design that allows easy test system reconfiguration to address changing test needs.

FLEX Test Platform purchases are being made by IDMs, OSATs, Foundries and Fabless customers. The FLEX Test Platform has become a widely used test solution at OSATs by providing versatile testers that can handle the widest range of devices, allowing OSATs to leverage their capital investments. The broad consumer, automotive and broadband markets have historically driven most of the device volume growth in the semiconductor industry. These markets include smart phones, cell phones, tablets, set top boxes, HDTVs, game controllers, computer graphics, and automotive controllers to name a few. These end use markets continue to be drivers for the FLEX Test Platform family of products because they require a wide range of technologies and instrument coverage. The UltraFLEX-M tester extends the FLEX Test Platform into the High Speed DRAM testing market. The FLEX Test Platform has an installed base of more than 4,400 systems.

Our J750 test system shares the IG-XL software environment with the family of FLEX Test Platform systems. The J750 is designed to address the highest volume semiconductor devices, such as microcontrollers, that are central to the functionality of almost every consumer electronics product, from small appliances to automotive engine controllers. J750 test systems combine compact packaging, high throughput and ease of production test. We extended the J750 platform technology to create the IP750 Image Sensor test system. The IP750 is focused on testing image sensor devices used in digital cameras and other imaging products. We continue to invest in the J750 platform with new instrument releases that bring new capabilities to existing market segments and expand the J750 platform to new devices that include high end microcontrollers and the latest generation of cameras. In 2013, we introduced the J750 Ex-HD which includes system enhancements and new high density instruments that enable the J750 test platform to provide higher test cell productivity. The J750 platform has an installed base of over 4,600 systems.

Our Magnum platform addresses the requirements of mass production test of memory devices such as flash memory and DRAM. Flash and DRAM memory are widely used core building blocks in modern electronic products finding wide application in consumer, industrial, and computing equipment. Magnum V, the newest member of the family, is a next generation memory test solution designed for parallel memory test in the flash, DRAM and multi-chip package markets. The Magnum platform has an installed base of over 1,700 systems.

Our ETS platform is used by semiconductor manufacturers and assembly and test subcontractors, primarily in the low pin count analog/mixed signal discrete markets that cover more cost sensitive applications. Our proprietary SmartPin technology enables multiple semiconductor devices to be tested simultaneously, or in parallel, on an individual test system, permitting greater test throughput. Semiconductors tested by ETS platform systems are incorporated into a wide range of products in historically high-growth markets, including digital cameras, MP3 players, cell phones, video/multimedia products, automotive electronics, computer peripherals, and notebook and desktop computers. In 2013, we introduced ETS-88, a high performance multiside production test system designed to test a wide variety of high volume commodity and precision devices. The ETS platform has an installed base of over 3,500 systems.

#### Wireless Test

Our acquisition of LitePoint in October of 2011 and ZTEC in October of 2013 expanded our product offerings in the wireless test industry. LitePoint designs, develops, and supports advanced wireless test equipment for the manufacturing of wireless devices, including smart phones, tablets, notebooks, laptops, personal computer peripherals, and other Wi-Fi, Bluetooth, Near Field Communication (NFC) and cellular enabled devices. LitePoint collaborates with developers, chipset/component manufacturers, and manufacturing leaders to create agile systems designed to ensure the quality of wireless products manufactured in very large numbers. Using easy-to-deploy, innovative test methodologies LitePoint s IQ product line is designed for high-

volume, low-cost production test, and fall into two test categories: cellular and connectivity. Our acquisition of ZTEC in October 2013 expanded our wireless product offerings into modular wireless test instruments for the design verification test of wireless components and chipsets.

#### Cellular

The IQxstream is an optimized solution for high-speed testing of GSM, EDGE, CDMA2000, TD-SCDMA, WCDMA, HSPA+, LTE-FDD, TD\_LTE, and LTE-A technologies used for calibration and verification of smartphones, tablets, small cell wireless gateways and embedded cellular modules. As the industry s first multi-DUT test solution, IQxstream greatly increased production output through the implementation of parallel test methods of multiple devices. IQxstream is complemented by IQvector , a turnkey production-optimized testing package that supports the leading cellular chipset solutions, which allows manufacturers to ramp volume production in a matter of weeks, rather than months. The IQxstream is embedded in the test software provided by leading cellular chipset companies including Qualcomm, Intel, MediaTek, Spreadtrum, Marvell and others.

### Connectivity

We offer a comprehensive range of test equipment for connectivity testing. The IQxel family enables calibration and verification of the latest Wi-Fi standard-802.11ac-taking wireless data rates beyond the gigabit per second barrier. The IQxel family supports multiple bandwidth and channel configurations, MIMO antenna arrangements, Bluetooth Classic and Low Energy, and covers the full range of communication standards. These solutions target manufacturers of networking equipment, Internet access devices, Internet of Things (IoT) products and embedded modules used in smartphones, tablets, and PCs. The IQ2015 is a one-box solution for multi-connectivity needs, covers the full range of communication standards. It is a preferred choice by manufacturers of smartphones and tablets. We were the first to introduce parametric production test of NFC technology with our IQnfc addressing the growing use of NFC technology for mobile payments with smartphones.

To complement the IQ family of connectivity testers, we offer IQfact+ a turnkey, chipset-optimized, customizable software library covering over 300 wireless IC solutions, enabling the rapid development of volume manufacturing solutions with a minimum of engineering effort by our customers. Similar to our cellular products, drivers for our connectivity products are found in the test software solutions from Broadcom, Qualcomm, Marvell, MediaTek and others.

#### Design Verification Test

We offer the zSeries of modular wireless test instruments for the design verification test of wireless components and chipsets. In 2014, we released the zSignal for testing LTE cellular devices.

#### System Test

Our System Test segment is comprised of three business units: Defense/Aerospace, Storage Test and Production Board Test.

#### Defense/Aerospace

We are a leading provider of high-performance test systems, subsystems, instruments and service for the defense and aerospace markets. Our test products are used to ensure the readiness of military and commercial aerospace electronics systems. New programs, such as tactical aircraft and missile systems, as well as upgrade programs, continue to fuel the demand for high performance test systems in this market. Our test products are well-suited to the demands of defense/aerospace electronics manufacturers and repair depots worldwide. Our

leadership in this market is underscored by our success with major Department of Defense programs across all U.S. military service branches and many allied defense services worldwide. Our acquisition of AIT in 2014 complements our line of bus test instrumentation for commercial and defense avionics systems. AIT is a supplier of equipment for testing state-of-the-art data communication buses.

#### Storage Test

The Storage Test business unit addresses the high throughput, automated manufacturing test requirements of hard disk drive ( HDD ) and solid state disk ( SSD ) manufacturers. Our products address the client and enterprise storage markets. The client market is driven by the needs of desktop, laptop, and external HDD and SSD storage products. The enterprise market is driven by the needs of data centers and cloud storage. Our products lead in addressing customer requirements related to factory density, throughput, thermal performance and vibration isolation.

#### **Production Board Test**

Our test systems are used by electronics manufacturers worldwide to perform In-Circuit-Test ( ICT ) and device programming of printed circuit board assemblies. Fast, accurate and cost-effective test capabilities are hallmark features of our Test Station and Spectrum ICT product families. We offer the Test Station in off-line and automated in-line configurations. The automated in-line configurations address the growing requirements for increased throughput in high volume applications.

## Summary of Revenues by Reportable Segment

Our three reportable segments accounted for the following percentages of consolidated revenues for each of the last three years:

|                    | 2014 | 2013 | 2012 |
|--------------------|------|------|------|
| Semiconductor Test | 79%  | 71%  | 68%  |
| Wireless Test      | 11   | 18   | 17   |
| System Test        | 10   | 11   | 15   |
|                    |      |      |      |
|                    | 100% | 100% | 100% |

### **Sales and Distribution**

In 2014, no single customer accounted for more than 10% of our consolidated revenues. In 2013 and 2012, revenues from Apple Inc. accounted for 12% and 10%, respectively, of our consolidated revenues. Apple Inc. is a customer of our Semiconductor Test and Wireless Test segments. In each of the years, 2014, 2013 and 2012, our three largest customers in aggregate accounted for 21%, 26% and 29% of our consolidated revenues, respectively. OSAT customers often purchase our test systems based upon recommendations from IDMs and Fabless companies. In all cases when an OSAT customer purchases a test system from us, we consider the OSAT as the customer since credit risk, title and risk of loss, among other things, are between Teradyne and the OSAT.

Direct sales to United States government agencies accounted for 2%, 3% and 2% of our consolidated revenues in 2014, 2013 and 2012, respectively. Approximately 20%, 32% and 15% of System Test s revenues in 2014, 2013 and 2012, respectively, were to United States government agencies and 23%, 24% and 20% of System Test s revenues in 2014, 2013 and 2012, respectively, were to government contractor customers.

We have sales and service offices located throughout North America, Asia and Europe, as our customers outside the United States are located primarily in these geographic areas. We sell in these areas predominantly through a direct sales force. Our manufacturing activities are primarily conducted through subcontractors and outsourced contract manufacturers with a significant operation concentrated in China.

Sales to customers outside the United States were 87%, 84% and 86% of our consolidated revenues in 2014, 2013 and 2012, respectively. Sales are attributed to geographic areas based on the location of the customer site.

Sales to customers by country outside of the United States that accounted for 10% or more of our consolidated revenues in any of the previous three years were as follows:

|        | 2014 | 2013 | 2012 |
|--------|------|------|------|
| Taiwan | 30%  | 19%  | 18%  |
| China  | 18   | 23   | 21   |
| Korea  | 9    | 8    | 13   |

See also Item 1A: Risk Factors and Note Q: Operating Segment, Geographic and Significant Customer Information in Notes to Consolidated Financial Statements.

#### Competition

We face significant competition throughout the world in each of our reportable segments. Competitors in the Semiconductor Test segment include, among others, Advantest Corporation and Xcerra Corporation. Competitors in the System Test segment include, among others, Keysight Technologies, Inc. (formerly Agilent Technologies), Astronics, Test Research Inc. and SPEA S.p.A.

Competitors in our Wireless Test segment include, among others, Keysight Technologies, Inc., Cobham/Aeroflex, Inc., Anritsu Company, National Instruments Corporation and Rohde & Schwarz GmbH & Co. KG.

Some of our competitors have substantially greater financial and other resources to pursue engineering, manufacturing, marketing and distribution of their products. We also face competition from emerging Asian equipment companies and from internal suppliers at several of our customers. Some of our competitors have introduced or announced new products with certain performance characteristics which may be considered equal or superior to those we currently offer. We expect our competitors to continue to improve the performance of their current products and to introduce new products or new technologies that provide improved cost of ownership and performance characteristics. See also Item 1A: Risk Factors.

## Backlog

At December 31, 2014 and 2013, our backlog of unfilled orders in our three reportable segments was as follows:

|                    | 2014     | 2013     |
|--------------------|----------|----------|
|                    | (in mi   | llions)  |
| Semiconductor Test | \$ 262.8 | \$ 233.8 |
| Wireless Test      | 37.0     | 31.2     |
| System Test        | 96.1     | 96.6     |
|                    |          |          |
|                    | \$ 305.0 | \$ 361.6 |

Of the backlog at December 31, 2014, approximately 97% of the Semiconductor Test backlog, 66% of Wireless Test backlog and 97% of System Test backlog, is expected to be delivered in 2015.

Customers may delay delivery of products or cancel orders suddenly and without advanced notice, subject to possible cancellation penalties. Due to possible customer changes in delivery schedules and cancellation of orders, our backlog at any particular date is not necessarily indicative of the actual sales for any succeeding period. Delays in delivery schedules or cancellations of backlog during any particular period could have a material adverse effect on our business, financial condition or results of operations.

#### **Raw Materials**

Our products contain electronic and mechanical components that are provided by a wide range of suppliers. Some of these components are standard products, while others are manufactured to our specifications. We can experience occasional delays in obtaining timely delivery of certain items. While the majority of our components are available from multiple suppliers, certain items are obtained from sole sources. We may experience a temporary adverse impact if any of our sole source suppliers delay or cease to deliver products.

#### **Intellectual Property and Licenses**

The development of our products, both hardware and software, is based in significant part on proprietary information, our brands and technology. We protect our rights in proprietary information, brands and technology through various methods, such as:

| patents;  |
|---|
| copyrights;   |
| trademarks;   |
| trade secrets;  |
| standards of business conduct and related business practices; and   |
| technology license agreements, software license agreements, non-disclosure agreements, employment agreements, and other agreements. |

agreements, However, these protections might not be effective in all circumstances. Competitors might independently develop similar technology or exploit

However, these protections might not be effective in all circumstances. Competitors might independently develop similar technology or exploit our proprietary information and our brands in countries where we lack enforceable intellectual property rights or where enforcement of such rights through the legal system provides an insufficient deterrent. Also, intellectual property protections can lapse or be invalidated through appropriate legal processes. We do not believe that any single piece of intellectual property or proprietary rights is essential to our business.

## **Employees**

As of December 31, 2014, we employed approximately 3,900 people. Since the inception of our business, we have experienced no work stoppages or other labor disturbances. We have no collective bargaining contracts.

### **Engineering and Development Activities**

The highly technical nature of our products requires a large and continuing engineering and development effort. For the years ended December 31, 2014, 2013 and 2012, our engineering and development expenditures were \$291.6 million, \$264.1 million, and \$255.9 million, respectively. These expenditures accounted for approximately 17.7%, 18.5%, and 15.4% of our consolidated revenues in 2014, 2013, and 2012, respectively.

