

VISHAY INTERTECHNOLOGY INC

Form 10-K

February 19, 2014

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2013

or

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number 1-7416

Vishay Intertechnology, Inc.

(Exact name of registrant as specified in its charter)

Delaware

38-1686453

(State or other jurisdiction of incorporation or organization) (IRS employer identification no.)

63 Lancaster Avenue

Malvern, Pennsylvania 19355-2143

(Address of principal executive offices)

(610) 644-1300

(Registrant's telephone number, including area code)

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

Common Stock, \$0.10 par value New York Stock Exchange

(Title of class) (Exchange on which registered)

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes  No

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

Note – Checking the box above will not relieve any registrant required to file reports under Section 13 or 15(d) of the Exchange Act from their obligations under those Sections.

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

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

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

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

Large accelerated filer  Accelerated filer

Non-accelerated filer  Smaller reporting company

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

The aggregate market value of the voting stock held by non-affiliates computed by reference to the price at which the common equity was last sold as of the last business day of the registrant's most recently completed second fiscal quarter (\$13.89 on June 29, 2013), assuming conversion of all of its Class B common stock held by non-affiliates into common stock of the registrant, was \$1,835,000,000. There is no non-voting stock outstanding.

As of February 17, 2014, registrant had 135,319,976 shares of its common stock and 12,129,227 shares of its Class B common stock outstanding.

#### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement, which will be filed within 120 days of December 31, 2013, are incorporated by reference into Part III.

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Vishay Intertechnology, Inc.  
Form 10-K for the year ended December 31, 2013

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## PART I

### Item 1. BUSINESS

#### Our Business

Vishay Intertechnology, Inc. ("Vishay," the "Company," "we," "us," or "our") is a leading global manufacturer and supplier of discrete semiconductors and passive components. Semiconductors include MOSFETs, diodes, and optoelectronic components. Passive components include resistive products, capacitors, and inductors. Discrete semiconductors and passive components are essential elements of virtually every type of electronic circuit. They support the microprocessor chips and other integrated circuits ("ICs") that coordinate and control the functions of electronic devices and equipment. We offer our customers "one-stop shop" access to one of the most comprehensive electronic component product lines of any manufacturer in the United States, Europe, and Asia.

Our semiconductor components are used for a wide variety of functions, including power control, power conversion, power management, signal switching, signal routing, signal blocking, signal amplification, two-way data transfer, one-way remote control, and circuit isolation. Our passive components are used to restrict current flow, suppress voltage increases, store and discharge energy, control alternating current ("AC") and voltage, filter out unwanted electrical signals, and perform other functions. Our components are used in virtually every type of product that contains electronic circuitry, in the industrial, computing, automotive, consumer, telecommunications, power supplies, military, aerospace, and medical markets.

#### The Vishay Story

In the 1950's, the late Dr. Felix Zandman, Vishay's founder, was issued patents for his PhotoStress® coatings and instruments, used to reveal and measure the distribution of stresses in structures such as airplanes and cars under live load conditions. His research in this area led him to develop Bulk Metal® foil resistors – ultra-precise, ultra-stable resistors with performance far beyond any other resistor available to date.

In 1962, Dr. Zandman, with a loan from the late Alfred P. Slaner, founded Vishay to develop and manufacture Bulk Metal foil resistors. Concurrently, J.E. Starr developed foil resistance strain gages, which also became part of Vishay. Throughout the 1960's and 1970's, Vishay established itself as a technical and market leader in foil resistors, PhotoStress products, and strain gages. These products were included with the measurements and foil resistor businesses that we spun off into an independent, publicly-traded company named Vishay Precision Group, Inc. ("Vishay Precision Group" or "VPG") through a tax-free stock dividend to our stockholders on July 6, 2010.

In 1985, Vishay began to expand its product line through various strategic acquisitions, including the resistor companies Dale Electronics, Draloric Electronic, and Sfernice. In the early 1990's, Vishay applied its acquisition strategy to the capacitor market, with the major acquisitions of Sprague Electric, Roederstein, and Vitramon. In 2002, Vishay acquired BCcomponents, the former passive components business of Philips Electronics and Beyschlag, which greatly enhanced Vishay's global market position in passive components. Over the years, we have made several smaller passive components acquisitions to gain market share, penetrate different geographic markets, enhance new product development, round out our product lines, or grow our high margin niche businesses. These include Electro-Films, Cera-Mite, and Spectrol in 2000; Tansitor and North American Capacitor Company (Mallory) in 2001; the thin film interconnect business of Aeroflex in 2004; Phoenix do Brasil in 2006; the wet tantalum capacitor business of KEMET Corporation in 2008; the resistor businesses of Huntington Electric in 2011; HiRel Systems in 2012; and MCB Industrie in 2013.

In the late 1990's, Vishay began expanding its product lines to include discrete semiconductors. In 1998, Vishay acquired the Semiconductor Business Group of TEMIC, which included Telefunken and an 80.4% interest in Siliconix, producers of MOSFETs, RF transistors, diodes, optoelectronics, and power and analog switching integrated circuits. Vishay's next semiconductor acquisition came in 2001, with the purchase of the infrared components business of Infineon Technologies, which was followed the same year by Vishay's acquisition of General Semiconductor, a leading global manufacturer of rectifiers and diodes. In 2005, Vishay made a successful tender offer for the minority interest in Siliconix. In 2007, Vishay acquired the Power Control Systems business of International Rectifier, further enhancing our product offerings. These acquisitions propelled Vishay into the top ranks of discrete semiconductor manufacturers.

We continue to implement the vision, strategy, and culture articulated by Dr. Zandman as we continue to work tirelessly to enhance value for our stockholders.

Vishay was incorporated in Delaware in 1962 and maintains its principal executive offices at 63 Lancaster Avenue, Malvern, Pennsylvania 19355-2143. Our telephone number is (610) 644-1300.

## Our Competitive Strengths

### Global Technology Leader

We were founded based on the inventions of Dr. Felix Zandman and we continue to emphasize technological innovation as a driver of growth. Many of our products and manufacturing techniques, technologies, and packaging methods have been invented, designed, and developed by Dr. Zandman, our engineers, and our scientists. We are currently a worldwide technology and market leader in wirewound and other power resistors, leaded film resistors, thin film SMD resistors, wet and conformal-coated tantalum capacitors, capacitors for power electronics, power rectifiers, low-voltage power MOSFETs, and infrared components.

### Research and Development Provides Customer-Driven Growth Solutions

We maintain strategically placed application and product support centers where proximity to customers and our manufacturing locations enables us to more easily gauge and satisfy the needs of local markets. The breadth of our product portfolio along with the proximity of our field application engineers to customers provides increased opportunities to have our components selected and designed into new end products by customers in all relevant market segments. We also maintain research and development personnel and promote programs at a number of our production facilities to develop new products and new applications of existing products, and to improve manufacturing processes and technologies. We plan to grow our business and increase earnings per share, in part, through accelerating the development of new products and technologies and increasing design-in opportunities by expanding our technical resources for providing solutions to customers.

### Operational Excellence

We are a leading manufacturer in our industry, with a broad product portfolio, access to a wide range of end markets and sales channels, and geographic diversity. We have solid, well-established relationships with our customers and strong distribution channels. Our senior management team is highly experienced, with deep industry knowledge. Over the past two decades, our management team has successfully restructured our company and integrated several acquisitions. We can adapt our operations to changing economic conditions, as demonstrated by our ability to remain profitable and generate cash through the volatile economic cycle of the recent past.