### **Environmental Affairs**

We are subject to various federal, state, and local government laws and regulations relating to the protection of employee health and safety and the environment. We accrue for all known environmental liabilities when it becomes probable that we will incur cleanup costs and those costs can reasonably be estimated. Estimated environmental costs are not expected to materially affect the financial position or results of our operations in future periods. However, estimates of future costs are subject to change due to protracted cleanup periods and changing environmental remediation laws and regulations.

#### OUR EXECUTIVE OFFICERS

Pursuant to General Instruction G(3) of Form 10-K, the following table is included in Part I of this Annual Report on Form 10-K in lieu of being included in the Proxy Statement for the Annual Meeting of Shareholders. The table sets forth the names of all of our executive officers and certain other information relating to their positions held with Teradyne and other business experience. Our executive officers do not have a specific term of office but rather serve at the discretion of the Board of Directors.

| Executive Officer<br>Mark E. Jagiela | Age<br>54 | Position Chief Executive Officer, President and President of Semiconductor Test | Business Experience For The Past 5 Years Chief Executive Officer since February 2014; President of Teradyne since January 2013; President of Semiconductor Test since 2003; Vice President of Teradyne from 2001 to 2013.                            |
|--------------------------------------|-----------|---|--|
| Gregory R. Beecher                   | 57        | Vice President, Chief<br>Financial Officer and<br>Treasurer                     | Vice President and Chief Financial Officer of Teradyne since 2001; Treasurer of Teradyne from 2003 to 2005 and since 2006.   |
| Charles J. Gray                      | 53        | Vice President, General<br>Counsel and Secretary                                | Vice President, General Counsel and Secretary of Teradyne since April 2009.  |
| Bradford B. Robbins                  | 56        | President of Wireless Test  | President of Wireless Test since August 2014; Chief Operating Officer of LitePoint Corporation from 2012 to 2014; Vice President of Teradyne since 2001.   |
| Walter G. Vahey                      | 50        | President of System Test  | President of System Test since July 2012; Vice President of Teradyne since 2008; General Manager of Storage Test since 2008; General Manager of Production Board Test since April 2013; General Manager of Defense/Aerospace from 2004 to July 2012. |

Item 1A: Risk Factors

Risks Associated with Our Business

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 and/or operating results.

Our business is impacted by global and industry-specific economic cycles, which are difficult to predict, and actions we have taken or may take to offset these cycles may not be sufficient.

Capital equipment providers in the electronics and semiconductor industries, such as Teradyne, have, in the past, been negatively impacted by both sudden slowdowns in the global economies and recurring cyclicality within those industries. These cycles have resulted in periods of over-supply; a trend we believe will continue to occur for newer generations of electronic products. Our business and results of operations depend, in significant part, upon capital expenditures of manufacturers of semiconductors and other electronics, which in turn depend upon the current and anticipated market demand for those products. Disruption or deterioration in economic conditions may reduce customer purchases of our products, thereby reducing our revenues and earnings. In addition, such adverse changes in economic conditions, and resulting slowdowns in the market for our products, may, among other things, result in increased price competition for our products, increased risk of excess and obsolete inventories, increased risk in the collectability of our accounts receivable from our customers, potential reserves for doubtful accounts and write-offs of accounts receivable, increased risk of restructuring charges, and

higher operating costs as a percentage of revenues, which, in each case and together, adversely affect our operating results. We are unable to predict the likely duration, frequency and severity of disruptions in financial markets, credit availability, and adverse economic conditions throughout the world, and we cannot ensure that the level of revenues or new orders for a fiscal quarter will be sustained in subsequent quarters. We have taken actions to address the effects of general economic variability and recurring industry cyclicality, including implementing cost control and reduction measures. If our businesses experience further downturns, whether due to a deterioration in global economic conditions or slowdowns in specific markets we serve, we may need to take further cost control and reduction measures. We cannot predict whether these measures will be sufficient to offset global or market-specific disruptions that might affect our test businesses.

In 2013, revenues from our Storage Test business unit were significantly lower than in 2012 due to lower hard disk drive demand from lower shipments of personal computers. In response to this lower demand, during the third quarter of 2013, we implemented a headcount reduction in the Storage Test business unit. It is possible that we may need to take further cost control and reduction measures including reducing the number of employees and reducing manufacturing capacity. A prolonged slowdown in hard disk drive demand may result in increased risk of excess and obsolete inventories, asset write-offs and restructuring charges.

#### We are subject to intense competition.

We face significant competition throughout the world in each of our reportable segments. Some of our competitors have substantial financial and other resources to pursue engineering, manufacturing, marketing and distribution of their products. We also face competition from emerging Asian equipment companies and internal development at several of our customers. Some of our competitors have introduced or announced new products with certain performance characteristics which may be considered equal or superior to those we currently offer. We expect our competitors to continue to improve the performance of their current products and to introduce new products or new technologies that provide improved cost of ownership and performance characteristics. New product introductions by competitors could cause a decline in revenues or loss of market acceptance of our products.

#### The market for our products is concentrated, and our business depends, in part, on obtaining orders from a few significant customers.

The market for our products is concentrated with a limited number of significant customers accounting for a substantial portion of the purchases of test equipment. In each of the years 2014, 2013 and 2012, our three largest customers in aggregate accounted for 21%, 26% and 29% of consolidated revenues, respectively. In any one reporting period, a single customer or several customers may contribute even a larger percentage of our consolidated revenues. In addition, our ability to increase sales will depend, in part, on our ability to obtain orders from current or new significant customers. The opportunities to obtain orders from these customers may be limited, which may impair our ability to grow revenues. We expect that sales of our products will continue to be concentrated with a limited number of significant customers for the foreseeable future. The loss of a significant customer or any reduction in orders by these customers, including reductions due to market or competitive conditions, would likely have a material adverse effect on our business, financial condition or results of operations.

## Failure to realize the estimated sales value of equipment leased to our customers may adversely affect our results of operations.

We occasionally lease equipment to our customers, typically for a term of one year. Subsequent to the one year term, the customer can cancel the lease by providing us two months notice. In 2014, the volume of leasing transactions and the value of equipment under leases increased significantly. The cost of the leased equipment is recorded as an asset on our balance sheet and depreciated over an estimated useful life of approximately four years. Realization of the leased equipment s value depends on numerous factors including: the technological

obsolescence of the leased equipment; elections by customers to terminate a lease prior to scheduled termination; the general market conditions at the time of expiration of the lease; the customer s election to renew the lease; and the cost of comparable new equipment. Our inability to realize the leased equipment s value could cause a decrease in revenues and an increase in asset write-offs which would in each case reduce our operating income.

#### Our operating results are likely to fluctuate significantly.

Our operating results are affected by a wide variety of factors that could materially adversely affect revenues or profitability. The following factors could impact future operations:

a worldwide economic slowdown or disruption in the global financial markets; competitive pressures on selling prices; our ability to introduce, and the market acceptance of, new products; changes in product revenues mix resulting from changes in customer demand; the level of orders received which can be shipped in a quarter because of the tendency of customers to wait until late in a quarter to commit to purchase due to capital expenditure approvals and constraints occurring at the end of a quarter, or the hope of obtaining more favorable pricing from a competitor seeking the business; engineering and development investments relating to new product introductions, and the expansion of manufacturing, outsourcing and engineering operations in Asia; provisions for excess and obsolete inventory relating to the lack of demand for and the discontinuance of products; impairment charges for certain long-lived and intangible assets and goodwill; an increase in the leasing of our products to customers; parallel or multi-site testing could lead to a decrease in the ultimate size of the market for our products; and the ability of our suppliers and subcontractors to meet product quality or delivery requirements needed to satisfy customer orders for our products, especially if product demand increases.

## We are subject to risks of operating internationally.

price.

A significant portion of our total revenues is derived from customers outside the United States. Our international sales and operations are subject to significant risks and difficulties, including:

As a result of the foregoing and other factors, we have experienced and may continue to experience material fluctuations in future operating results on a quarterly or annual basis which could materially and adversely affect our business, financial condition, operating results or stock

| unexpected changes in legal and regulatory requirements affecting international markets;   |
|--|
| changes in tariffs and exchange rates;   |
| social, political and economic instability, acts of terrorism and international conflicts; |
| difficulties in protecting intellectual property;  |
| difficulties in accounts receivable collection;  |
| cultural differences in the conduct of business;   |

difficulties in staffing and managing international operations; compliance with customs regulations; and compliance with international tax laws and regulations. In addition, an increasing portion of our products and the products we purchase from our suppliers are sourced or manufactured in foreign locations, including China, and a large portion of the devices our products test are fabricated and tested by foundries and subcontractors in Taiwan, China, Singapore and other parts of Asia. As a result, we are subject to a number of economic and other risks, particularly during times of political or financial instability in these regions. Disruption of manufacturing or supply sources in these international locations could materially adversely impact our ability to fill customer orders and potentially result in lost business. If we fail to develop new technologies to adapt to our customers needs and if our customers fail to accept our new products, our revenues will be adversely affected. We believe that our technological position depends primarily on the technical competence and creative ability of our engineers. In a rapidly evolving market, such as ours, the development or acquisition of new technologies, commercialization of those technologies into products and market acceptance and customer demand for those products are critical to our success. Successful product development or acquisition, introduction and acceptance depend upon a number of factors, including: new product selection; ability to meet customer requirements; development of competitive products by competitors; timely and efficient completion of product design; timely and efficient implementation of manufacturing and manufacturing processes; timely remediation of product performance issues, if any, identified during testing; assembly processes and product performance at customer locations; differentiation of our products from our competitors products; management of customer expectations concerning product capabilities and product life cycles;

ability to attract and retain technical talent; and

innovation that does not infringe on the intellectual property rights of third parties.

If our suppliers do not meet product or delivery requirements, we could have reduced revenues and earnings.

Certain components, including semiconductor chips, may be in short supply from time to time because of high industry demand or the inability of some vendors to consistently meet our quality or delivery requirements. Approximately 25% of material purchases require some custom work where having multiple suppliers would be cost prohibitive. If any of our suppliers were to cancel contracts or commitments or fail to meet the quality or delivery requirements needed to satisfy customer orders for our products, we could lose time-sensitive customer orders, have significantly decreased revenues and earnings and be subject to contractual penalties, which would have a material adverse effect on our business, results of operations and financial condition. In addition, we rely on contract manufacturers for certain subsystems used in our products, and our ability to meet customer orders for those products depends upon the timeliness and quality of the work performed by these subcontractors, over whom we do not exercise any control.

To a certain extent, we are dependent upon the ability of our suppliers and contractors to help meet increased product or delivery requirements. It may be difficult for certain suppliers to meet delivery requirements in a period of rapid growth, therefore impacting our ability to meet our customers demands.

We rely on the financial strength of our suppliers. There can be no assurance that the loss of suppliers either as a result of financial viability, bankruptcy or otherwise will not have a material adverse effect on our business, results of operations or financial condition.

## Our operations may be adversely impacted if our outsourced contract manufacturers or service providers fail to perform.

We depend on Flextronics International Ltd. (Flextronics) to manufacture and test our FLEX and J750 family of products from its facility in China and on other contract manufacturers to manufacture other products. If for any reason these contract manufacturers cannot provide us with these products in a timely fashion, or at all, we may not be able to sell these products to our customers until we enter a similar arrangement with an alternative contract manufacturer. If we experience a problem with our supply of products from Flextronics or our other contract manufacturers, it may take us significant time to either manufacture the product or find an alternate contract manufacturer, which could result in substantial expense and disruption to our business.

We have also outsourced a number of our general and administrative functions, including information technology, to reputable service providers, many of which are in foreign countries, sometimes impacting communication with them because of language and time differences. Their presence in foreign countries also increases the risk they could be exposed to political risk. Additionally, there may be difficulties encountered in coordinating the outsourced operations with existing functions and operations. If we fail in successfully coordinating and managing the outsourced service providers, it may cause an adverse effect on our operations which could have a material adverse effect on our business, results of operations or financial condition.

## We may not fully realize the benefits of our acquisitions or strategic alliances.

We may acquire businesses, form strategic alliances or create joint ventures with third parties that we believe will complement or augment our existing businesses. We may not be able to realize the expected synergies and cost savings from the integration with our existing operations of other businesses or technologies that we may acquire. In addition, the integration process for our acquisitions may be complex, costly and time consuming and include unanticipated issues, expenses and liabilities. We may have difficulty in developing, manufacturing and marketing the products of a newly acquired company in a manner that enhances the performance of our combined businesses or product lines and allows us to realize value from expected synergies. Following an acquisition, we may not achieve the revenues or net income levels that justify the acquisition. Acquisitions may also result in one-time charges (such as acquisition-related expenses, write-offs or restructuring charges) or in the future, impairment of goodwill, that adversely affect our operating results. Additionally, we may fund acquisitions of new businesses, strategic alliances or joint ventures by utilizing our cash, raising debt, issuing shares of our common stock, or by other means.

In the fourth quarter of 2014, we performed our annual goodwill impairment test and recorded a goodwill impairment charge of \$98.9 million in our Wireless Test segment as a result of decreased projected demand attributable to an estimated smaller future wireless test market due to reuse of wireless test equipment, price competition and different testing techniques. Further reductions in the size of the wireless test market may occur, which may result in additional goodwill impairment charges, increased risk of excess and obsolete inventories, asset write-offs and restructuring charges.

#### We may incur significant liabilities if we fail to comply with environmental regulations.

We are subject to both domestic and international environmental regulations and statutory strict liability relating to the use, storage, discharge, site cleanup and disposal of hazardous chemicals used in our

manufacturing processes. If we fail to comply with present and future regulations, or are required to perform site remediation, we could be subject to future liabilities or cost, including penalties or the suspension of production. Present and future regulations may also:

| restrict our ability to expand facilities;     |
|--|
| restrict our ability to ship certain products; |
| require us to modify our operations logistics; |
| require us to acquire costly equipment; or     |

require us to incur other significant costs and expenses.

Pursuant to present regulations and agreements, we are conducting groundwater and subsurface assessment and monitoring and are implementing remediation and corrective action plans for facilities located in Massachusetts and New Hampshire which are no longer conducting manufacturing operations. As of December 31, 2014, we have not incurred material costs as result of the monitoring and remediation steps taken at the Massachusetts and New Hampshire sites.

On January 27, 2003, the European Union adopted the following directives: (i) the directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (the RoHS Directive); and (ii) the directive on Waste Electrical and Electronic Equipment (the WEEE Directive). The WEEE Directive became effective August 13, 2005 and the RoHS Directive became effective on July 6, 2006. Both the RoHS Directive and the WEEE Directive alter the form and manner in which electronic equipment is imported, sold and handled in the European Union. Other jurisdictions, such as China, have followed the European Union s lead in enacting legislation with respect to hazardous substances and waste removal. Ensuring compliance with the RoHS Directive, the WEEE Directive and similar legislation in other jurisdictions, and integrating compliance activities with our suppliers and customers could result in additional costs and disruption to operations and logistics and thus, could have a negative impact on our business, operations or financial condition.

We currently are, and in the future may be, subject to litigation or regulatory proceedings that could have an adverse effect on our business.

From time to time, we may be subject to litigation or other administrative, regulatory or governmental proceedings, including tax audits and resulting claims that could require significant management time and resources and cause us to incur expenses and, in the event of an adverse decision, pay damages or incur costs in an amount that could have a material adverse effect on our financial position or results of operations.

Third parties may claim we are infringing their intellectual property and we could suffer significant litigation costs, licensing expenses or be prevented from selling our products.

We have been sued for patent infringement in the past and receive notifications from time to time that we may be in violation of patents held by others. An assertion of patent infringement against us, if successful, could have a material adverse effect on our ability to sell our products or it could force us to seek a license to the intellectual property rights of others or alter such products so that they no longer infringe the intellectual property rights of others. A license could be very expensive to obtain or may not be available at all. Similarly, changing our products or processes to avoid infringing the rights of others may be costly or impractical. Additionally, patent litigation could require a significant use of management resources and involve a lengthy and expensive defense, even if we eventually prevail. If we do not prevail, we might be forced to pay significant damages, obtain licenses, modify our products, or stop making our products; each of which could have a material adverse effect on our financial condition, operating results or cash flows.

# If we are unable to protect our intellectual property ( IP ), we may lose a valuable asset or may incur costly litigation to protect our rights.

We protect the technology that is incorporated in our products in several ways, including through patent, copyright, and trade secret protection and by contractual agreement. However, even with these protections, our IP may still be challenged, invalidated or subject to other infringement actions. While we believe that our IP has value in the aggregate, no single element of our IP is in itself essential. If a significant portion of our IP is invalidated or ineffective, our business could be materially adversely affected.

### We may incur higher tax rates than we expect and may have exposure to additional international tax liabilities and costs.

We are subject to paying income taxes in the United States and various other countries where we operate. Our effective tax rate is dependent on where our earnings are generated and the tax regulations and the interpretation and judgment of administrative tax or revenue entities in the United States and other countries. We have pursued a global tax strategy which could adversely be affected by the mix of earnings and tax rates in the countries where we operate, changes to tax laws or an adverse tax ruling by administrative entities. We are also subject to tax audits in the countries where we operate. Any material assessment resulting from an audit from an administrative tax or revenue entity could also negatively affect our financial results.

As a multinational corporation, we are subject to income taxes as well as non-income based taxes, in both the United States and various foreign jurisdictions. In certain foreign jurisdictions, we qualify for tax incentives and tax holidays based on our ability to meet, on a continuing basis, various tests relating to our employment levels, research and development expenditures and other qualification requirements in a particular foreign jurisdiction. While we intend to operate in such a manner to maintain and maximize our tax incentives, no assurance can be given that we have so qualified or that we will so qualify for any particular year or jurisdiction. If we fail to qualify and to remain qualified for certain foreign tax incentives and tax holidays, we may be subject to further taxation or an increase in our effective tax rate which would adversely impact our financial results. In Singapore, we operate under a tax holiday which is effective through December 31, 2015. The tax savings attributable to the Singapore tax holiday for the years ended December 31, 2014, 2013 and 2012 were \$13.2 million or \$0.06 per diluted share, \$4.7 million or \$0.02 per diluted share and \$10.9 million or \$0.05 per diluted share, respectively. We are in discussions with the Singapore Economic Development Board with respect to extension of the tax holiday for periods after December 31, 2015. No assurances can be given that such discussions will be successful. If we are unable to reach an agreement with the Singapore Economic Development Board, our results of operations and financial condition for periods after December 31, 2015 will be adversely affected.

In addition, we may incur additional costs, including headcount expenses, in order to obtain or maintain a foreign tax incentive in a particular foreign jurisdiction.

## We have significant guarantees, indemnification and customer confidentiality obligations.

From time to time, we make guarantees to customers regarding the delivery, price and performance of our products and guarantee certain indebtedness, performance obligations or lease commitments of our subsidiary and affiliate companies. We also have agreed to provide indemnification to our officers, directors, employees and agents, to the extent permitted by law, arising from certain events or occurrences while the officer, director, employee or agent, is or was serving at our request in such capacity. Additionally, we have confidentiality obligations to certain customers and if breached would require the payment of significant penalties. If we become liable under any of these obligations, it could materially and adversely affect our business, financial condition or operating results. For additional information see Note J: Commitments and Contingencies Guarantees and Indemnification Obligations in Notes to Consolidated Financial Statements.

#### We may discontinue or reduce our quarterly cash dividend or share repurchase program.

In January 2014, our Board of Directors initiated a quarterly dividend of \$0.06 per share. In January 2015, our Board of Directors authorized Teradyne to repurchase up to \$500 million of common stock, \$300 million of which we intend to repurchase in 2015. Holders of our common stock are only entitled to receive dividends when and if they are declared by our Board of Directors. Future cash dividends and share repurchases are subject to the discretion of our Board of Directors and will depend, among other things, upon our earnings, capital requirements and financial condition. While we have declared a quarterly cash dividend on our common stock and authorized a share repurchase program, we are not required to do either and may reduce or eliminate our cash dividend or share repurchase program in the future. The reduction or elimination of our cash dividend or our share repurchase program could adversely affect the market price of our common stock.

### Our business may suffer if we are unable to attract and retain key employees.

Competition for employees with skills we require is intense in the high technology industry. Our success will depend on our ability to attract and retain key technical employees. The loss of one or more key or other employees, a decrease in our ability to attract additional qualified employees, or the delay in hiring key personnel could each have a material adverse effect on our business, results of operations or financial condition.

#### New regulations related to conflict minerals may adversely affect us.

The Dodd-Frank Wall Street Reform and Consumer Protection Act imposes new disclosure requirements regarding the use of conflict minerals mined from the Democratic Republic of Congo and adjoining countries in our products, whether or not these products are manufactured by third parties. This requirement could affect the pricing, sourcing and availability of minerals used in the manufacture of components we use in our products. In addition, there are additional costs associated with complying with the disclosure requirements, such as costs related to determining the source of any conflict minerals used in our products. Our supply chain is complex and we may be unable to verify the origins for all minerals used in our products. As a result, we may be unable to certify that our products are conflict free.

Our operations, and the operations of our customers and suppliers, are subject to risks of natural catastrophic events, widespread health epidemics, acts of war, terrorist attacks and the threat of domestic and international terrorist attacks, any one of which could result in cancellation of orders, delays in deliveries or other business activities, or loss of customers and could negatively affect our business and results of operations.

Our business is international in nature, with our sales, service and administrative personnel and our customers and suppliers located in numerous countries throughout the world. Our operations, and those of our customers and suppliers, are subject to disruption for a variety of reasons, including work stoppages, acts of war, terrorism, health epidemics, fires, earthquakes, hurricanes, volcanic eruptions, energy shortages, telecommunication failures, tsunamis, flooding or other natural disasters. Such disruption could materially increase our costs and expenses as well as cause delays in, among other things, shipments of products to our customers, our ability to perform services requested by our customers, or the installation and acceptance of our products at customer sites. Any of these conditions could have a material adverse effect on our business, financial conditions or results of operations.

#### A breach of our operational or security systems could negatively affect our business and results of operations.

We rely on various information technology networks and systems, some of which are managed by third parties, to process, transmit and store electronic information, including confidential data, and to carry out and support a variety of business activities, including manufacturing, research and development, supply chain management, sales and accounting. A failure in or a breach of our operational or security systems or infrastructure, or those of our suppliers and other service providers, including as a result of cyber attacks, could disrupt our business, result in the disclosure or misuse of proprietary or confidential information, damage our reputation, cause losses and increase our costs.

#### We may face risks associated with shareholder activism.

Publicly traded companies have increasingly become subject to campaigns by shareholders advocating corporate actions such as financial restructuring, increased borrowing, special dividends, stock repurchases or divestitures. We may become subject in the future to such shareholder activity and demands. Such activities could interfere with our ability to execute our business plans, be costly and time-consuming, disrupt our operations, divert the attention of management or result in our initiating borrowing or increasing our share repurchase plan or dividend, any of which could have an adverse effect on our business or stock price.

## Provisions of our charter and by-laws and Massachusetts law make a takeover of Teradyne more difficult.

There are provisions in our basic corporate documents and under Massachusetts law that could discourage, delay or prevent a change in control, even if a change in control may be regarded as beneficial to some or all of our stockholders.

### Item 1B: Unresolved Staff Comments

None.

### Item 2: Properties

The following table provides information as to our principal facilities:

| Location                     | Operating Segment                               | Major<br>Activity+ | Approximate<br>Square Feet of<br>Floor Space |
|------------------------------|---|--------------------|--|
| Properties Owned:            |   |                    |  |
| North Reading, Massachusetts | Semiconductor Test, System Test                 | 1-2-3-4-5          | 422,000                                      |
| Agoura Hills, California     | Semiconductor Test                              | 3-4                | 120,000                                      |
| Kumamoto, Japan              | Semiconductor Test                              | 2-3-4-5            | 79,000                                       |
|                              |   |                    | 621,000                                      |
| Properties Leased:           |   |                    |  |
| Cebu, Philippines            | Semiconductor Test                              | 1-5                | 135,000                                      |
| San Jose, California         | Semiconductor Test                              | 2-3-4-5            | 128,000                                      |
| Buffalo Grove, Illinois      | Semiconductor Test                              | 2-3-4-5            | 95,000                                       |
| Sunnyvale, California        | Wireless Test                                   | 2-3-4-5            | 75,000                                       |
| Shanghai, China              | Semiconductor Test, System Test & Wireless Test | 3-4-5              | 68,000                                       |
| Heredia, Costa Rica          | Semiconductor Test                              | 1-5                | 49,000                                       |
| Hsinchu, Taiwan              | Semiconductor Test & System Test                | 4                  | 43,000                                       |
| Seoul, Korea                 | Semiconductor Test                              | 4                  | 28,000                                       |
| Singapore, Singapore         | Semiconductor Test                              | 1-3-4              | 23,000                                       |

644,000

#### Item 3: Legal Proceedings

We are subject to legal proceedings, claims and investigations that arise in the ordinary course of business such as, but not limited to, patent, employment, commercial and environmental matters. We believe that we have meritorious defenses against all pending claims and intend to vigorously contest them. While it is not possible to

<sup>+</sup> Major activities have been separated into the following categories: 1. Corporate Administration, 2. Manufacturing, 3. Engineering, 4. Sales and Marketing, 5. Storage and Distribution.

predict or determine the outcomes of any pending claims or to provide possible ranges of losses that may arise, we believe the potential losses associated with all of these actions are unlikely to have a material adverse effect on our results of operations, financial condition or cash flows.

**Item 4:** *Mine Safety Disclosure* Not Applicable.

#### PART II

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

The following table shows the market range for our common stock based on reported sales price on the New York Stock Exchange and the dividends declared per share during such periods:

| Period         | High     | Low      | Divi | dends   |
|----------------|----------|----------|------|---------|
| 2013           |          |          |      |         |
| First Quarter  | \$ 17.66 | \$ 15.44 |      | N/A     |
| Second Quarter | 18.57    | 14.05    |      | N/A     |
| Third Quarter  | 18.73    | 15.22    |      | N/A     |
| Fourth Quarter | 17.90    | 15.75    |      | N/A     |
| 2014           |          |          |      |         |
| First Quarter  | \$ 20.54 | \$ 17.36 |      | N/A     |
| Second Quarter | 20.72    | 16.95    | \$   | 0.06(1) |
| Third Quarter  | 20.88    | 17.74    |      | 0.06    |
| Fourth Quarter | 20.49    | 16.02    |      | 0.06    |

(1) Dividend declared January 22, 2014 with a record date of May 9, 2014 and a payment date of June 2, 2014. The number of record holders of our common stock at February 20, 2015 was 2,108.

In January 2014, our Board of Directors initiated a quarterly dividend program. Our Board of Directors declared quarterly cash dividends of \$0.06 per share of common stock payable in each of the second, third and fourth quarters of 2014.

In November 2010, our Board of Directors authorized a stock repurchase program for up to \$200 million. The cumulative repurchases as of December 31, 2014 totaled 2.6 million shares of common stock for \$31.2 million at an average price of \$11.84 per share.