### Broad Market Penetration

We have one of the broadest product lines of discrete semiconductors and passive components among our competitors. Our broad product portfolio allows us to penetrate markets in all industry segments and all regions, which reduces our exposure to a particular end market or geographic location. We plan to grow our business and increase earnings per share, in part, through improving market penetration by expanding manufacturing facilities for our most successful products, increasing technical resources, and developing markets for specialty products in Asia. Our net revenues for the following applicable periods were attributable to customers in the following regions:

	Years Ended		
	December 31,		
	2013	2012	2011
Asia	38 %	37 %	38 %
Europe	37 %	37 %	40 %
Americas	25 %	26 %	22 %

The share of net revenues by end market was as follows:

	Years Ended		
	December 31,		
	2013	2012	2011
Industrial	29 %	29 %	28 %
Automotive	21 %	20 %	18 %
Computing	13 %	15 %	18 %
Telecommunications	11 %	11 %	12 %
Power Supplies	8 %	7 %	8 %
Consumer Products	8 %	7 %	7 %
Military and Aerospace	6 %	7 %	6 %
Medical	4 %	4 %	3 %

### Strong Track Record of Growth through Acquisitions

Since 1985, we have expanded our product line through various strategic acquisitions, growing from a small manufacturer of precision resistors and resistance strain gages to one of the world's largest manufacturers and suppliers of a broad line of electronic components. We have successfully integrated the acquired companies within our existing management and operational structure, reducing selling, general, and administrative expenses through the integration or elimination of redundant sales and administrative functions, creating manufacturing synergies, while improving customer service. We plan to grow our business and increase earnings per share, in part, through targeted acquisitions. We often target high margin niche business acquisitions, such as Huntington Electric, HiRel Systems, and MCB Industrie, which we acquired in 2011, 2012, and 2013, respectively. These acquisitions accounted for 3.4% of 2013 revenues and have margins above our corporate average.

### Strong Free Cash Flow Generation

We refer to the amount of cash generated from operations in excess of our capital expenditure needs and net of proceeds from the sale of assets as "free cash." Due to our strong operational management, cost control measures, efficient capital expenditures, broad product portfolio, and strong market position, we have generated positive "free cash" in each of the past 17 years and "free cash" in excess of \$80 million in each of the past 12 years. We expect the benefits of our restructuring and other cost cutting measures in prior periods and continued cost control activities (see

"Cost Management" included in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations") to contribute to our "free cash" generation going forward.

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## Financial Strength and Flexibility

As of December 31, 2013, our cash and short-term investment balance exceeded our debt balance by \$787 million. We also maintain a credit facility, which provides a revolving commitment of up to \$640 million through August 8, 2018, of which \$518 million was available as of December 31, 2013. Our net cash position and short-term investment balance, available revolving commitment, and strong "free cash" flow generation provide financial strength and flexibility and reduce our exposure to future economic uncertainties.

## Our Key Challenges

### Economic Environment

Our business and operating results have been and will continue to be impacted by the global economy and the local economies in which our customers operate. Our revenues are dependent on end markets that are impacted by fluctuating consumer and industrial demand, and our operating results can be adversely affected by reduced demand in those markets.

### Competition

Our business is highly competitive worldwide, with low transportation costs and few import barriers. Our major competitors, some of which are larger than us, have significant financial resources and technological capabilities. To continue to grow our business successfully, we need to continually develop, introduce, and market new and innovative products, modify existing products, respond to technological change, and customize certain products to meet customer requirements.

### Continuous Innovation and Protection of Intellectual Property

Our ability to compete effectively with other companies depends, in part, on our ability to maintain the proprietary nature of our technology. Although we have been awarded, have filed applications for, or have licenses to use, numerous patents in the United States and other countries, there can be no assurance concerning the degree of protection afforded by these patents or the likelihood that pending patents will be issued.

### Continuing to Grow through Acquisitions

Our long-term historical growth in revenues and net earnings has resulted in large part from our strategy of growth through acquisitions. For this strategy to remain successful, we need to continue to identify attractive and available acquisition candidates, complete acquisitions on favorable terms, and integrate new businesses, manufacturing processes, employees, and logistical arrangements into our existing management and operating infrastructure.

For a more detailed discussion of the risks and uncertainties inherent in our business, which could materially and adversely affect our business, results of operations or financial condition, see "Risk Factors" in Item 1A.

## Key Business Strategies

Since our first acquisition in 1985, we have pursued a business strategy that principally consists of the following elements:

### Invest in Innovation to Drive Growth

We plan to continue to use our research and development ("R&D"), engineering, and product marketing resources to continually roll out new and innovative products. As part of our plan to foster intensified internal growth, we have increased our R&D and engineering technical staff by 18% since 2009 and plan to further increase it. In addition, we are increasing our technical field sales force in Asia by about 25% to increase the opportunities to design-in our products in local markets. Our ability to react to changing customer needs and industry trends will continue to be key to our success. We intend to leverage our insights into customer demand to continually develop new innovative products within our existing lines and to modify our existing core products to make them more appealing, addressing changing customer needs and industry trends.

We are directing increased funding and are focusing on developing products to capitalize on the connectivity, mobility, and sustainability growth drivers of our business.

### Cost Management

We place a strong emphasis on controlling our costs. We focus on controlling fixed costs and reducing variable costs. When our ongoing cost management activities are not adequate, we take actions to maintain our cost competitiveness including restructuring our business to realign our labor distribution.

### Growth through Strategic Acquisitions

We plan to continue to expand within the electronic components industry, through the acquisition of other manufacturers of electronic components that have established positions in major markets, reputations for product innovation, quality, and reliability, strong customer bases, and product lines with which we have substantial marketing and technical expertise.

### Customer Service Excellence

We maintain significant production facilities in those regions where we market the bulk of our products in order to enhance the service and responsiveness that we provide to our customers. We aim to further strengthen our relationships with customers and strategic partners by providing broad product lines that allow us to provide "one-stop shop" service, whereby they can streamline their design and purchasing processes by ordering multiple types of products.

Our growth plan was designed based on the tenets of the key business strategies listed above.

## Products

We design, manufacture, and market electronic components that cover a wide range of functions and technologies. Our product portfolio includes:

### MOSFETs Segment

#### MOSFETs

- Low-Voltage TrenchFET® Power MOSFETs
- Medium-Voltage Power MOSFETs
- High-Voltage Planar MOSFETs
- High-Voltage Super Junction MOSFETs
- Automotive-Grade MOSFETs

#### ICs

- Power Management and Power Control ICs
- Smart Load Switches
- Analog Switches and Multiplexers

### Diodes Segment

#### Rectifiers

- Schottky Rectifiers
- Ultra-Fast Recovery Rectifiers
- Standard and Fast Recovery Rectifiers
- High-Power Rectifiers/Diodes
- Bridge Rectifiers

#### Small-Signal Diodes

- Schottky and Switching Diodes
- Zener Diodes
- Tuner/Capacitance Diodes
- Bandswitching Diodes
- RF PIN Diodes

#### Protection Diodes

- TVS Diodes or TRANSZORB® (uni-directional, bi-directional)
- ESD Protection Diodes (including arrays)

#### Thyristors/SCR

- Phase-Control Thyristors
- Fast Thyristors

#### Power Modules

- Input Modules (diodes and thyristors)
- Output & Switching Modules (contain MOSFETs, IGBTs, and diodes)
- Custom Modules

### Optoelectronic Components Segment

#### Infrared Emitters and Detectors

#### Optical Sensors

#### Infrared Remote Control Receivers

#### Optocouplers

- Phototransistor, Photodarlington
- Linear
- Phototriac

### Resistors & Inductors Segment

#### Film Resistors

- Metal Film Resistors
- Thin Film Resistors
- Thick Film Resistors
- Power Thick Film Resistors
- Crowbar and Steel Blade Resistors
- Metal Oxide Film Resistors

#### Carbon Film Resistors

#### Wirewound Resistors

- Vitreous, Cemented, and Housed Resistors
- Braking and Neutral Grounding Resistors
- Custom Load Banks

#### Power Metal Strip® Resistors

#### Battery Management Shunts

#### Thermo Fuses

#### Chip Fuses

#### Pryotechnic Initiators / Ignitors

#### Variable Resistors

- Cermet Variable Resistors
- Wirewound Variable Resistors
- Conductive Plastic Variable Resistors
- Contactless Potentiometers
- Hall Effect Position Sensors
- Precision Magnetic Encoders

#### Networks/Arrays

#### Non-Linear Resistors

- NTC Thermistors
- PTC Thermistors
- Varistors

#### Magnetics

- Inductors
- Wireless Charging Coils
- Transformers

### Capacitors Segment

#### Tantalum Capacitors

- Molded Chip Tantalum Capacitors
- Coated Chip Tantalum Capacitors
- Solid Through-Hole Tantalum Capacitors
- Wet Tantalum Capacitors

#### Ceramic Capacitors

- Multilayer Chip Capacitors
- Disc Capacitors

#### Film Capacitors

- High Speed
- IGBT and MOSFET Driver

Solid-State Relays  
LEDs and 7-Segment Displays  
Infrared Data Transceiver Modules  
Custom Products

Power Capacitors  
Heavy-Current Capacitors  
Aluminum Capacitors

We promote our ability to provide "one-stop shop" service to customers, whereby they can streamline their design and purchasing processes by ordering multiple types of products from Vishay. Our technical sales force consisting of field application engineers offers customers the complete breadth of the Vishay portfolio for their applications. We aim to use this broad portfolio to increase opportunities to have our components selected and "designed in" to new end products.