In January 2015, our Board of Directors cancelled the November 2010 stock repurchase program and authorized a new stock repurchase program for up to \$500 million, \$300 million of which we intend to repurchase in 2015.

See Item 7: Management s Discussion and Analysis of Financial Condition and Results of Operations, for information on our equity compensation plans and our performance graph.

The following table includes information with respect to repurchases we made of our common stock during the quarter ended December 31, 2014 (in thousands except per share price):

|                                     |  |                               |  | (or Appr | imum Number<br>coximate Dollar<br>e) of Shares     |
|-------------------------------------|--|-------------------------------|--|----------|--|
|                                     | (a) Total<br>Number of<br>Shares<br>(or Units) | (b) Average<br>Price Paid per | (c) Total Number of<br>Shares (or Units)<br>Purchased as Part of<br>Publicly Announced |          | (or<br>s) that May<br>Yet Be<br>nased Under<br>the |
| Period                              | Purchased                                      | Share (or Unit)               | Plans or Programs  | Plans    | or Programs  |
| September 29, 2014 October 26, 2014 |  | \$                            |  | \$       | 168,825  |
| October 27, 2014 November 23, 2014  |  | \$                            |  | \$       | 168,825  |
| November 24, 2014 December 31, 2014 |  | \$                            |  | \$       | 168,825  |

We satisfy U.S. federal and state minimum withholding tax obligations due upon the vesting and the conversion of restricted stock units into shares of our common stock, by automatically withholding from the shares being issued, a number of shares with an aggregate fair market value on the date of such vesting and conversion that would satisfy the minimum withholding amount due.

Item 6: Selected Financial Data

|   | 2014 2013 |          |      |          | s Ended December 31, 2012 2011 sands, except per share amounts) |              |      |           | 2010 |          |
|---|-----------|----------|------|----------|---|--------------|------|-----------|------|----------|
| Consolidated Statement of Operations Data (1)(2)(3)(4)(5)(6): |           |          |      |          |   | ´ <b>.</b> . |      | ĺ         |      |          |
| Revenues  | \$ 1      | ,647,824 | \$ 1 | ,427,933 | \$ 1  | ,656,750     | \$ 1 | 1,429,061 | \$ 1 | ,566,162 |
| Income from continuing operations                             |           | 81,272   |      | 164,947  |   | 217,049      |      | 343,957   |      | 379,692  |
| Net income  | \$        | 81,272   | \$   | 164,947  | \$  | 217,049      | \$   | 369,873   | \$   | 384,820  |
| Income from continuing operations per common share basic      | \$        | 0.40     | \$   | 0.86     | \$  | 1.16         | \$   | 1.86      | \$   | 2.11     |
| Income from continuing operations per common share diluted    | \$        | 0.37     | \$   | 0.70     | \$  | 0.94         | \$   | 1.52      | \$   | 1.73     |
| Net income per common share basic                             | \$        | 0.40     | \$   | 0.86     | \$  | 1.16         | \$   | 2.00      | \$   | 2.14     |
| Net income per common share diluted                           | \$        | 0.37     | \$   | 0.70     | \$  | 0.94         | \$   | 1.63      | \$   | 1.75     |
| Cash dividend declared per common share                       | \$        | 0.18     | \$   |          | \$  |              | \$   |           | \$   |          |
| Consolidated Balance Sheet Data:                              |           |          |      |          |   |              |      |           |      |          |
| Total assets  | \$ 2      | ,538,520 | \$ 2 | ,629,824 | \$ 2  | 2,429,345    | \$ 2 | 2,188,639 | \$ 1 | ,810,355 |
| Short-term debt obligations                                   |           |          |      | 186,663  |   | 2,328        |      | 2,573     |      | 2,450    |
| Long-term debt obligations                                    | \$        |          | \$   |          | \$  | 171,059      | \$   | 159,956   | \$   | 150,182  |

- (1) The Consolidated Statement of Operations Data for the year ended December 31, 2014 includes a \$98.9 million goodwill impairment charge related to the Wireless Test segment and \$46.6 million of pension actuarial losses.
- (2) The Consolidated Statement of Operations Data for the year ended December 31, 2013 includes a \$34.2 million gain from the sale of an equity investment and \$10.3 million of pension actuarial gains.
- (3) The Consolidated Statement of Operations Data for the year ended December 31, 2012 includes \$23.3 million of pension actuarial losses.
- (4) As a result of the divestiture of Diagnostic Test Solutions in 2011, we are reporting this business unit as discontinued operations for 2011 and 2010.
- (5) The Consolidated Statement of Operations Data for the year ended December 31, 2011 includes the results of operations of LitePoint from October 5, 2011.
- (6) The Consolidated Statement of Operations Data for the year ended December 31, 2011 includes a tax benefit of \$129.5 million due primarily to the release of the deferred tax valuation allowance and \$13.6 million of pension actuarial losses.

# Item 7: Management s Discussion and Analysis of Financial Condition and Results of Operations Overview

We are a leading global supplier of automatic test equipment. We design, develop, manufacture and sell automatic test systems and solutions used to test semiconductors, wireless products, hard disk drives, solid state disks and circuit boards in the consumer electronics, wireless, automotive, industrial, computing, communications and aerospace and defense industries. Our automatic test equipment products and services include:

semiconductor test ( Semiconductor Test ) systems;

wireless test ( Wireless Test ) systems; and

defense/aerospace ( Defense/Aerospace ) test instrumentation and systems, storage test ( Storage Test ) systems, and circuit-board test and inspection ( Production Board Test ) systems (collectively these products represent System Test ).

We have a broad customer base which includes integrated device manufacturers ( IDMs ), outsourced semiconductor assembly and test providers ( OSATs ), wafer foundries, fabless companies that design, but contract with others for the manufacture of, integrated circuits ( ICs ), developers of wireless devices and consumer electronics, manufacturers of circuit boards, automotive suppliers, wireless product manufacturers, storage device manufacturers, aerospace and military contractors.

In 2014, we acquired Avionics Interface Technologies, LLC ( AIT ), a supplier of equipment for testing state-of-the-art data communication buses. The acquisition of AIT complements our Defense/Aerospace line of bus test instrumentation for commercial and defense avionics systems. AIT is included in our System Test segment.

In 2013, we acquired ZTEC Instruments Inc. ( ZTEC ), a supplier of modular wireless test instruments. The acquisition of ZTEC expands our Wireless Test segment into the design verification test of wireless components and chipsets.

We believe our recent acquisitions have enhanced our opportunities for growth. We will continue to invest in our business, grow market share in our markets and expand further our addressable markets while tightly managing our costs.

The sales of our products and services are dependent, to a large degree, on customers who are subject to cyclical trends in the demand for their products. These cyclical periods have had, and will continue to have, a significant effect on our business since our customers often delay or accelerate purchases in reaction to changes in their businesses and to demand fluctuations in the semiconductor and electronics industries. Historically, these demand fluctuations have resulted in significant variations in our results of operations. The sharp swings in the semiconductor and electronics industries in recent years have generally affected the semiconductor and electronics test equipment and services industries more significantly than the overall capital equipment sector.

In the fourth quarter of 2014, we performed our annual goodwill impairment test and recorded a goodwill impairment charge of \$98.9 million in our Wireless Test segment as a result of decreased projected demand attributable to an estimated smaller future wireless test market due to reuse of wireless test equipment, price competition and different testing techniques. Further reductions in the size of the wireless test market may occur, which may result in additional goodwill impairment charges, increased risk of excess and obsolete inventories, asset write-offs and restructuring charges.

In 2013, revenues from our Storage Test business unit were significantly lower than in 2012 due to lower hard disk drive demand from lower shipments of personal computers. In response to this lower demand, during the third quarter of 2013, we implemented a headcount reduction in the Storage Test business unit. It is possible that we may need to take further cost control and reduction measures including reducing the number of employees and reducing manufacturing capacity. A prolonged slowdown in Storage Test demand may result in increased risk of excess and obsolete inventories, asset write-offs and restructuring charges.

# **Critical Accounting Policies and Estimates**

We have identified the policies discussed below as critical to understanding our business and our results of operations and financial condition. The impact and any associated risks related to these policies on our business operations is discussed throughout Management s Discussion and Analysis of Financial Condition and Results of Operations where such policies affect our reported and expected financial results.

#### Revenue Recognition

We recognize revenues when there is persuasive evidence of an arrangement, title and risk of loss have passed, delivery has occurred or the services have been rendered, the sales price is fixed or determinable and collection of the related receivable is reasonably assured. Title and risk of loss generally pass to our customers upon shipment or at delivery destination point. In circumstances where either title or risk of loss pass upon destination, acceptance or cash payment, we defer revenue recognition until such events occur.

Our equipment has non-software and embedded software components that function together to deliver the equipment s essential functionality. Revenue is recognized upon shipment or at delivery destination point, provided that customer acceptance criteria can be demonstrated prior to shipment. Certain contracts require us to perform tests of the product to ensure that performance meets the published product specifications or customer requested specifications, which are generally conducted prior to shipment. Where the criteria cannot be demonstrated prior to shipment, revenue is deferred until customer acceptance has been received. We also defer the portion of the sales price that is not due until acceptance, which represents deferred profit.

For multiple element arrangements, we allocate revenue to all deliverables based on their relative selling prices. In such circumstances, a hierarchy is used to determine the selling price for allocating revenue to deliverables as follows: (i) vendor-specific objective evidence of selling price (VSOE), (ii) third-party evidence of selling price (TPE), and (iii) best estimate of the selling price (BESP). For a delivered item to be considered a separate unit, the delivered item must have value to the customer on a standalone basis and the delivery or performance of the undelivered item must be considered probable and substantially in our control.

Our post-shipment obligations include installation, training services, one-year standard warranties, and extended warranties. Installation does not alter the product capabilities, does not require specialized skills or tools and can be performed by the customers or other vendors. Installation is typically provided within five days of product shipment and is completed within one to two days thereafter. Training services are optional and do not affect the customers ability to use the product. We defer revenue for the selling price of installation and training. Extended warranties constitute warranty obligations beyond one year and we defer revenue in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 605-20, Separately Priced Extended Warranty and Product Maintenance Contracts and ASC 605-25, Revenue Recognition Multiple-Element Arrangements. Service revenue is recognized over the contractual period or as services are performed.

Our products are generally subject to warranty and the related costs of the warranty are provided for in cost of revenues when product revenue is recognized. We classify shipping and handling costs in cost of revenues.

We do not provide our customers with contractual rights of return for any of our products.

## Retirement and Postretirement Plans

Effective January 1, 2012, we changed the method of recognizing actuarial gains and losses for our defined benefit pension plans and postretirement benefit plan and calculating the expected return on plan assets for our defined benefit pension plans. Historically, we recognized net actuarial gains and losses in accumulated other comprehensive income within shareholders—equity on our consolidated balance sheet on an annual basis and amortized them into operating results over the average remaining years of service of the plan participants, to the extent such gains and losses were outside of a range (corridor). In 2012, we elected to immediately recognize net actuarial gains and losses and the change in the fair value of the plan assets in our operating results in the year in which they occur or upon any interim remeasurement of the plans. In addition, we used to calculate the expected return on plan assets using a calculated market-related value of plan assets. Effective January 1, 2012, we elected to calculate the expected return on plan assets using the fair value of the plan assets.

We believe that this new method is preferable as it eliminates the delay in recognizing gains and losses in our operating results and it will improve the transparency by faster recognition of the effects of economic and

interest rate trends on plan obligations and investments. These actuarial gains and losses are generally measured annually as of December 31 and, accordingly, will be recorded during the fourth quarter of each year or upon any interim remeasurement of the plans. In accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 250, Accounting Changes and Error Corrections , all prior periods presented in this Annual Report on Form 10-K have been adjusted to apply the new accounting method retrospectively.

#### **Inventories**

Inventories are stated at the lower of cost (first-in, first-out basis) or net realizable value. On a quarterly basis, we use consistent methodologies to evaluate all inventories for net realizable value. We record a provision for both excess and obsolete inventory when such write-downs or write-offs are identified through the quarterly review process. The inventory valuation is based upon assumptions about future demand, product mix, and possible alternative uses.

#### Equity Incentive and Stock Purchase Plans

Stock-based compensation expense is based on the grant-date fair value estimated in accordance with the provisions of ASC 718, Compensation Stock Compensation. As required by ASC 718, we have made an estimate of expected forfeitures and are recognizing compensation costs only for those stock-based compensation awards expected to vest.

#### Income Taxes

Deferred tax assets and liabilities are determined based on differences between financial reporting and tax basis of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The measurement of deferred tax assets is reduced by a valuation allowance if it is more likely than not that some or all of the deferred tax assets will not be realized. We performed the required assessment of positive and negative evidence regarding the realization of the net deferred tax assets in accordance with ASC 740, Accounting for Income Taxes. This assessment included the evaluation of scheduled reversals of deferred tax liabilities, estimates of projected future taxable income and tax-planning strategies. Although realization is not assured, based on our assessment, we concluded that it is more likely than not that such assets, net of the existing valuation allowance, will be realized. U.S. income taxes are not provided for on the earnings of non-U.S. subsidiaries which are expected to be reinvested indefinitely in operations outside the U.S. For intra-period tax allocations, we first utilize non-equity related tax attributes, such as net operating losses and credit carryforwards, and then equity-related tax attributes. We use the with-and-without method for calculating excess stock compensation deductions and do not take into account any indirect impacts of excess stock compensation deductions on its research and development tax credits, domestic production activities deduction, and other differences between financial reporting and tax reporting.