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## Product Segments

Our products can be divided into two general classes: semiconductors and passive components. Semiconductors are sometimes referred to as "active components" because they require power to function whereas passive components do not require power to function. Our semiconductor and passive components products are further categorized based on their functionality for financial reporting purposes. See Note 15 to our consolidated financial statements for additional information on revenues, income, and total assets by segment.

### Semiconductors

Our semiconductor products include MOSFETs, Diodes, and Optoelectronic Components. Semiconductors are typically used to perform functions such as switching, amplifying, rectifying, routing, or transmitting electrical signals, power conversion, and power management.

#### MOSFETs Segment

Our MOSFETs business includes both the commodity and non-commodity markets in which we believe that we enjoy a good reputation and strong brand recognition (Siliconix). MOSFETs function as solid-state switches to control power in multiple applications, including mobile phones, notebook and desktop computers, tablet computers, digital cameras, televisions, DC/DC and AC/DC switch mode power supplies, solar inverters, automotive and industrial systems. We are a leader in low-voltage TrenchFET MOSFETs and also offer high-voltage MOSFETs. Our MOSFETs product line includes low- and medium-voltage TrenchFET MOSFETs, high-voltage planar MOSFETs, high voltage Super Junction MOSFETs, power integrated circuits (power ICs), and integrated function power devices. We are one of the technology leaders in MOSFETs, with a tradition of innovation in wafer design, packaging, and performance.

#### Diodes Segment

Our Diodes business is a solid business with a strong market presence in both the commodity and non-commodity markets. The products that comprise our Diodes business represent our broadest product line and include rectifiers, small signal diodes, protection diodes, thyristors/SCRs and power modules. The primary application of rectifiers, found inside the power supplies of virtually all electronic equipment, is to derive DC power from the AC supply. Vishay is the worldwide leader in rectifiers, having a broad technology base and a good position in automotive, industrial, computing and consumer markets. Our rectifier innovations include TMBS® using Trench MOS barrier Schottky rectifier technology, which reduces power loss and improves the efficiency of end systems and eSMP®, the best in class high-current density surface mount packages. Our wide selection of small signal diodes consist of the following functions: switching, tuning, band-switching, RF attenuation and voltage regulation (Zener). They are available in various glass and plastic packaging options and generally are used in electronic circuits, where small currents and high frequencies are involved. Vishay is also one of the market leaders for TVS (transient voltage suppressor) diodes. The portfolio of protection diodes includes ESD protection and EMI filter. Our thyristors or SCR (silicon-controlled rectifiers) are very popular in the industrial high-voltage AC power control applications. The fast growing markets of solar inverter and HEV/EV are the focus of our power modules business (IGBT or MOSFET modules). These modules can be customized to fit in different customer design requirements.

### Optoelectronics Components Segment

Our Optoelectronic Components business has a strong market presence in both the commodity and non-commodity markets. Optoelectronic components emit light, detect light, or do both. Our broad range of standard and customer specific optoelectronic components includes infrared ("IR") emitters and detectors, IR remote control receivers, optocouplers, solid-state relays, optical sensors, light-emitting diodes ("LEDs"), 7-segment displays, and IR data transceiver modules (IrDA®). Our IR remote control receivers are designed for use in infrared remote control, data transmission, and light barrier applications in end products including televisions, set-top boxes, notebook computers, and audio systems. We are the leading manufacturer of IR remote control receivers. Our optocouplers electrically isolate input and output signals. Uses include switch-mode power supplies, consumer electronics, telecommunications equipment, solar inverters, and industrial systems. Our IR data transceiver modules are used for short range, two-way, high-speed, and secure wireless data transfer between electronic devices such as home medical appliances, mobile phones, industrial data loggers, and metering. Our LEDs are designed for backlighting and illumination in automotive and other applications. Our LEDs include ultra-bright as well as small surface-mount packages, with products available in all standard colors including white.

#### Passive components

Our passive components include resistors, capacitors, and magnetics such as inductors and transformers. Passive components are used to store electrical charges, to limit or resist electrical current, and to help in filtering, surge suppression, measurement, timing, and tuning applications.

### Resistors and Inductors Segment

Our Resistors and Inductors business is our original business. We maintain the broadest portfolio of resistor products worldwide. The business is solid, predictable, and growing at relatively stable selling prices. We are a market leader with a strong technology base, many specialty products, and strong brand recognition (such as our Dale, Draloric, Beyschlag, Sfernice, and HiRel Systems brands). We focus on higher value markets in specialized industries, while maintaining a complete portfolio of commodity products. We do not aim to be the volume leader in commodity markets.

Resistors are basic components used in all forms of electronic circuitry to adjust and regulate levels of voltage and current. They vary widely in precision and cost, and are manufactured from numerous materials and in many forms. Linear resistive components are classified as variable or fixed, depending on whether or not their resistance is adjustable. Non-linear resistors function by varying in resistance under influence of temperature (thermistors) or voltage (varistors). They can be used in temperature-measuring applications or as current or voltage-limiting devices. We manufacture virtually all types of fixed resistors, both in discrete and network forms, as well as many variable types.

Vishay resistor innovations include Power Metal Strip® technology. These resistors feature very low resistance and are used to measure changes in current flow (current sensing) or divert current flow (shunting).

Inductors use an internal magnetic field to change AC current phase and resist AC current. Inductor applications include controlling AC current and voltage, filtering out unwanted electrical signals, and energy storage. Vishay inductor innovations include IHLP® low-profile, high-current inductor technology with industry-leading specifications, which is patented and generates royalty revenue. Our low-profile, high-current inductors save circuit board space and power in voltage regulator module ("VRM") and DC to DC converter applications. In addition, we are a worldwide leader in custom magnetic solutions focusing on high performance and high reliability. This field has been substantially strengthened, with the 2012 acquisition of HiRel Systems, broadening our portfolio, customer, and market segment reach.





## Capacitors Segment

Our Capacitors business consists of a broad range of reliable, high-quality products. We have a strong presence worldwide in specialty markets based on our product performance and reliability and strong brand recognition (including our Sprague, Vitramon, Roederstein, BCcomponents, and ESTA brands). We focus on higher value markets in specialized industries, while maintaining a complete portfolio of commodity products. We do not aim to be the volume leader in commodity markets. Capacitors are used in almost all electronic circuits. They store energy and discharge it when needed. Important applications for capacitors include electronic filtering for linear and switching power supplies; decoupling and bypass of electronic signals for integrated circuits and circuit boards; and frequency control, timing and conditioning of electronic signals for a broad range of applications.

We manufacture products based on all major capacitor technologies: tantalum (molded chip tantalum, coated chip tantalum, solid through-hole tantalum, and wet tantalum), ceramic (multilayer chip and ceramic disc), film, power, heavy-current, and aluminum electrolytic. Our capacitors range from tiny surface-mount devices for hearing aids and mobile devices to large power correction capacitors used in renewable energy, heavy industry, and electrical power grids. We are a recognized technology leader in many product ranges, securing our strong position in military and medical markets, and in a wide range of industrial and automotive applications. Our wet tantalum and MicroTan™ technologies are market leaders.

## Military Qualifications

We have qualified certain of our products under various military specifications approved and monitored by United States government agencies, and under certain European military specifications. Qualification levels are based in part upon the rate of failure of products. In order to maintain the classification level of a product, we must continuously perform tests on the product and the results of these tests must be reported to the government agencies. If the product fails to meet the requirements for the applicable classification level, the product's classification may be reduced to a lower level. During the time that the classification level is reduced for a product with military application, net revenues and earnings attributable to that product may be adversely affected.

## Manufacturing Operations

In order to better serve our customers, we maintain production facilities in locations where we market the bulk of our products, such as the United States, Germany, and Asia. To optimize production efficiencies, we have whenever practicable established manufacturing facilities in countries, such as the Czech Republic, Hungary, India, Israel, Malaysia, Mexico, the People's Republic of China, and the Philippines, where we can benefit from lower labor and tax costs and also benefit from various government incentives, including grants and tax relief.

One of our most sophisticated manufacturing operations is the production of power semiconductor components. This manufacturing process involves two phases of production: wafer fabrication and assembly (or packaging). Wafer fabrication subjects silicon wafers to various thermal, metallurgical, and chemical process steps that change their electrical and physical properties. These process steps define cells or circuits within numerous individual devices (termed "dies" or "chips") on each wafer. Assembly is the sequence of production steps that divides the wafer into individual chips and encloses the chips in structures (termed "packages") that make them usable in a circuit. Both wafer fabrication and assembly phases incorporate wafer level and device level electrical testing to ensure that device design integrity has been achieved.

In the United States, our manufacturing facilities are located in California, Minnesota, Nebraska, New Hampshire, New York, Rhode Island, South Dakota, Vermont, and Wisconsin. In Asia, our main manufacturing facilities are located in the People's Republic of China, the Republic of China (Taiwan), India, and Malaysia. In Europe, our main manufacturing facilities are located in Germany, France, and the Czech Republic. We have substantial manufacturing facilities in Israel (see "Israeli Operations" below). We also have manufacturing facilities in Austria, Dominican

Republic, Hungary, Italy, Mexico, the Netherlands, Portugal, and the Philippines. Over the past several years, we have invested substantial resources to increase the efficiency of our plants, which we believe will further reduce production costs.

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The majority of our manufacturing operations have received ISO 9001 certification and others are actively pursuing such approval. ISO 9001 is a comprehensive set of quality program standards developed by the International Standards Organization.

See Note 15 to our consolidated financial statements for financial information by geographic area.

#### Sources of Supplies

Although most materials incorporated in our products are available from a number of sources, certain materials, including plastics and metals, are available only from a relatively limited number of suppliers or are subject to significant price volatility.

Silicon wafers are the most important raw material for the manufacturing of our semiconductor products. Silicon wafers are manufactured from high-purity silicon, a metalloid. There have at times been industry-wide shortages of high-purity silicon resulting primarily from growing demand of the electronic component and solar power industries, and limited growth in high-purity silicon manufacturing capacities. Shifts in demand for high-purity silicon and in turn, silicon wafers, have resulted in significant fluctuation in prices of silicon wafers.

We are a major consumer of the world's annual production of tantalum, a metal used in the manufacturing of tantalum capacitors. There are few suppliers that process tantalum ore into capacitor grade tantalum powder. We acquire tantalum powder and wire from all of them under short-term commitments.

Certain materials, in addition to tantalum and including tin, tungsten, and gold are available only from a relatively limited number of suppliers, the source for which may be in the Democratic Republic of the Congo or an adjoining country. We are conducting due diligence on the source and custody of such materials.

Palladium, a metal used to produce multi-layer ceramic capacitors, is currently found primarily in South Africa and Russia. Palladium is a commodity metal that is subject to price volatility. We periodically enter into short-term commitments to purchase palladium.

Certain metals used in the manufacture of our products, such as copper, are traded on active markets, and can be subject to significant price volatility. Our policy is to enter into short-term commitments to purchase defined portions of annual consumption of these metals if market prices decline below budget.

#### Israeli Operations

We have substantial manufacturing operations in Israel, where we benefit from the government's grant and tax incentive programs. These programs have contributed substantially, predominantly in previous years, to our growth and profitability.

The current benefits derived under these programs are not material to our consolidated results. Because of our significant presence in Israel, the availability of these incentive programs could have a significant positive effect on us if we relocate manufacturing capacity or develop new product lines there. However, there are no substantial plans that would allow us to earn additional benefits.

We could be materially adversely affected if events were to occur in the Middle East that interfered with our operations in Israel. However, we have not experienced any material interruption in our Israeli operations during our 43 years of operations there, in spite of several Middle East crises, including wars.

#### Inventory and Backlog

We manufacture both standardized products and those designed and produced to meet customer specifications. We maintain an inventory of standardized components and monitor the backlog of outstanding orders for our products.

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We include in our backlog only open orders that we expect to ship in the next twelve months. Many of our customers encounter uncertain and changing demand for their products. They typically order products from us based on their forecasts. If demand falls below customers' forecasts, or if customers do not control their inventory effectively, they may cancel or reschedule the shipments included in our backlog, in many instances without the payment of any penalty. Therefore, our backlog at any point in time is not necessarily indicative of the results to be expected for future periods.

#### Customers and Marketing

We sell our products to original equipment manufacturers ("OEMs"), electronic manufacturing services ("EMS") companies, which manufacture for OEMs on an outsourcing basis, and independent distributors that maintain large inventories of electronic components for resale to OEMs and EMS companies. The distribution of sales by customer type for 2013 is shown below:

Distributors	54%
OEMs	39%
EMS companies	7%

Our sales organizations are regionally based. While our sales and support procedures are typically similar across all regions, we remain flexible in our ability to offer programs tailored to our customers' specific support requirements in each local area. The aim of our sales organizations is supporting our customers across all product lines, developing new design wins, negotiating pricing and contracts, and providing general commercial support as would normally be expected of a large multi-national sales force.

We have an established Strategic Global Account program, which provides each of our top customers with a dedicated Strategic Global Account Manager. Our Strategic Global Account Managers are typically highly experienced salesmen or saleswomen who are capable of providing key customers with the coordination and management visibility required in a complex multi-product business relationship. They typically coordinate the sales, pricing, contract, logistic, quality, and other aspects of the customer's business requirements. The Strategic Global Account Manager normally is the focal point of communication between Vishay and our main customers. We maintain a similar program for our strategic distributors as well.

We work with our customers so that our products are incorporated into the design of electronic equipment at the earliest stages of development and to provide technical and applications support. In addition to our staff of direct field sales personnel, independent manufacturers' representatives, and distributors, our Business Development group maintains teams of dedicated Field Application Engineers ("FAEs") to assist our customers in solving technical problems and in developing products to meet specific customer application needs using our entire product portfolio to provide support for our customers' engineering needs. Organized by market segment, our Business Development FAEs bring specific knowledge of component applications in their areas of expertise in the automotive, telecommunications, computer, consumer/entertainment, industrial, peripherals, digital consumer, and other market segments. With the ultimate goal of a Vishay "design-in" – the process by which our customers specify a Vishay component in their products – this program offers our customers enhanced access to all Vishay technologies while at the same time increasing design wins, and ultimately sales, for us. Most importantly, the process is closely monitored via a proprietary database developed by our Business Development group. Our database captures specific design activities and allows for real-time measurement of new business potential for our management team.

Our top 30 customers have been relatively stable despite not having long-term commitments to purchase our products. With selected customers, we have signed longer term (greater than one year) contracts for specific products. Net revenues from our top 30 customers represent approximately 70% of our total net revenues. No single customer comprises more than 10% of our total net revenues.

In certain areas we also work with sales representatives. The commission expense for these sales representatives is not material.

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## Competition

We face strong competition in various product lines from both domestic and foreign manufacturers. Our primary competitors by product type include:

- MOSFETs: Fairchild Semiconductor, Infineon, International Rectifier, NXP Semiconductors, ON Semiconductor, Rohm, STMicroelectronics, Toshiba.
- Diodes: Diodes Inc., Infineon, NXP Semiconductors, ON Semiconductor, STMicroelectronics.
- Optoelectronic Components: Avago, OSRAM Opto Semiconductors, Rohm, Sharp, Toshiba.
- Resistors and Inductors: KOA, Murata, Panasonic, Rohm, TDK-EPCOS, Yageo.
- Capacitors: AVX, KEMET, Murata, Nichicon, Panasonic, TDK-EPCOS, Yageo.

There are many other companies that produce products in the markets in which we compete.

Our competitive position depends on our ability to maintain a competitive advantage on the basis of product quality, know-how, proprietary data, market knowledge, service capability, technological innovation, business reputation, and price competitiveness. Our sales and marketing programs aim to compete by offering our customers a broad range of world-class technologies and products, superior global sales and distribution support, and a secure and multi-location source of product supply.

## Research and Development

Many of our products and manufacturing techniques, technologies, and packaging methods have been invented, designed, and developed by Dr. Felix Zandman, our engineers, and our scientists. We maintain strategically placed design centers where proximity to customers enables us to more easily gauge and satisfy the needs of local markets. These design centers are located predominantly in the United States, Germany, Italy, Israel, the People's Republic of China, France, and the Republic of China (Taiwan).

We also maintain research and development personnel and promote programs at a number of our production facilities to develop new products and new applications of existing products and to improve manufacturing processes and technologies. This decentralized system encourages product development at individual manufacturing facilities, closer to our customers.