#### Investments

We account for our investments in debt and equity securities in accordance with the provisions of ASC 320-10, *Investments Debt and Equity Securities*. On a quarterly basis, we review our investments to identify and evaluate those that have an indication of a potential other-than-temporary impairment. Factors considered in determining whether a loss is other-than-temporary include:

The length of time and the extent to which the market value has been less than cost;

The financial condition and near-term prospects of the issuer; and

The intent and ability to retain the investment in the issuer for a period of time sufficient to allow for any anticipated recovery in market value.

#### Goodwill, Intangible and Long-Lived Assets

We assess goodwill for impairment at least annually in the fourth quarter, as of December 31, on a reporting unit basis, or more frequently, when events and circumstances occur indicating that the recorded goodwill may be impaired. If the book value of a reporting unit exceeds its fair value, the implied fair value of goodwill is compared with the carrying amount of goodwill. If the carrying amount of goodwill exceeds the implied fair value, an impairment charge is recorded in an amount equal to that excess. In the fourth quarter of 2014, we performed our annual goodwill impairment test and recorded a goodwill impairment charge of \$98.9 million in our Wireless Test segment as a result of decreased projected demand attributable to an estimated smaller future wireless test market due to reuse of wireless test equipment, price competition and different testing techniques.

We assess the impairment of intangible and long-lived assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important in the determination of an impairment include significant underperformance relative to historical or projected future operating results, significant changes in the manner that we use the acquired asset and significant negative industry or economic trends.

As a result of the Wireless Test segment goodwill impairment charge in the fourth quarter of 2014 described above, we performed an impairment test of the Wireless Test segment s intangible and long-lived assets based on a comparison of the estimated undiscounted cash flows to the recorded value of the assets and there was no indication of impairment. When we determine that the carrying value of intangible and long-lived assets may not be recoverable based upon the existence of one or more of the above indicators of impairment, we measure any impairment based on a projected discounted cash flow method using a discount rate commensurate with the associated risks.

## SELECTED RELATIONSHIPS WITHIN THE CONSOLIDATED

# STATEMENTS OF OPERATIONS

|   | Year Ended December 31, |       |       |
|---|-------------------------|-------|-------|
|   | 2014                    | 2013  | 2012  |
| Percentage of revenues:   |                         |       |       |
| Revenues:   |                         |       |       |
| Products  | 82.8%                   | 80.9% | 83.5% |
| Services  | 17.2                    | 19.1  | 16.5  |
| Total revenues  | 100.0                   | 100.0 | 100.0 |
| Cost of revenues:   |                         |       |       |
| Cost of products  | 38.9                    | 34.9  | 38.8  |
| Cost of services  | 7.8                     | 8.4   | 7.7   |
| Total cost of revenues (exclusive of acquired intangible assets amortization shown separately |                         |       |       |
| below)  | 46.7                    | 43.4  | 46.5  |
| Gross profit  | 53.3                    | 56.6  | 53.5  |
| Operating expenses:   |                         |       |       |
| Engineering and development   | 17.7                    | 18.5  | 15.4  |
| Selling and administrative  | 19.4                    | 19.6  | 16.7  |
| Goodwill impairment   | 6.0                     |       |       |
| Acquired intangible assets amortization   | 4.3                     | 5.1   | 4.4   |
| Restructuring and other   | 0.1                     | 0.1   | (0.5) |
| Total operating expenses  | 47.5                    | 43.3  | 36.1  |
| Income from operations  | 5.9                     | 13.4  | 17.3  |
| Non-operating (income) expenses:  |                         |       |       |
| Interest income   | (0.4)                   | (0.3) | (0.2) |
| Interest expense  | 0.4                     | 1.8   | 1.5   |
| Other (income) expense, net   |                         | (2.3) | 0.1   |
| Income before income taxes  | 5.8                     | 14.1  | 16.1  |
| Provision for income taxes  | 0.9                     | 2.6   | 3.0   |
| Net income  | 4.9%                    | 11.6% | 13.1% |

# **Results of Operations**

## Book to Bill Ratio

Book to bill ratio is calculated as net bookings divided by net sales. Book to bill ratio by reportable segment was as follows:

|                    | Three | Three months ended December 31, |      |  |
|--------------------|-------|---------------------------------|------|--|
|                    | 2014  | 2013                            | 2012 |  |
| Semiconductor Test | 1.0   | 1.0                             | 1.0  |  |
| Wireless Test      | 1.0   | 0.7                             | 1.1  |  |
| System Test        | 1.5   | 1.0                             | 1.6  |  |
| Total Company      | 1.0   | 1.0                             | 1.1  |  |

#### Revenues

Revenues for our three reportable segments were as follows:

|                    | 2014       | 2013       | 2012<br>(in millions) | 2013-2014<br>Dollar<br>Change | 2012-2013<br>Dollar<br>Change |
|--------------------|------------|------------|-----------------------|-------------------------------|-------------------------------|
| Semiconductor Test | \$ 1,300.8 | \$ 1,023.0 | \$ 1,127.7            | \$ 277.8                      | \$ (104.7)                    |
| Wireless Test      | 184.5      | 251.9      | 286.4                 | (67.4)                        | (34.5)                        |
| System Test        | 162.5      | 153.0      | 242.7                 | 9.5                           | (89.7)                        |
|                    | \$ 1,647.8 | \$ 1,427.9 | \$ 1,656.8            | \$ 219.9                      | \$ (228.9)                    |

The increase in Semiconductor Test revenues of \$277.8 million or 27% from 2013 to 2014 was primarily due to higher system-on-a-chip (SOC) product volume, driven by a larger application processor test market driven by market demand.

The decrease in Semiconductor Test revenues of \$104.7 million or 9% from 2012 to 2013 was primarily due to a decrease in SOC test product sales because of a smaller application processor test market, partially offset by higher memory system sales.

The decrease in Wireless Test revenues of \$67.4 million or 27% from 2013 to 2014 was primarily due to lower cellular and connectivity product volume.

The decrease in Wireless Test revenues of \$34.5 million or 12% from 2012 to 2013 was primarily due to lower connectivity product volume, partially offset by higher cellular product volume.

The increase in System Test revenues of \$9.5 million or 6% from 2013 to 2014 was primarily due to higher product volume in Storage Test and Production Board Test, partially offset by lower Defense/Aerospace product sales.

The decrease in System Test revenues of \$89.7 million or 37% from 2012 to 2013 was primarily due to lower product volume in Storage Test. The decrease in Storage Test sales was due to lower hard disk drive demand primarily from lower shipments of personal computers.

Our three reportable segments accounted for the following percentages of consolidated revenues for each of the last three years:

|                    | 2014 | 2013 | 2012 |
|--------------------|------|------|------|
| Semiconductor Test | 79%  | 71%  | 68%  |
| Wireless Test      | 11   | 18   | 17   |
| System Test        | 10   | 11   | 15   |
|                    |      |      |      |
|                    | 100% | 100% | 100% |

Revenues by country as a percentage of total revenues were as follows (1):

|                   | 2014 | 2013 | 2012 |
|-------------------|------|------|------|
| Taiwan            | 30%  | 19%  | 18%  |
| China             | 18   | 23   | 21   |
| United States     | 13   | 16   | 14   |
| Korea             | 9    | 8    | 13   |
| Singapore         | 7    | 8    | 6    |
| Europe            | 7    | 6    | 5    |
| Malaysia          | 5    | 6    | 4    |
| Philippines       | 4    | 4    | 7    |
| Japan             | 4    | 6    | 6    |
| Thailand          | 2    | 2    | 5    |
| Rest of the World | 1    | 2    | 1    |
|                   |      |      |      |
|                   | 100% | 100% | 100% |

(1) Revenues attributable to a country are based on location of customer site. The breakout of product and service revenues for the past three years was as follows:

|                  | 2014       | 2013       | 2012<br>(in millions) | 2013-2014<br>Dollar<br>Change | 2012-2013<br>Dollar<br>Change |
|------------------|------------|------------|-----------------------|-------------------------------|-------------------------------|
| Product Revenues | \$ 1,364.0 | \$ 1,154.9 | \$ 1,383.6            | \$ 209.1                      | \$ (228.7)                    |
| Service Revenues | 283.8      | 273.0      | 273.2                 | 10.8                          | (0.2)                         |
|                  | \$ 1,647.8 | \$ 1,427.9 | \$ 1,656.8            | \$ 219.9                      | \$ (228.9)                    |

Our product revenues increased \$209.1 million or 18% in 2014 from 2013 primarily due to an increase in SOC test product volume, driven by a larger application processor test market driven by market demand. This increase was partially offset by lower cellular and connectivity product volume in Wireless Test. Service revenues, which are derived from the servicing of our installed base of products and includes equipment maintenance contracts, repairs, extended warranties, parts sales, and applications support, increased \$10.8 million or 4%.

Our product revenues decreased \$228.7 million or 17% in 2013 from 2012 primarily due to a decrease in SOC test product sales because of a smaller application processor test market and due to lower product volume in Storage Test.

In 2014, no single customer accounted for more than 10% of our consolidated revenues. In 2013 and 2012, revenues from one customer accounted for 12% and 10%, respectively, of our consolidated revenues. In each of the years 2014, 2013 and 2012, our three largest customers in aggregate accounted for 21%, 26% and 29%, respectively, of our consolidated revenues.

#### **Gross Profit**

|                           | 2014     | 2013     | 2012<br>Iollars in millior | 2013-2014<br>Dollar /<br>Point<br>Change | 2012-2013<br>Dollar /<br>Point<br>Change |
|---------------------------|----------|----------|----------------------------|--|--|
| Gross Profit              | \$ 878.8 | \$ 808.8 | \$ 886.0                   | \$ 70.0                                  | \$ (77.2)                                |
| Percent of Total Revenues | 53.3%    | 56.6%    | 53.5%                      | (3.3)                                    | 3.1                                      |

Gross profit as a percent of total revenues decreased from 2013 to 2014 by 3.3 points. This decrease was a result of a decrease of 2.8 points related to unfavorable product mix in SOC Semiconductor Test and lower Wireless Test sales and a decrease of 1.1 points due to pension expense in 2014 compared to pension income in 2013, partially offset by an increase of 1.1 points due to higher sales volume.

Gross profit as a percent of total revenues increased from 2012 to 2013 by 3.1 points. This increase was a result of an increase of 1.7 points related to favorable product mix in SOC Semiconductor Test and lower Storage Test system sales compared to 2012, an increase of 1.1 points due to pension income in 2013 compared to pension expense in 2012, an increase of 1.1 points due to lower excess and obsolete inventory provisions and increased sales of previously reserved inventory, and an increase of 0.4 points as a result of no purchase accounting inventory step-up in 2013, partially offset by a decrease of 1.4 points due to lower sales volume across all segments.

The breakout of product and service gross profit was as follows:

|                             | 2014     | 2013     | 2012<br>dollars in million | Do<br>P<br>Ch | 3-2014<br>ollar /<br>oint<br>nange | D  | 12-2013<br>ollar /<br>Point<br>hange |
|-----------------------------|----------|----------|----------------------------|---------------|------------------------------------|----|--------------------------------------|
| Product Gross Profit        | \$ 723.2 | \$ 655.9 | \$ 740.7                   | \$            | 67.3                               | \$ | (84.8)                               |
| Percent of Product Revenues | 53.0%    | 56.8%    | 53.5%                      |               | (3.8)                              |    | 3.3                                  |
| Service Gross Profit        | \$ 155.6 | \$ 152.9 | \$ 145.3                   | \$            | 2.7                                | \$ | 7.6                                  |
| Percent of Service Revenues | 54.8%    | 56.0%    | 53.2%                      |               | (1.2)                              |    | 2.8                                  |

We assess the carrying value of our inventory on a quarterly basis by estimating future demand and comparing that demand against on-hand and on-order inventory positions. Forecasted revenue information is obtained from the sales and marketing groups and incorporates factors such as backlog and future product demand. This quarterly process identifies obsolete and excess inventory. Obsolete inventory, which represents items for which there is no demand, is fully reserved. Excess inventory, which represents inventory items that are not expected to be consumed during the next twelve quarters for our Semiconductor Test and System Test segments and next four quarters for our Wireless Test segment, is written-down to estimated net realizable value.

During the year ended December 31, 2014, we recorded an inventory provision of \$22.2 million included in cost of revenues, due to the following factors:

A charge of \$15.4 million due to downward revisions to previously forecasted demand levels, of which \$8.1 million was in Semiconductor Test, \$5.2 million was in Wireless Test and \$2.1 million was in System Test; and

A \$6.8 million inventory write-down as a result of product transition, of which \$6.3 million was in Semiconductor test and \$0.5 million in Wireless Test.

During the year ended December 31, 2013, we recorded an inventory provision of \$16.6 million included in cost of revenues, due to the following factors:

A charge of \$12.2 million due to downward revisions to previously forecasted demand levels, of which \$5.2 million was in Semiconductor Test, \$4.2 million was in System Test and \$2.8 million was in Wireless Test; and

A \$4.4 million inventory write-down as a result of product transition in Wireless Test.

During the year ended December 31, 2012, we recorded an inventory provision of \$26.8 million included in cost of revenues, due to the following factors:

A charge of \$12.0 million due to decline in demand compared to previously forecasted demand levels for prior generation Magnum testers resulted in an inventory provision in Semiconductor Test;

A \$5.3 million inventory write-down as a result of product transition related to the Flex Test Platform in Semiconductor Test;

A \$3.9 million inventory write-down as a result of product transition in Wireless Test; and

The remainder of the charge of \$5.6 million primarily reflects downward revisions to previously forecasted demand levels, of which \$4.3 million was in System Test, \$1.1 million in Semiconductor Test and \$0.2 million in Wireless Test.