## Patents and Licenses

We have made a significant investment in securing intellectual property protection for our technology and products. We seek to protect our technology by, among other things, filing patent applications for technology considered important to the development of our business. We also rely upon trade secrets, unpatented know-how, continuing technological innovation, and the aggressive pursuit of licensing opportunities to help develop and maintain our competitive position.

Our ability to compete effectively with other companies depends, in part, on our ability to maintain the proprietary nature of our technology. Although we have been awarded, have filed applications for, or have been licensed under, numerous patents in the United States and other countries, there can be no assurance concerning the degree of protection afforded by these patents or the likelihood that pending patents will be issued.





We require all of our technical, research and development, sales and marketing, and management employees and most consultants and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information developed or made known to the entity or individual during the course of the entity's or individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. Substantially all of our technical, research and development, sales and marketing, and management employees have entered into agreements providing for the assignment to us of rights to inventions made by them while employed by us.

When we believe other companies are misappropriating our intellectual property rights, we vigorously enforce those rights through legal action, and we intend to continue to do so. See Item 3, "Legal Proceedings."

Although we have numerous United States and foreign patents covering certain of our products and manufacturing processes, no particular patent is considered individually material to our business.

#### Environment, Health and Safety

We have adopted an Environmental Health and Safety Corporate Policy that commits us to achieve and maintain compliance with applicable environmental laws, to promote proper management of hazardous materials for the safety of our employees and the protection of the environment, and to minimize the hazardous materials generated in the course of our operations. This policy is implemented with accountability directly to the Board of Directors. In addition, our manufacturing operations are subject to various federal, state, and local laws restricting discharge of materials into the environment.

We are involved in environmental remediation programs at various sites currently or formerly owned by us and our subsidiaries both within and outside of the U.S., in addition to involvement as a potentially responsible party ("PRP") at Superfund sites. Certain obligations as a PRP have arisen in connection with business acquisitions. The remediation programs are on-going and the ultimate cost of site cleanup is difficult to predict given the uncertainties regarding the extent of the required cleanup, the interpretation of applicable laws and regulations and alternative cleanup methods. See Item 3, "Legal Proceedings."

We are not involved in any pending or threatened proceedings that would require curtailment of our operations. We continually expend funds to ensure that our facilities comply with applicable environmental regulations. While we believe that we are in material compliance with applicable environmental laws, we cannot accurately predict future developments and do not necessarily have knowledge of all past occurrences on sites that we currently occupy. More stringent environmental regulations may be enacted in the future, and we cannot determine the modifications, if any, in our operations that any such future regulations might require, or the cost of compliance with such regulations. Moreover, the risk of environmental liability and remediation costs is inherent in the nature of our business and, therefore, there can be no assurance that material environmental costs, including remediation costs, will not arise in the future.

With each acquisition, we attempt to identify potential environmental concerns and to minimize, or obtain indemnification for, the environmental matters we may be required to address. In addition, we establish reserves for specifically identified potential environmental liabilities. We believe that the reserves we have established are adequate. Nevertheless, we have in the past and may in the future inherit certain pre-existing environmental liabilities, generally based on successor liability doctrines. Although we have never been involved in any environmental matter that has had a material adverse impact on our overall operations, there can be no assurance that in connection with any past or future acquisition we will not be obligated to address environmental matters that could have a material adverse impact on our operations.

## Employees

As of December 31, 2013, we employed approximately 22,500 full time employees, of whom approximately 89% were located outside the United States. Our future success is substantially dependent on our ability to attract and retain highly qualified technical and administrative personnel. Some of our employees outside the United States are members of trade unions, and employees at one U.S. facility are represented by a trade union. Our relationship with our employees is generally good. However, no assurance can be given that, if we continue to restructure our operations and/or reduce employee hours in response to changing economic conditions, labor unrest or strikes will not occur.

## Company Information and Website

We file annual, quarterly, and current reports, proxy statements, and other documents with the Securities and Exchange Commission ("SEC") under the Securities Exchange Act of 1934. The public may read and copy any materials that we file with the SEC at the SEC's Public Reference Room at Station Place, 100 F Street, N.E., Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Also, the SEC maintains an Internet website that contains reports, proxy and information statements, and other information regarding issuers, including us, that file electronically with the SEC. The public can obtain any documents that we file with the SEC at <http://www.sec.gov>.

In addition, our company website can be found on the Internet at [www.vishay.com](http://www.vishay.com). The website contains information about us and our operations. Copies of each of our filings with the SEC on Form 10-K, Form 10-Q, and Form 8-K, and all amendments to those reports, can be viewed and downloaded free of charge as soon as reasonably practicable after the reports and amendments are electronically filed with or furnished to the SEC. To view the reports, access [ir.vishay.com](http://ir.vishay.com) and click on "SEC Filings."

The following corporate governance related documents are also available on our website:

- Corporate Governance Principles
- Code of Business Conduct and Ethics
  - Code of Ethics Applicable to the Company's Chief Executive Officer, Chief Financial Officer, Principal Accounting Officer or Controller and Financial Managers
- Audit Committee Charter
- Nominating and Corporate Governance Committee Charter
- Compensation Committee Charter
- Strategic Affairs Committee Charter
- Policy on Director Attendance at Annual Meetings
- Nominating and Corporate Governance Committee Policy Regarding Qualification of Directors
- Procedures for Securityholders' Submissions of Nominating Recommendations
- Securityholder Communications with Directors and Interested Party Communication with Non-Management Directors
- Whistleblower and Ethics Hotline Procedures
- Related Party Transaction Policy

To view these documents, access [ir.vishay.com](http://ir.vishay.com) and click on "Corporate Governance."

Any of the above documents can also be obtained in print by any stockholder upon request to our Investor Relations Department at the following address:

Corporate Investor Relations  
Vishay Intertechnology, Inc.

63 Lancaster Avenue  
Malvern, PA 19355-2143  
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## Item 1A. RISK FACTORS

From time to time, information provided by us, including but not limited to statements in this report, or other statements made by or on our behalf, may contain "forward-looking" information within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements involve a number of risks, uncertainties, and contingencies, many of which are beyond our control, which may cause actual results, performance, or achievements to differ materially from those anticipated. Set forth below are important factors that could cause our results, performance, or achievements to differ materially from those in any forward-looking statements made by us or on our behalf. You should understand that it is not possible to predict or identify all such factors. Consequently, you should not consider the following to be a complete discussion of all potential risks or uncertainties.

Risks relating to our business generally

### Our business is cyclical and the periods of decline we recently experienced may resume and may become more pronounced.

The electronic component industry is highly cyclical and experiences periods of decline from time to time. We and others in the electronic component industry have experienced these conditions in the recent past and cannot predict when we may experience such downturns in the future. While we believe that a recovery from the recent global downturn is underway, there is no assurance that the recovery will continue at its current pace or at all, or that the conditions that contributed to the recent recessionary environment have in fact abated. A decline in product demand on a global basis could result in order cancellations and deferrals, lower average selling prices, and a material and adverse impact on our results of operations. These declines in demand are driven by market conditions in the end markets for our products. Changes in the demand mix, needed technologies, and these end markets may adversely affect our ability to match our products, inventory, and capacity to meet customer demand and could adversely affect our operating results and financial condition. A slowdown in demand or recessionary trends in the global economy makes it more difficult for us to predict our future sales and manage our operations, and could adversely impact our results of operations.

### We have incurred and will continue to incur restructuring costs and associated asset write-downs.

To remain competitive, particularly when business conditions are difficult, we sometimes attempt to reduce our cost structure by restructuring our existing businesses, where we seek to achieve synergies, eliminate redundant facilities and staff positions, and move operations, where possible, to jurisdictions with lower labor costs. On October 28, 2013, we announced various cost reduction programs as part of our continuous efforts to improve efficiency and operating performance. The programs primarily focus on a plan to enhance the competitiveness of our MOSFETs segment and a voluntary separation / early retirement offer to certain employees Company-wide. We also plan to implement two other smaller cost reduction programs concerning the manufacturing of products within our Diodes segment. The expenses associated with the programs have been and will continue to be recorded as they become recognizable under generally accepted accounting principles ("GAAP"). Complete implementation of all of the programs is expected to occur before the end of the first fiscal quarter of 2016.

Additionally, our long-term strategy includes growing through the integration of acquired businesses, and GAAP requires plant closure and employee termination costs that we incur in connection with our acquisition activities to be recorded as expenses in our consolidated statement of operations, as such expenses are incurred. For this reason, we expect to have some level of future restructuring expenses due to acquisitions.

Our business is cyclical, and in periods of a rising economy we may experience intense demand for our products. If our restructuring activities result in us not being able to satisfy the intense demand from our customers during a rising economy and our competitors sufficiently expand production, we could lose customers and/or market share. These losses could have an adverse effect on our operations, financial condition, and results of operations.

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In the past we have grown through successful integration of acquired businesses, but this may not continue.

Our long-term historical growth in revenues and net earnings has resulted in large part from our strategy of expansion through acquisitions. Despite our plan to continue to grow, in part, through targeted acquisitions, we may be unable to continue to identify, have the financial capabilities to acquire, or successfully complete transactions with suitable acquisition candidates. We are subject to various U.S. and foreign competition laws and regulations that may affect our ability to complete certain acquisitions. Also, if an acquired business fails to operate as anticipated, cannot be successfully integrated with our other businesses, or we cannot effectively mitigate the assumed, contingent, and unknown liabilities acquired, our results of operations, financial condition, enterprise value, market value, and prospects could all be materially adversely affected.

Significant fluctuations in interest rates could adversely affect our results of operations and financial position.

We are exposed to changes in interest rates as a result of our borrowing activities and our cash balances. Our credit facility and our exchangeable unsecured notes due 2102 bear interest at variable rates based on LIBOR. A significant increase in LIBOR would significantly increase our interest expense. A general increase in interest rates would be largely offset by an increase in interest income earned on our cash and short-term investment balances, which are currently greater than our debt balances. However, there can be no assurance that the interest rate earned on cash and short-term investments will move in tandem with the interest rate paid on our variable rate debt.

Our debt levels have increased and may continue to increase, which could adversely affect the perception in the financial markets of our financial condition.

The recorded value of our outstanding debt increased from approximately \$347 million as of December 31, 2008 to approximately \$365 million as of December 31, 2013, primarily due to the issuance of convertible senior debentures, the proceeds from the sale of which we used to fund repurchases of our common stock. The carrying value of our convertible senior debentures will continue to increase as the discount associated with the debentures is amortized. Additionally, we and our subsidiaries may incur substantial additional debt in the future, subject to the conditions contained in our existing debt instruments, some of which may be secured debt. The marketplace could react negatively to our current debt levels which in turn could affect our share price and also make it more difficult to obtain financing in the future.

Future acquisitions could require us to issue additional indebtedness or equity.

If we were to undertake a substantial acquisition for cash, the acquisition would likely need to be financed in part through bank borrowings or the issuance of public or private debt. This acquisition financing would likely decrease our ratio of earnings to fixed charges and adversely affect other leverage criteria. Under our existing credit facility, we are required to obtain the lenders' consent for certain additional debt financing and to comply with other covenants including the application of specific financial ratios. We cannot make any assurances that the necessary acquisition financing would be available to us on acceptable terms if and when required. If we were to undertake an acquisition for equity, the acquisition may have a dilutive effect on the interests of the holders of our common stock.

Our existing credit facility restricts our current and future operations and requires compliance with certain financial covenants.

Our existing credit facility includes restrictions on, among other things, incurring indebtedness, incurring liens on assets, making investments and acquisitions, making asset sales, and paying cash dividends and making other restricted payments. Our existing credit facility also requires us to comply with other covenants, including the maintenance of specific financial ratios. If we are not in compliance with all of such covenants, the credit facility could be terminated by the lenders, and all amounts outstanding pursuant to the credit facility could become immediately payable. Additionally, our exchangeable unsecured notes due 2102 and our convertible senior debentures

due 2040, due 2041, and due 2042 have cross-default provisions that could accelerate repayment in the event the indebtedness under the credit facility is accelerated.

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To remain successful, we must continue to innovate, and our investments in new technologies may not prove successful.

Our future operating results are dependent on our ability to continually develop, introduce, and market new and innovative products, to modify existing products, to respond to technological change, and to customize certain products to meet customer requirements. There are numerous risks inherent in this process, including the risks that we will be unable to anticipate the direction of technological change or that we will be unable to develop and market new products and applications in a timely fashion to satisfy customer demands. If this occurs, we could lose customers and experience adverse effects on our financial condition and results of operations.

In addition to our own research and development initiatives, we periodically invest in technology start-up enterprises, in which we may acquire a controlling or noncontrolling interest but whose technology would be available to be commercialized by us. There are numerous risks in investments of this nature including the limited operating history of such start-up entities, their need for capital, and their limited or absence of production experience, as well as the risk that their technologies may prove ineffective or fail to gain acceptance in the marketplace. Certain of our historical investments in start-up companies have not succeeded, and there can be no assurance that our current and future investments in start-up enterprises will prove successful.

Our results are sensitive to raw material availability, quality, and cost.

Many of our products require the use of raw materials that are produced in only a limited number of regions around the world or are available from only a limited number of suppliers. Our results of operations may be materially adversely affected if we have difficulty obtaining these raw materials, the quality of available raw materials deteriorates, or there are significant price increases for these raw materials. The determination that any of the raw materials used in our products are conflict minerals originating from the Democratic Republic of the Congo or adjoining countries could increase the probability that we will encounter the challenges noted above, incur additional expenses to comply with government regulations, and face public scrutiny. For periods in which the prices of these raw materials are rising, we may be unable to pass on the increased cost to our customers, which would result in decreased margins for the products in which they are used. For periods in which the prices are declining, we may be required to write down our inventory carrying cost of these raw materials, because we record our inventory at the lower of cost or market. Depending on the extent of the difference between market price and our carrying cost, this write-down could have a material adverse effect on our results of operations.

From time to time there have been short-term market shortages of certain raw materials used in our products. While these shortages have not historically adversely affected our ability to increase production of products containing these materials, they have historically resulted in higher raw material costs for us. We cannot make any assurances that any of these market shortages in the future would not adversely affect our ability to increase production, particularly during periods of growing demand for our products. To assure availability of raw materials in times of shortage, we may enter into long-term supply contracts for these materials, which may prove costly, unnecessary, and burdensome when the shortage abates.

We may not have adequate facilities to satisfy future increases in demand for our products.

Our business is cyclical and in periods of a rising economy, we may experience intense demand for our products. During such periods, we may have difficulty expanding our manufacturing to satisfy demand. Factors which could limit such expansion include delays in procurement of manufacturing equipment, shortages of skilled personnel, and physical constraints on expansion of our facilities. If we are unable to meet our customers' requirements and our competitors sufficiently expand production, we could lose customers and/or market share. These losses could have an adverse effect on our financial condition and results of operations. Also, capacity that we add during upturns in the business cycle may result in excess capacity during periods when demand for our products recede, resulting in inefficient use of capital which could also adversely affect us.



Our ability to compete effectively with other companies depends, in part, on our ability to maintain the proprietary nature of our technology.

Protection of intellectual property often involves complex legal and factual issues. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies are covered by valid and enforceable patents or are effectively maintained as trade secrets. We have applied, and will continue to apply, for patents covering our technologies and products, as we deem appropriate. However, our applications may not result in issued patents. Also, our existing patents and any future patents may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products. Others may independently develop similar or alternative technologies, design around our patented technologies, or may challenge or seek to invalidate our patents. Also, the legal system in certain countries in which we operate may not provide or may not continue to provide sufficient, intellectual property legal protections and remedies.

Litigation regarding patent and other intellectual property rights is prevalent in the electronic components industry, particularly the discrete semiconductor sector. We have on occasion been notified that we may be infringing on patent and other intellectual property rights of others. In addition, customers purchasing components from us have rights to indemnification under certain circumstances if such components violate the intellectual property rights of others. Further, we have observed that in the current business environment, electronic component and semiconductor companies have become more aggressive in asserting and defending patent claims against competitors. We will continue to vigorously defend our intellectual property rights, and may become party to disputes regarding patent licensing and cross patent licensing. Although licenses are generally offered in such situations and we have successfully resolved these situations in the past, there can be no assurance that we will not be subject to future litigation alleging intellectual property rights infringement, or that we will be able to obtain licenses on acceptable terms. An unfavorable outcome regarding one of these matters could have a material adverse effect on our business and results of operations.

We face intense competition in our business, and we market our products to an increasingly concentrated group of customers.