During the years ended December 31, 2014, 2013 and 2012, we scrapped \$20.8 million, \$35.3 million and \$9.6 million of inventory, respectively, and sold \$12.9 million, \$9.8 million and \$4.3 million of previously written-down or written-off inventory, respectively. As of December 31, 2014, we had inventory related reserves for amounts which had been written-down or written-off totaling \$111.3 million. We have no pre-determined timeline to scrap the remaining inventory.

#### **Engineering and Development**

Engineering and development expenses were as follows:

|                             | 2014     | 2013 (d  | 2012<br>ollars in million | C  | 3-2014<br>hange | 2-2013<br>ange |
|-----------------------------|----------|----------|---------------------------|----|-----------------|----------------|
| Engineering and Development | \$ 291.6 | \$ 264.1 | \$ 255.9                  | \$ | 27.5            | \$<br>8.2      |
| Percent of Total Revenues   | 17.7%    | 18.5%    | 15 4%                     |    |                 |                |

The increase of \$27.5 million from 2013 to 2014 was due primarily to \$12.2 million of pension expense in 2014 compared to \$4.4 million of pension income in 2013, a \$10.9 million increase in Semiconductor Test spending, \$2.7 million of higher variable compensation and \$2.6 million of increased spending in Wireless Test, partially offset by lower System Test spending.

The increase of \$8.2 million in engineering and development expenses from 2012 to 2013 was due primarily to a \$21.7 million increase in Semiconductor Test spending, partially offset by \$4.4 million of pension income in 2013 compared to \$7.5 million of pension expense in 2012.

#### **Selling and Administrative**

Selling and administrative expenses were as follows:

|                            | 2014     | 2013 (d  | 2012<br>ollars in million | C  | 13-2014<br>hange | 2-2013<br>ange |
|----------------------------|----------|----------|---------------------------|----|------------------|----------------|
| Selling and Administrative | \$ 319.7 | \$ 279.6 | \$ 277.0                  | \$ | 40.1             | \$<br>2.6      |
| Percent of Total Revenues  | 19.4%    | 19.6%    | 16.7%                     |    |                  |                |

The increase of \$40.1 million from 2013 to 2014 was due primarily to \$21.6 million of pension expense in 2014 compared to \$2.9 million of pension income in 2013, a one-time \$6.6 million stock-based compensation charge in 2014 related to a retirement agreement entered into with our retired chief executive officer and increased spending in Semiconductor Test and Corporate.

The increase of \$2.6 million in selling and administrative expenses from 2012 to 2013 was due primarily to a \$7.0 million increase in Wireless Test spending, a \$5.4 million increase in Semiconductor Test spending, partially offset by \$2.9 million of pension income in 2013 compared to

\$6.8 million of pension expense in 2012.

#### **Acquired Intangible Assets Amortization**

Acquired intangible assets amortization expense was as follows:

|   | 2014    | 2013    | 2012<br>dollars in milli | Cł | 3-2014<br>nange | 2-2013<br>nange |
|---|---------|---------|--------------------------|----|-----------------|-----------------|
| Acquired Intangible Assets Amortization | \$ 70.8 | \$ 72.4 | \$ 73.5                  | \$ | (1.6)           | \$<br>(1.1)     |
| Percent of Total Revenues               | 4 3%    | 5.1%    | 4 4%                     |    |                 |                 |

Acquired intangible assets amortization expense decreased from 2013 to 2014 due to intangible assets that became fully amortized during the year, partially offset by increased amortization expense due to the AIT acquisition. Acquired intangible assets amortization expense decreased from 2012 to 2013 due to intangible assets that became fully amortized during the year, partially offset by increased amortization expense due to the ZTEC acquisition.

#### **Goodwill Impairment**

In the fourth quarter of 2014, we performed our annual goodwill impairment test and recorded a goodwill impairment charge of \$98.9 million in our Wireless Test segment as a result of decreased projected demand attributable to an estimated smaller future wireless test market due to reuse of wireless test equipment, price competition and different testing techniques. Further reductions in the size of the wireless test market may occur, which may result in additional goodwill impairment charges, increased risk of excess and obsolete inventories, asset write-offs and restructuring charges.

#### Restructuring and Other

#### Restructuring

During the year ended December 31, 2014, we recorded \$1.6 million of charges related to headcount reductions of approximately 43 people, primarily in Semiconductor Test and Wireless Test.

During the year ended December 31, 2013, we recorded \$1.9 million of severance charges related to headcount reductions of 48 people primarily in System Test and Semiconductor Test and a \$(0.4) million credit in Corporate related to a change in the estimated exit costs related to a leased facility.

During the year ended December 31, 2012, we recorded \$1.0 million of severance charges related to headcount reductions of 19 people primarily in System Test and Semiconductor Test.

The remaining accrual for severance of \$0.4 million is reflected in the accrued employees compensation and withholdings on the balance sheet and is expected to be paid by June 2015.

### Other

During the year ended December 31, 2014, we recorded a \$0.6 million gain from the fair value adjustment to decrease the ZTEC acquisition contingent consideration, partially offset by \$0.4 million of acquisition costs related to AIT.

During the year ended December 31, 2012, due to a decrease in specified new product revenue through the December 31, 2012 earn-out period end date, we recorded an \$8.8 million gain from the fair value adjustment to decrease the LitePoint acquisition contingent consideration.

#### **Interest and Other**

|                             | 2014     | 2013     | 2012<br>(in million | 2013-2014<br>Change | 2012-2013<br>Change |
|-----------------------------|----------|----------|---------------------|---------------------|---------------------|
| Interest Income             | \$ (6.3) | \$ (4.1) | \$ (4.1)            | \$ (2.2)            | \$                  |
| Interest Expense            | 6.9      | 26.1     | 24.5                | (19.2)              | 1.6                 |
| Other (income) expense, net | 0.4      | (33.2)   | 1.0                 | 33.6                | (34.2)              |

Interest income increased by \$2.2 million, from \$4.1 million in 2013 to \$6.3 million in 2014, due primarily to higher cash and marketable securities balances in 2014.

Interest expense decreased by \$19.2 million, from \$26.1 million in 2013 to \$6.9 million in 2014, due primarily to a repayment of our convertible debt in the first quarter of 2014. In 2013 and 2012, interest expense included convertible debt discount amortization.

In 2013, other (income) expense, net included a \$34.2 million gain from the sale of an equity investment.

#### **Income (Loss) Before Income Taxes**

|                    | 2014     | 2013     | 2012<br>(in millions) | 2013-2014<br>Change | 2012-2013<br>Change |
|--------------------|----------|----------|-----------------------|---------------------|---------------------|
| Semiconductor Test | \$ 255.8 | \$ 153.8 | \$ 186.0              | \$ 102.0            | \$ (32.2)           |
| Wireless Test      | (116.2)  | 23.1     | 83.1                  | (139.3)             | (60.0)              |
| System Test        | 12.1     | 3.1      | 34.2                  | 9.0                 | (31.1)              |
| Corporate (1)      | (56.3)   | 21.9     | (37.3)                | (78.2)              | 59.2                |
|                    | \$ 95.4  | \$ 201.9 | \$ 266.0              | \$ (106.5)          | \$ (64.1)           |

(1) Included in Corporate are pension and postretirement plans actuarial gains and losses, interest income and interest expense. The decrease in income before income taxes from 2013 to 2014 was primarily due to a \$98.9 million goodwill impairment charge related to Wireless Test and \$46.6 million pension expense related to actuarial losses in 2014, partially offset by higher income due to higher revenues in Semiconductor Test in 2014.

The decrease in income before income taxes from 2012 to 2013 was primarily due to lower revenues in 2013 compared to 2012, a \$9.8 million increase in restructuring and other costs, partially offset by a \$34.2 million gain from the sale of an equity investment in 2013.

#### **Income Taxes**

Income tax expense for 2014, 2013 and 2012 totaled \$14.1 million, \$37.0 million and \$48.9 million, respectively. The effective tax rate for 2014, 2013 and 2012 was 14.8%, 18.3% and 18.4%, respectively. The decrease in income tax expense from 2013 to 2014 was primarily attributable to a shift in the geographic distribution of income which decreased income subject to taxation in the United States relative to lower tax rate jurisdictions, partially offset by an increase in income tax expense associated with uncertain tax positions and a reduction in the benefit from U.S. research and development tax credits.

The decrease in income tax expense from 2012 to 2013 was due to the reinstatement of the U.S. research and development tax credit in 2013 for fiscal years 2013 and 2012 and lower pre-tax income, partially offset by higher tax expense for uncertain tax positions and state taxes.

U.S. research and development tax credits provided a 7.9% and 7.2% reduction to the 2014 and 2013 U.S. statutory federal tax rate of 35.0%, respectively. The research and development tax credit expired at the end of 2014; therefore if the credit is not re-enacted there could be an unfavorable impact on our 2015 effective income tax rate.

We operate under a tax holiday in Singapore, which is effective through December 31, 2015. The tax savings attributable to the Singapore tax holiday for the years ended December 31, 2014, 2013 and 2012 were \$13.2 million or \$0.06 per diluted share, \$4.7 million or \$0.02 per diluted share and \$10.9 million or \$0.05 per diluted share, respectively. We are in discussions with the Singapore Economic Development Board with respect to extension of the tax holiday for periods after December 31, 2015.

#### **Contractual Obligations**

The following table reflects our contractual obligations as of December 31, 2014:

|  |            |                     | Payments Du  | ue by Period |                   |           |
|--|------------|---------------------|--------------|--------------|-------------------|-----------|
|  | Total      | Less than<br>1 year | 1-3<br>vears | 3-5<br>years | More than 5 years | Other     |
|  |            | ·                   | (in thou     | ısands)      |                   |           |
| Operating Lease Obligations                                | \$ 53,991  | \$ 13,521           | \$ 18,618    | \$ 8,638     | \$ 13,214         |           |
| Purchase Obligations                                       | 151,459    | 146,543             | 4,916        |              |                   |           |
| Retirement Plan Contributions                              | 112,637    | 4,260               | 8,351        | 8,853        | 91,173            |           |
| Other Long-Term Liabilities Reflected on the Balance Sheet |            |                     |              |              |                   |           |
| under GAAP (1)   | 58,674     |                     | 19,929       |              |                   | 38,745    |
|  |            |                     |              |              |                   |           |
| Total  | \$ 376,761 | \$ 164,324          | \$ 51,814    | \$ 17,491    | \$ 104,387        | \$ 38,745 |

(1) Included in Other Long-Term Liabilities are liabilities for customer advances, extended warranty, uncertain tax positions, deferred tax liabilities and other obligations. For certain long-term obligations, we are unable to provide a reasonably reliable estimate of the timing of future payments relating to these obligations and therefore we included these amounts in the column marked Other.

# **Liquidity and Capital Resources**

Our cash, cash equivalents and marketable securities balance increased \$99.2 million to \$1.3 billion from 2013 to 2014. Cash activity for 2014, 2013 and 2012 was as follows:

|  | 2014       | 2013     | 2012<br>(in millions) | 2013-2014<br>Change | 2012-2013<br>Change |
|--|------------|----------|-----------------------|---------------------|---------------------|
| Cash provided by operating activities:                                 |            |          |                       |                     |                     |
| Net income, adjusted for non-cash items                                | \$ 439.7   | \$ 318.4 | \$ 444.8              | \$ 121.3            | \$ (126.4)          |
| Change in operating assets and liabilities, net of businesses acquired | 52.4       | (49.7)   | (41.8)                | 102.1               | (7.9)               |
| Net cash provided by operating activities                              | \$ 492.1   | \$ 268.7 | \$ 402.9              | \$ 223.4            | \$ (134.3)          |
| Net cash used for investing activities                                 | (332.9)    | (283.3)  | (602.5)               | (49.6)              | 319.2               |
| Net cash (used for) provided by financing activities                   | \$ (206.6) | \$ 17.3  | \$ (35.3)             | \$ (223.9)          | \$ 52.6             |
| (Decrease) increase of cash and cash equivalents                       | \$ (47.4)  | \$ 2.7   | \$ (234.8)            | \$ (50.1)           | \$ 237.5            |

In 2014, changes in operating assets and liabilities, net of businesses acquired, provided cash of \$52.4 million. This was due to a \$100.8 million decrease in operating assets and a \$48.4 million decrease in operating liabilities.

The decrease in operating assets was due to a \$41.5 million decrease in prepayments and other assets primarily related to a reduction in prepayments to our contract manufacturers, a \$51.2 million decrease in inventories due to higher sales, and an \$8.1 million decrease in accounts receivable.

The decrease in operating liabilities was due to \$33.9 million of retirement plan contributions, a \$17.0 million decrease in other accrued liabilities, a \$16.9 million decrease in accounts payable, a \$7.3 million decrease in accrued employee compensation due primarily to employee stock awards payroll taxes and variable compensation payments, a \$4.3 million convertible note interest payment, partially offset by a \$22.0 million increase in customer advance payments and deferred revenue, and an \$8.9 million increase in accrued income taxes.

Investing activities during 2014 used cash of \$332.9 million due to \$1,578.7 million used for purchases of marketable securities and \$169.0 million used for purchases of property, plant and equipment, and \$19.4 million used for the acquisition of AIT, completed in October 2014, partially offset by proceeds from sales and maturities of marketable securities that provided cash of \$859.7 million and \$570.4 million, respectively, and net proceeds from life insurance of \$4.2 million primarily related to the cash surrender value from the cancellation of Teradyne owned life insurance policies on its retired chief executive officer. The increase in purchase of property, plant and equipment of \$62.3 million in 2014 compared to the year ended December 31, 2013 is primarily due to testers used for customer leases.