Our business is highly competitive worldwide, with low transportation costs and few import barriers. We compete principally on the bases of product quality and reliability, availability, customer service, technological innovation, timely delivery, and price. The electronic component industry has become increasingly concentrated and globalized in recent years and our major competitors, some of which are larger than us, have significant financial resources and technological capabilities.

Our customers have become increasingly concentrated in recent years, and as a result, their buying power has increased and they have had greater ability to negotiate favorable pricing and terms. This trend has adversely affected our average selling prices, particularly for commodity components.

Our backlog is subject to customer cancellation.

Many of the orders that comprise our backlog may be canceled by our customers without penalty. Our customers may on occasion double and triple order components from multiple sources to ensure timely delivery when demand exceeds global supply. They often cancel orders when business is weak and inventories are excessive, a situation that we experienced during the period of economic slowdown. Therefore, we cannot be certain that the amount of our backlog accurately reflects the level of orders that we will ultimately deliver. Our results of operations could be adversely impacted if customers cancel a material portion of orders in our backlog.

Future changes in our environmental liability and compliance obligations may harm our ability to operate or increase our costs.

Our operations, products and/or product packaging are subject to environmental laws and regulations governing air emissions, wastewater discharges, the handling, disposal and remediation of hazardous substances, wastes and certain chemicals used or generated in our manufacturing processes, employee health and safety labeling or other notifications with respect to the content or other aspects of our processes, products or packaging, restrictions on the use of certain materials in or on design aspects of our products or product packaging, and responsibility for disposal of products or product packaging. We establish reserves for specifically identified potential environmental liabilities. Nevertheless, we have in the past and may in the future inherit certain pre-existing environmental liabilities, generally based on successor liability doctrines, or otherwise incur environmental liabilities. We are involved in remediation programs and related litigation at various current and former properties and at third-party disposal sites both within and outside of the U.S., including involvement as a potentially responsible party at Superfund sites. Although we have never been involved in any environmental matter that has had a material adverse impact on our overall operations, there can be no assurance that in connection with any past or future acquisition, future developments, including related to our remediation programs, or otherwise, we will not be obligated to address environmental matters that could have a material adverse impact on our results of operations. In addition, more stringent environmental regulations may be enacted in the future, and we cannot presently determine the modifications, if any, in our operations that any such future regulations might require, or the cost of compliance with these regulations. In order to resolve liabilities at various sites, we have entered into various administrative orders and consent decrees, some of which may be, under certain conditions, reopened or subject to renegotiation.

Our products are sold to or used in goods sold to the U.S. government and other governments. By virtue of such sales, we are subject to various regulatory requirements and risks in the event of non-compliance.

We sell products under prime and subprime contracts with the U.S. government and other governments. Many of these products are used in military applications. Government contractors must comply with specific procurement regulations and other requirements. These requirements, although customary in government contracts, impact our performance and compliance costs. Failure to comply with these regulations and requirements could result in contract modifications or termination, and the assessment of penalties and fines, which could negatively impact our results of operations and financial condition. Our failure to comply with these regulations and requirements could also lead to suspension or debarment, for cause, from government contracting or subcontracting for a period of time. Among the causes for debarment are violations of various statutes, including those related to procurement integrity, export control, government security regulations, employment practices, protection of the environment, accuracy of records and the recording of costs, and foreign corruption. The termination of a government contract as a result of any of these acts could have a negative impact on our results of operations and financial condition and could have a negative impact on our reputation and ability to procure other government contracts in the future.

We have qualified certain of our products under various military specifications approved and monitored by the United States Defense Electronic Supply Center and under certain European military specifications. These products are assigned certain classification levels. In order to maintain the classification level of a product, we must continuously perform tests on the products and the results of these tests must be reported to governmental agencies. If a product fails to meet the requirements of the applicable classification level, its classification may be reduced to a lower level. A decrease in the classification level for a product with a military application could have an adverse impact on the net revenues and earnings attributable to that product.

Our future success is substantially dependent on our ability to attract and retain highly qualified technical, managerial, marketing, finance, and administrative personnel.

Rapid changes in technologies, frequent new product introductions, and declining average selling prices over product life cycles require us to attract and retain highly qualified personnel to develop and manufacture products that feature

technological innovations and bring them to market on a timely basis. Our complex operations also require us to attract and retain highly qualified administrative personnel in functions such as legal, tax, accounting, financial reporting, auditing, and treasury. The market for personnel with such qualifications is highly competitive. While we have employment agreements with certain of our executives, we have not entered into employment agreements with all of our key personnel.

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The loss of the services of or the failure to effectively recruit qualified personnel could have a material adverse effect on our business.

Interruptions in our information technology systems could adversely affect our business.

We rely on the efficient and uninterrupted operation of complex information technology systems and networks to operate our business. Any significant system or network disruption, including, but not limited to, new system implementations, computer viruses, security breaches, facility issues or energy blackouts could have a material adverse impact on our operations and results of operations. Such network disruption could result in a loss of the confidentiality of our intellectual property or the release of sensitive competitive information or customer or employee personal data. Any loss of such information could harm our competitive position, result in a loss of customer confidence, and cause us to incur significant costs to remedy the damages caused by the disruptions or security breaches. We have implemented protective measures to prevent against and limit the effects of system or network disruptions, but there can be no assurance that such measures will be sufficient to prevent or limit the damage from any future disruptions and any such disruption could have a material adverse impact on our business and results of operations.

Third-party service providers, such as foundries, subcontractors, distributors, and vendors have access to certain portions of our sensitive data. In the event that these service providers do not properly safeguard our data that they hold, security breaches and loss of our data could result. Any such loss of data by our third-party service providers could have a material adverse impact on our business and results of operations.

Risks relating to Vishay's operations outside the United States

We are subject to the risks of political, economic, and military instability in countries outside the United States in which we operate.

We have substantial operations outside the United States, and approximately 75% of our revenues during 2013 were derived from sales to customers outside the United States. Certain of our assets are located, and certain of our products are produced, in countries which are subject to risks of social, political, economic, and military instability. This instability could result in wars, riots, nationalization of industry, currency fluctuation, and labor unrest. These conditions could have an adverse impact on our ability to operate in these regions and, depending on the extent and severity of these conditions, could materially and adversely affect our overall financial condition, results of operations, and our ability to access our liquidity.

Our business has been in operation in Israel for 43 years, where we have substantial manufacturing operations. Although we have never experienced any material interruption in our operations attributable to these factors, in spite of several Middle East crises, including wars, our financial condition and results of operations might be adversely affected if events were to occur in the Middle East that interfered with our operations in Israel.

Our global operations are subject to extensive anti-corruption laws and other regulations.

The U.S. Foreign Corrupt Practices Act and similar foreign anti-corruption laws generally prohibit companies and their intermediaries from making improper payments or providing anything of value to improperly influence foreign government officials for the purpose of obtaining or retaining business, or obtaining an unfair advantage. Recent years have seen a substantial increase in the global enforcement of anti-corruption laws. Our continued operation and expansion outside the United States, including in developing countries, could increase the risk of such violations or violations under other regulations relating to limitations on or licenses required for sales made to customers located in certain countries. Violations of these laws may result in severe criminal or civil sanctions, could disrupt our business, and result in a material adverse effect on our reputation, business and results of operations or financial condition.



We obtain substantial benefits by operating in Israel, but these benefits may not continue.

We have substantial manufacturing operations in Israel, where we benefit from the Israeli government's grant and tax incentive programs. These programs have contributed substantially, predominantly in previous years, to our growth and profitability. There can also be no assurance that in the future the Israeli government will continue to offer new grant and tax incentive programs applicable to us or that, if it does, such programs will provide the same level of benefits we have historically received or that we will continue to be eligible to benefit from them. Any significant increase in the Israeli tax rates or reduction or elimination of the Israeli grant programs that have benefited us could have an adverse impact on our results of operations.

We attempt to improve profitability by controlling labor costs, but these activities could result in labor unrest or considerable expense.