Financing activities during 2014 used cash of \$206.6 million, \$191.0 million of cash was used for payments on long-term debt related to the convertible note and a loan in Japan and \$37.4 million was used for dividend payments, partially offset by \$21.3 million provided by the issuance of common stock under employee stock purchase and stock option plans and \$0.5 million from the tax benefit related to stock options and restricted stock units.

In 2013, changes in operating assets and liabilities, net of businesses sold and acquired, used cash of \$49.7 million. This was due to a \$32.1 million increase in operating assets and a \$17.7 million decrease in operating liabilities.

The increase in operating assets was due to a \$49.6 million increase in prepayments due primarily to prepayments to our contract manufacturers and a \$3.7 million increase in accounts receivable, partially offset by a \$21.2 million decrease in inventories.

The decrease in operating liabilities was due to a \$2.5 million decrease in accrued employee compensation due primarily to employee stock awards payroll taxes and variable compensation payments, a \$28.9 million decrease in customer advance payments and deferred revenue, and \$5.5 million of retirement plan contributions, partially offset by a \$13.9 million increase in other accrued liabilities, a \$3.7 million increase in accounts payable due to higher fourth quarter sales volume, and a \$1.6 million increase in accrued income taxes.

Investing activities during 2013 used cash of \$283.3 million. In October 2013, we completed the acquisition of ZTEC for an initial cash purchase price, net of cash acquired, of \$15.0 million. Purchases of property, plant and equipment were \$106.7 million. Purchases of marketable securities used cash of \$1,170.5 million, partially offset by proceeds from maturities and sales of marketable securities that provided cash of \$516.5 million and \$458.5 million, respectively. The sale of an equity investment provided cash of \$34.2 million. Purchases of life insurance policies used cash of \$0.3 million.

Financing activities during 2013 provided cash of \$17.3 million, \$17.6 million was from the issuance of common stock under stock option and stock purchase plans, and \$2.7 million from the tax benefit related to stock options and restricted stock units, partially offset by \$0.4 million of cash used for payments related to LitePoint acquisition contingent consideration and \$2.5 million of cash used for payments on long-term debt related to a loan in Japan.

In 2012, changes in operating assets and liabilities, net of businesses sold and acquired, used cash of \$41.8 million. This was due to a \$9.4 million increase in operating assets and a \$32.4 million decrease in operating liabilities.

The increase in operating assets was due to a \$24.1 million increase in accounts receivable and a \$3.0 million increase in prepayments due primarily to supplier prepayments, partially offset by a \$17.7 million decrease in inventories.

The decrease in operating liabilities was due to a \$15.7 million decrease in accrued employee compensation due primarily to employee stock awards payroll taxes and variable compensation payments, a \$14.6 million decrease in customer advance payments and deferred revenue, a \$11.5 million decrease in accounts payable due to lower fourth quarter sales volume, a \$5.6 million decrease in other accrued liabilities, and \$4.8 million of retirement plan contributions, partially offset by a \$19.8 million increase in accrued income taxes.

Investing activities during 2012 used cash of \$602.5 million, due to \$748.2 million used for purchases of marketable securities and \$119.1 million used for purchases of property, plant and equipment, partially offset by proceeds from sales and maturities of marketable securities that provided cash of \$38.3 million and \$225.1 million, respectively, and proceeds of \$1.5 million from life insurance policies.

Financing activities during 2012 used cash of \$35.3 million, \$18.5 million was from the issuance of common stock under stock option and stock purchase plans, and \$8.5 million from the tax benefit related to stock options and restricted stock units, partially offset by \$59.7 million of cash used for payments related to LitePoint acquisition contingent consideration and \$2.5 million of cash used for payments on long-term debt related to a loan in Japan.

In January 2014, our Board of Directors declared an initial quarterly cash dividend of \$0.06 per share. In each of the second, third and fourth quarters of 2014, we paid a cash dividend of \$0.06 per share. In January 2015, our Board of Directors declared a quarterly dividend of \$0.06 per share to be paid on March 24, 2015 to shareholders of record as of February 27, 2015. Total dividend payments in 2014 were \$37.4 million. Payment of future cash dividends are subject to the discretion of our Board of Directors and will depend, among other things, upon our earnings, capital requirements and financial condition.

In January 2015, our Board of Directors authorized the repurchase of up to \$500 million of common stock, \$300 million of which we intend to repurchase in 2015.

We believe our cash, cash equivalents and marketable securities balance will be sufficient to pay our quarterly dividend, execute our authorized share repurchase program and meet our working capital and expenditure needs for at least the next twelve months. The amount of cash, cash equivalents and marketable securities in the U.S. and our operations in the U.S. provide sufficient liquidity to fund our business activities in the U.S. We have approximately \$616 million of cash outside the U.S. that if repatriated would incur additional taxes. Determination of the additional taxes that would be incurred is not practicable due to uncertainty regarding the remittance structure, the mix of earnings and earnings and profit pools in the year of remittance, and overall complexity of the calculation. Inflation has not had a significant long-term impact on earnings.

#### **Retirement Plans**

ASC 715-20, Compensation Retirement Benefits Defined Benefit Plans requires an employer with defined benefit plans or other postretirement benefit plans to recognize an asset or a liability on its balance sheet for the overfunded or underfunded status of the plans as defined by ASC 715-20. The pension asset or liability represents the difference between the fair value of the pension plan s assets and the projected benefit obligation as of December 31. For other postretirement benefit plans, the liability is the difference between the fair value of the plan s assets and the accumulated postretirement benefit obligation as of December 31.

Our pension expense, which includes the U.S. Qualified Pension Plan (U.S. Plan), certain qualified plans for non-U.S. subsidiaries, and a U.S. Supplemental Executive Defined Benefit Plan, was approximately \$52.4 million for the year ended December 31, 2014. The largest portion of our 2014 pension expense was \$31.2 million for our U.S. Plan. Pension expense is calculated based upon a number of actuarial assumptions. Discount rate and expected return on assets are two assumptions which are important elements of pension plan expense/income and asset/liability measurement. We evaluate our discount rate and expected rate of return on assets assumptions annually on a plan and country specific basis. We evaluate other assumptions related to demographic factors, such as retirement age, mortality and turnover periodically, and update them to reflect our experience and expectations for the future. In the fourth quarter of 2014, we updated the mortality assumptions related to our U.S retirement plans using the mortality tables published in October 2014 by the U.S. Society of Actuaries. The change in the mortality assumptions resulted in approximately \$39.0 million of actuarial losses in 2014 for the U.S. retirement plans.

In developing the expected return on U.S. Plan assets assumption, we evaluated input from our investment managers and pension consultants, including their review of asset class return expectations. Based on this review, we believe that 5.0% was an appropriate rate to use for 2014. The December 31, 2014 asset allocation for our U.S. Plan was 83% invested in fixed income securities, 16% invested in equity securities, and 1% invested in other securities. Our investment managers regularly review the actual asset allocation and periodically rebalance the portfolio to ensure alignment with our targeted allocations.

Effective January 1, 2012, we elected to immediately recognize net actuarial gains and losses and the change in the fair value of plans assets in our operating results in the year in which they occur or upon any interim remeasurement of the plans. In addition, we used to calculate the expected return on plan assets using a calculated market-related value of plan assets. Effective January 1, 2012, we elected to calculate the expected return on plan assets using the fair value of the plan assets.

The discount rate that we utilized for determining future pension obligations for the U.S. Plan is based on the Citigroup Pension Index adjusted for the U.S. Plan is expected cash flows and was 3.7% at December 31, 2014, down from 4.5% at December 31, 2013. We estimate that in 2015 we will recognize approximately \$1.5 million of pension income for the U.S. Plan. The U.S. Plan pension income estimate for 2015 is based on a 3.7% discount rate and 4.75% return on assets. Future pension expense or income will depend on future investment performance, changes in future discount rates and various other factors related to the employee population participating in our pension plans.

As of December 31, 2014, our pension plans had unrecognized pension prior service cost of \$0.4 million.

We performed a sensitivity analysis, which expresses the potential U.S. Plan (income) expense for the year ending December 31, 2015, which would result from changes to either the discount rate or the expected return on plan assets. The below estimates exclude the impact of any potential actuarial gains or losses. It is difficult to reliably forecast or predict whether there will be any actuarial gains or losses in 2015 as they are primarily driven by events and circumstances beyond our control, such as changes in interest rates and the performance of the financial markets.

|                       |          | Discount Rate      |        |  |  |  |
|-----------------------|----------|--------------------|--------|--|--|--|
| Return on Plan Assets | 3.2%     | 3.7% (in millions) | 4.2%   |  |  |  |
| 4.25%                 | \$ (0.8) | \$ 0.0             | \$ 0.6 |  |  |  |
| 4.75%                 | (2.3)    | (1.5)              | (0.9)  |  |  |  |
| 5.25%                 | (3.8)    | (3.1)              | (2.5)  |  |  |  |

The assets of the U.S. Plan consist substantially of fixed income securities. U.S. Plan assets have increased from \$256.4 million at December 31, 2013 to \$316.1 million at December 31, 2014.

Our funding policy is to make contributions to our pension plans in accordance with local laws and to the extent that such contributions are tax deductible. During 2014, we made contributions of \$30.0 million to the U.S. Plan, \$1.8 million to the U.S. supplemental executive defined benefit pension plan and \$1.2 million to certain qualified plans for non-U.S. subsidiaries. We expect to contribute approximately \$2.5 million to the U.S. supplemental executive defined benefit pension plan in 2015. Contributions that will be made in 2015 to certain qualified plans for non-U.S. subsidiaries are based on local statutory requirements and will be approximately \$1.0 million. We do not expect to make any contributions to the U.S. Plan in 2015.

#### **Equity Compensation Plans**

In addition to our 1996 Employee Stock Purchase Plan discussed in Note N: Stock Based Compensation in Notes to Consolidated Financial Statements, we have a 2006 Equity and Cash Compensation Incentive Plan (the 2006 Equity Plan ) under which equity securities are authorized for issuance. The 2006 Equity Plan was initially approved by stockholders on May 25, 2006.

At our annual meeting of stockholders held May 21, 2013, our stockholders approved an amendment to the 2006 Equity Plan to increase the number of shares issuable thereunder by 10.0 million, for an aggregate of 32.0 million shares issuable thereunder, and our stockholders also approved an amendment to our 1996 Employee Stock Purchase Plan to increase the number of shares issuable thereunder by 5.0 million, for an aggregate of 30.4 million shares issuable thereunder.

The following table presents information about these plans as of December 31, 2014 (share numbers in thousands):

| Plan category                                     | Number of securities to be issued upon exercise of outstanding options, warrants and rights | Weighted-average exercise price of outstanding options, warrants and rights |       | Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column one) |
|---|---|---|-------|---|
| Equity plans approved by shareholders             | 4,871(1)  | \$  | 17.03 | 17,787(2)   |
| Equity plans not approved by shareholders (3,4,5) | 988   | \$  | 3.09  | , , ,   |
| Total   | 5,859   | \$  | 7.89  | 17,787  |

- (1) Includes 4,351,325 shares of restricted stock units that are not included in the calculation of the weighted average exercise price.
- (2) Consists of 12,443,022 securities available for issuance under the 2006 Equity Plan and 5,343,654 of securities available for issuance under the Employee Stock Purchase Plan.
- (3) In connection with the 2008 acquisition of Nextest (the Nextest Acquisition ), we assumed the options and restricted stock units granted under the Nextest Systems Corporation 1998 Equity Incentive Plan, as amended, and the Nextest Systems Corporation 2006 Equity Incentive Plan (collectively, the Nextest Plans ). Upon the consummation of the Nextest Acquisition, these options and restricted stock units were converted automatically into, respectively, options to purchase and restricted stock units representing, an aggregate of 4,417,594 shares of our common stock. No additional awards will be granted under the Nextest Plans. As of December 31, 2014, there were outstanding options exercisable for an aggregate of 185,036 shares of our common stock pursuant to the Nextest Plans, with a weighted average exercise price of \$3.18 per share.
- (4) In connection with the 2008 acquisition of Eagle Test (the Eagle Acquisition ), we assumed the options granted under the Eagle Test Systems, Inc. 2003 Stock Option and Grant Plan and the Eagle Test Systems, Inc. 2006 Stock Option and Incentive Plan (collectively, the Eagle Plans ). Upon the consummation of the Eagle Acquisition, these options were converted automatically into options to purchase an aggregate of 3,594,916 shares of our common stock. No additional awards will be granted under the Eagle Plans. As of December 31, 2014, there were outstanding options exercisable for an aggregate of 129,467 shares of our common stock pursuant to the Eagle Plans, with a weighted average exercise price of \$3.85 per share.

(5) In connection with the 2011 acquisition of LitePoint Corporation (the LitePoint Acquisition ), we assumed the options granted under the LitePoint Corporation 2002 Stock Plan (the LitePoint Plan ). Upon the consummation of the LitePoint Acquisition, these options were converted automatically into options to purchase an aggregate of 2,828,344 shares of our common stock. No additional awards will be granted under the LitePoint Plan. As of December 31, 2014, there were outstanding options exercisable for an aggregate of 673,703 shares of our common stock pursuant to the LitePoint Plan, with a weighted average exercise price of \$2.92 per share.

The purpose of the 2006 Equity Plan is to motivate employees, officers and directors by providing equity ownership and compensation opportunities in Teradyne. The aggregate number of shares available under the 2006 Equity Plan as of December 31, 2014 was 12,443,022 shares of our common stock. The 2006 Equity Plan authorizes the grant of stock-based awards in the form of (1) non-qualified and incentive stock options, (2) stock appreciation rights, (3) restricted stock awards and restricted stock unit awards, (4) phantom stock, and (5) other stock-based awards. Awards may be tied to time-based vesting schedules and/or performance-based vesting measured by reference to performance criteria chosen by the Compensation Committee of the Board of Directors, which administers the 2006 Equity Plan. Awards may be made to any employee, officer, consultant and advisor of Teradyne and our subsidiaries, as well as, to our directors. The maximum number of shares of stock-based awards that may be granted to one participant during any one fiscal year is 2,000,000 shares of common stock. The 2006 Equity Plan will expire on May 24, 2016.

As of December 31, 2014, total unrecognized compensation expense related to non-vested restricted stock units and options was \$51.3 million, and is expected to be recognized over a weighted average period of 2.4 years.

#### **Performance Graph**

The following graph compares the change in our cumulative total shareholder return in our common stock with (i) the Standard & Poor s 500 Index and (ii) the Philadelphia Semiconductor Index. The comparison assumes \$100.00 was invested on December 31, 2009 in our common stock and in each of the foregoing indices and assumes reinvestment of dividends, if any. Historic stock price performance is not necessarily indicative of future price performance.

#### Recently Issued Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)* which will replace numerous requirements in U.S. GAAP, including industry-specific requirements, and provide companies with a single revenue recognition model for recognizing revenue from contracts with customers. The core principle of the new standard is that a company should recognize revenue to show the transfer of promised goods or services to customers in an amount that reflects the consideration to which the company expects to be

entitled to in exchange for those goods or services. The new standard will be effective for annual reporting periods beginning after December 15, 2016, including interim periods within that reporting period. For Teradyne, the standard will be effective in the first quarter of 2017. The two permitted transition methods under the new standard are the full retrospective method, in which case the standard would be applied to each prior reporting period presented, or the modified retrospective method, in which case the cumulative effect of applying the standard would be recognized at the date of initial application. We have not yet selected a transition method. We are currently evaluating the impact of this ASU on our financial position and results of operations.

# Item 7A: Quantitative and Qualitative Disclosures about Market Risks Concentration of Credit Risk

Financial instruments which potentially subject us to concentrations of credit risk consist principally of cash equivalents, marketable securities, forward currency contracts and accounts receivable. Our cash equivalents consist primarily of money market funds invested in U.S. Treasuries and government agencies. Our fixed income available-for-sale marketable securities have a minimum rating of AA by one or more of the major credit rating agencies. We place forward currency contracts with high credit-quality financial institutions in order to minimize credit risk exposure. Concentrations of credit risk with respect to accounts receivable are limited due to the large number of geographically dispersed customers. We perform ongoing credit evaluations of our customers financial condition and from time to time may require customers to provide a letter of credit from a bank to secure accounts receivable.

#### **Exchange Rate Risk Management**

We regularly enter into foreign currency forward contracts to hedge the value of our monetary assets and liabilities in Japanese Yen, British Pound, Korean Won, Taiwan Dollar and Euro. These foreign currency forward contracts have maturities of approximately one month. These contracts are used to minimize the effect of exchange rate fluctuations associated with the remeasurement of monetary assets and liabilities. We do not engage in currency speculation.

We performed a sensitivity analysis assuming a hypothetical 10% fluctuation in foreign exchange rates to the hedging contracts and the underlying exposures described above. As of December 31, 2014, 2013 and 2012, the analysis indicated that these hypothetical market movements would not have a material effect on our consolidated financial position, results of operations or cash flows.

#### **Interest Rate Risk Management**

We are exposed to potential losses due to changes in interest rates. Our interest rate exposure is primarily in the United States in short-term and long-term marketable securities.

In order to estimate the potential loss due to interest rate risk, a fluctuation in interest rates of 25 basis points was assumed. Market risk for the short and long-term marketable securities was estimated as the potential change in the fair value resulting from a hypothetical change in interest rates for securities contained in the investment portfolio. The potential change in fair value from changes in interest rates is immaterial as of December 31, 2014 and 2013.

# Item 8: Financial Statements and Supplementary Data Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Teradyne, Inc.:

In our opinion, the consolidated financial statements listed in the index appearing under Item 15(a) (1) present fairly, in all material respects, the financial position of Teradyne, Inc. and its subsidiaries at December 31, 2014 and December 31, 2013, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2014 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the index appearing under Item 15(a)(2) presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2014, based on criteria established in Internal Control Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company s management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management s Annual Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements and on the Company s internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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

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

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts

February 27, 2015

#### CONSOLIDATED BALANCE SHEETS

### December 31, 2014 and 2013

2014

19,929

108,460

23,315

15,430

459,540

2013

(in thousands, except per

|  | share information) |              |  |
|--|--------------------|--------------|--|
| ASSETS   |                    |              |  |
| Current assets:  |                    |              |  |
| Cash and cash equivalents  | \$ 294,256         | \$ 341,638   |  |
| Marketable securities  | 533,787            | 586,882      |  |
| Accounts receivable, less allowance for doubtful accounts of \$2,491 and \$2,912 in 2014 and 2013, |                    |              |  |
| respectively   | 151,034            | 157,642      |  |
| Inventories:   |                    |              |  |
| Parts  | 70,821             | 84,232       |  |
| Assemblies in process  | 10,347             | 15,539       |  |
| Finished goods   | 23,961             | 38,168       |  |
|  |                    |              |  |
|  | 105,129            | 137,939      |  |
| Deferred tax assets  | 57,239             | 72,478       |  |
| Prepayments  | 95,819             | 136,374      |  |
| Other current assets   | 6,582              | 7,324        |  |
|  | 0,502              | 7,02         |  |
| Total current assets   | 1,243,846          | 1,440,277    |  |
| Total cultent assets   | 1,243,640          | 1,440,277    |  |
| Net property, plant and equipment  | 329,038            | 275,236      |  |
| Marketable securities  | 470,789            | 271,078      |  |
| Deferred tax assets  | 7,494              | 5,217        |  |
| Other assets   | 10,419             | 14,591       |  |
| Retirement plans assets  | 12,896             | 9,342        |  |
| Intangible assets, net   | 190,600            | 252,291      |  |
| Goodwill   | 273,438            | 361,792      |  |
| Goodwiii   | 213,436            | 301,792      |  |
| Total assets   | \$ 2,538,520       | \$ 2,629,824 |  |
| Total assets   | \$ 2,336,320       | \$ 2,029,824 |  |
| LIABILITIES  |                    |              |  |
| Current liabilities:   |                    |              |  |
| Accounts payable   | \$ 47,763          | \$ 62,874    |  |
| Accrued employees compensation and withholdings  | 100,994            | 95,619       |  |
| Deferred revenue and customer advances   | 71,603             | 55,404       |  |
| Other accrued liabilities  | 51,997             | 63,712       |  |
| Accrued income taxes   | 20,049             | 11,360       |  |
| Debt   |                    | 186,663      |  |
|  |                    | ,500         |  |
| Total current liabilities  | 292,406            | 475,632      |  |
|  |                    | 10.55        |  |

Long-term deferred revenue and customer advances

Retirement plans liabilities

Long-term other accrued liabilities

Commitments and contingencies (Note J)

Deferred tax liabilities

Total liabilities

13,756

91,517

40,686

644,730

23,139

# SHAREHOLDERS EQUITY

| Common stock, \$0.125 par value, 1,000,000 shares authorized, 216,613 and 191,731 shares issued and |              |              |
|---|--------------|--------------|
| outstanding at December 31, 2014 and 2013, respectively   | 27,077       | 23,966       |
| Additional paid-in capital  | 1,437,135    | 1,390,896    |
| Accumulated other comprehensive income  | 4,689        | 4,000        |
| Retained earnings   | 610,079      | 566,232      |
| Total shareholders equity   | 2,078,980    | 1,985,094    |
| Total liabilities and shareholders equity   | \$ 2,538,520 | \$ 2,629,824 |

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

# CONSOLIDATED STATEMENTS OF OPERATIONS

|  | Years Ended December 31,<br>2014 2013 20<br>(in thousands, except per share amoun |                          |         |               | 2012   |           |
|--|---|--------------------------|---------|---------------|--------|-----------|
| Revenues:  |   | (III tilousai            | ius, ex | cept per snar | e anno | ounts)    |
| Products   | \$  | 1,364,024                | \$      | 1,154,922     | \$     | 1,383,569 |
| Services   | Ψ   | 283,800                  | Ψ.      | 273,011       | Ψ      | 273,181   |
|  |   | 200,000                  |         | 270,011       |        | 270,101   |
| Total revenues   |   | 1,647,824                | :       | 1,427,933     |        | 1,656,750 |
| Cost of revenues:  |   | < 40 <b>5</b> 0 <b>5</b> |         | 100.020       |        | 642.001   |
| Cost of products   |   | 640,787                  |         | 499,030       |        | 642,881   |
| Cost of services   |   | 128,229                  |         | 120,102       |        | 127,832   |
| Total cost of revenues (exclusive of acquired intangible assets amortization shown separately below) |   | 769,016                  |         | 619,132       |        | 770,713   |
| Gross profit   |   | 878,808                  |         | 808,801       |        | 886,037   |
| Operating expenses:  |   | ,                        |         | ,             |        | ,         |
| Engineering and development  |   | 291,639                  |         | 264,055       |        | 255,866   |
| Selling and administrative   |   | 319,713                  |         | 279,560       |        | 277,016   |
| Goodwill impairment  |   | 98,897                   |         |               |        |           |
| Acquired intangible assets amortization  |   | 70,771                   |         | 72,447        |        | 73,508    |
| Restructuring and other  |   | 1,365                    |         | 2,080         |        | (7,721)   |
| Total operating expenses   |   | 782,385                  |         | 618,142       |        | 598,669   |
| Income from operations   |   | 96,423                   |         | 190,659       |        | 287,368   |
| Non-operating (income) expenses:   |   |                          |         |               |        |           |
| Interest income  |   | (6,259)                  |         | (4,129)       |        | (4,090)   |
| Interest expense   |   | 6,934                    |         | 26,097        |        | 24,534    |
| Other (income) expense, net  |   | 372                      |         | (33,231)      |        | 948       |
| Income before income taxes   |   | 95,376                   |         | 201,922       |        | 265,976   |
| Provision for income taxes   |   | 14,104                   |         | 36,975        |        | 48,927    |
| Net income   | \$  | 81,272                   | \$      | 164,947       | \$     | 217,049   |
|  |   | ·                        |         | ŕ             |        | ŕ         |
| Net income per common share:   |   |                          |         |               |        |           |
| Basic  | \$  | 0.40                     | \$      | 0.86          | \$     | 1.16      |
| Diluted  | \$  | 0.37                     | \$      | 0.70          | \$     | 0.94      |
| Weighted average common shares basic   |   | 202,908                  |         | 190,772       |        | 186,878   |
| Weighted average common shares diluted   |   | 222,550                  |         | 235,599       |        | 230,246   |
| Cash dividend declared per common share  | \$  | 0.18                     | \$      |               | \$     |           |

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

# CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

|  | Years Ended December 31, |                     |            |
|--|--------------------------|---------------------|------------|
|  | 2014                     | 2013 (in thousands) | 2012       |
| Net income   | \$ 81,272                | \$ 164,947          | \$ 217,049 |
| Other comprehensive income (loss), net of tax:   |                          |                     |            |
| Unrealized gains (losses) on marketable securities:  |                          |                     |            |
| Unrealized gains (losses) on marketable securities arising during period, net of tax of \$1,449, \$216, \$370  | 2,417                    | (1,097)             | 2,009      |
| Less: Reclassification adjustment for gains included in net income, net of tax of \$(645), \$(257), \$(201)  | (1,433)                  | (447)               | (702)      |
|  | 984                      | (1,544)             | 1,307      |
| Defined benefit pension and post-retirement plans:   |                          |                     |            |
| Amortization of prior service (benefit) cost included in net periodic pension and post-retirement expense/income, net of tax \$(169), \$(159), \$(134) | (295)                    | (276)               | (233)      |
| Other comprehensive income (loss)  | 689                      | (1,820)             | 1,074      |
| Comprehensive income   | \$ 81,961                | \$ 163,127          | \$ 218,123 |

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

# CONSOLIDATED STATEMENTS OF SHAREHOLDERS EQUITY

# **Years Ended December 31, 2014, 2013 and 2012**

|   | Common<br>Stock<br>Shares<br>Issued | Common<br>Stock Par<br>Value | Additional<br>Paid-in<br>Capital<br>(in t | Accumulated Other Comprehensive Income | Retained<br>Earnings | Total<br>Shareholders<br>Equity |
|---|-------------------------------------|------------------------------|---|--|----------------------|---------------------------------|
| Balance, December 31, 2011  | 183,587                             | \$ 22,948                    | \$ 1,293,130                              | \$ 4,746                               | \$ 184,236           | \$ 1,505,060                    |
| Issuance of stock to employees under benefit plans, net of shares |                                     |                              |   |  |                      |                                 |
| withheld for payroll tax of \$11,582                              | 4,321                               | 540                          | 6,354                                     |  |                      | 6,894                           |
| Stock-based compensation expense                                  |                                     |                              | 39,920                                    |  |                      | 39,920                          |
| Tax benefit related to stock options and restricted stock units   |                                     |                              | 8,358                                     |  |                      | 8,358                           |
| Net income  |                                     |                              |   |  | 217,049              | 217,049                         |
| Unrealized gain on marketable securities:                         |                                     |                              |   |  |                      |                                 |
| Unrealized gain on marketable securities, net of tax of \$370     |                                     |                              |   |  |                      |                                 |