Historically, our primary labor cost controlling strategy was to transfer manufacturing operations to countries with lower production costs, such as the Czech Republic, Hungary, India, Israel, Malaysia, Mexico, the People's Republic of China, and the Philippines. We believe that our manufacturing footprint is suitable to serve our customers and end markets, while maintaining lower manufacturing costs. Except for the distinct and targeted restructuring programs announced in the fourth fiscal quarter of 2013, we do not anticipate further transferring any significant existing operations to lower-labor-cost countries; however, acquired operations may be transferred to lower-labor-cost countries when integrated into Vishay. Currently, our primary labor cost controlling strategy involves reducing hours and limiting the use of subcontractors and foundries when demand for our products decreases. Shifting operations to lower-labor-cost countries, reducing hours, or limiting the use of subcontractors and foundries could result in production inefficiencies, higher costs, and/or strikes or other types of labor unrest.

We are subject to foreign currency exchange rate risks which may impact our results of operations.

We are exposed to foreign currency exchange rate risks, particularly due to market values of transactions in currencies other than the functional currencies of certain subsidiaries. From time to time, we utilize forward contracts to hedge a portion of projected cash flows from these exposures. As of December 31, 2013, we did not have any outstanding foreign currency forward exchange contracts.

Our significant foreign subsidiaries are located in Germany, Israel, and Asia. We finance our operations in Europe and certain locations in Asia in local currencies. Our operations in Israel and most significant locations in Asia are largely financed in U.S. dollars, but these subsidiaries also have significant transactions in local currencies. Our exposure to foreign currency risk is mitigated to the extent that the costs incurred and the revenues earned in a particular currency offset one another. Our exposure to foreign currency risk is more pronounced in situations where, for example, production labor costs are predominantly paid in local currencies while the sales revenue for those products is denominated in U.S. dollars. This is particularly the case for products produced in Israel, the Czech Republic, and China.

A change in the mix of the currencies in which we transact our business could have a material effect on results of operations. Furthermore, the timing of cash receipts and disbursements could have a material effect on our results of operations, particularly if there are significant changes in exchange rates in a short period of time.

Approximately 98% of our cash and cash equivalents and short-term investments balances were held by our non-U.S. subsidiaries.

We generate a significant amount of cash and profits from our non-U.S. subsidiaries. As of December 31, 2013, \$1,132 million of our cash and cash equivalents and short-term investments were held in countries outside of the United States. At the present time, we expect the cash and profits generated by foreign subsidiaries will continue to be reinvested outside of the United States indefinitely. Accordingly, no provision has been made for U.S. federal and



state income taxes on these foreign earnings. If cash is needed to be repatriated to the United States, in addition to various foreign country laws regulating the exportation of the cash and profits, we would be subject to additional U.S. income taxes (subject to an adjustment for foreign tax credits), state income taxes, incremental foreign income taxes, and withholding taxes payable to various foreign countries.

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Risks related to our capital structure

The holders of our Class B common stock have effective voting control of our company.

We have two classes of common stock: common stock and Class B common stock. The holders of common stock are entitled to one vote for each share held, while the holders of Class B common stock are entitled to 10 votes for each share held. At December 31, 2013, the holders of Class B common stock held approximately 47.3% of the voting power of Vishay. The ownership of Class B common stock is highly concentrated, and holders of Class B common stock effectively can cause the election of directors and approve other actions as stockholders without the approval of our other stockholders. As a result of the passing of our founder and former Executive Chairman, Dr. Felix Zandman, Mrs. Ruta Zandman (a member of our Board of Directors) controls the voting of, solely or on a shared basis with Marc Zandman (our Executive Chairman) and Ziv Shoshani (a member of our Board of Directors), approximately 89.4% of our Class B common stock, representing 42.4% of the total voting power of our capital stock as of December 31, 2013.

We have a staggered board of directors which could make a takeover of Vishay difficult.

Our staggered board of directors might discourage, delay, or prevent a change in control of our company by a third party and could discourage proxy contests and make it more difficult for stockholders to elect directors and take other corporate actions. Also, as a consequence of our staggered board, directors may not be removed without cause, even though a majority of stockholders may wish to do so.

Our reluctance to issue substantial additional shares in order not to dilute the interests of our existing stockholders could impede growth.

Our overall long-term business strategy has historically included a strong focus on acquisitions financed alternatively through cash on hand, the incurrence of indebtedness, and the issuance of equity, directly or indirectly by refinancing acquisition debt. We may in the future be presented with attractive investment or strategic opportunities that, because of their size and our financial condition at the time, would require the issuance of substantial additional amounts of our common stock. Some or all of our holders of Class B common stock may exert considerable influence over our policies, business and affairs, and in any corporate transaction or other matter, including those described above. If such opportunities were to arise, our Board of Directors may consider the potentially dilutive effect on the interests and voting power of our existing stockholders, including our Class B stockholders. Any resulting reluctance to issue additional shares could impede our future growth.

Our outstanding convertible debentures and exchangeable notes may impact the trading price of our common stock.

We believe that many investors in, and potential purchasers of, convertible or exchangeable debt instruments employ, or seek to employ, a convertible arbitrage strategy with respect to these instruments. Investors that employ a convertible arbitrage strategy with respect to convertible or exchangeable debt instruments typically implement that strategy by selling short the common stock underlying the convertible or exchangeable instrument and dynamically adjusting their short position while they hold the instrument. The implementation of this strategy by investors in our convertible debentures and exchangeable notes, as well as related market regulatory actions, could have a significant impact on the trading prices of our common stock, and the trading prices and liquidity of our convertible debentures and exchangeable notes. The price of our common stock and our convertible debentures and exchangeable notes could also be affected by possible sales of our common stock by investors who view our convertible debentures or exchangeable notes as more attractive means of equity participation in us.

Risks related to the spin-off of the Vishay Precision Group

If the VPG spin-off transaction is determined to be taxable for income tax purposes, we and our stockholders that are subject to U.S. federal, state or local income tax could incur substantial income tax liabilities.

The VPG spin-off transaction was conditioned upon Vishay's receipt of a private letter ruling from the Internal Revenue Service (the "IRS") and an opinion of tax counsel (the "Opinion") confirming that the VPG spin-off transaction should qualify as tax-free to us and our stockholders. The ruling and opinions rely on certain facts, assumptions, and representations from us regarding the past and future conduct of the companies' businesses and other matters. Any inaccuracy in these facts, assumptions, or representations could invalidate the ruling, and we and our stockholders could be subject to substantial income tax liabilities.

Notwithstanding the private letter ruling and Opinion, the IRS or state or local tax authorities (collectively with the IRS, the "Tax Authorities") could determine on audit that the VPG spin-off transaction should be treated as a taxable transaction if the Tax Authorities determine that any of these facts, assumptions, or representations are not correct or have been violated, or for other reasons, including as a result of significant changes in the stock ownership of our company or VPG after the spin-off.

Under the tax matters agreement between our company and VPG, VPG generally would be required to indemnify our company against its taxes resulting from the failure of the VPG spin-off transaction to qualify as tax-free ("Transaction Taxes") as a result of (i) any action by VPG or any of its affiliates following the completion of the spin-off that would reasonably be expected to prevent the spin-off from qualifying as a tax-free transaction to us and our stockholders (ii) any action by VPG or its affiliates following the completion of the spin-off that would be inconsistent with any material information or representation made in connection with the private letter ruling obtained by us from the IRS and/or with the Opinion or (iii) certain other actions taken by VPG. However, in the event that Transaction Taxes are incurred for any other reason, we would not be entitled to indemnification.

In addition, due to the potential impact of significant stock ownership changes on the taxability of the spin-off to us, we and VPG may determine not to enter into transactions that might otherwise be advantageous, such as issuing equity securities to satisfy financing needs or acquiring businesses or assets with equity securities, if such issuances would exceed certain thresholds and such actions could be considered part of a plan or series of related transactions that include the spin-off.

Vishay Precision Group is using the Vishay name under license from us, which could result in product and market confusion or the loss of certain of our rights to the Vishay name.

VPG has a worldwide, perpetual and royalty-free license from us to use the "Vishay" mark as part of its corporate name and in connection with the manufacture, sale, and marketing of the products and services that comprise its measurements and foil resistors businesses. The license of the Vishay name to VPG is important because we anticipate that the success of VPG will depend in no small measure on the reputation of the Vishay brand for these products and services built over many years. Nonetheless, there exists the risk that the use by VPG could cause confusion in the marketplace over the products of the two companies, that any negative publicity associated with a product or service of VPG following the spin-off could be mistakenly attributed to our company or that we could lose our own rights to the "Vishay" mark if we fail to impose sufficient controls on VPG's use of the mark.

## General Economic and Business Risks

In addition to the risks relating specifically to our business, a variety of other factors relating to general conditions could cause actual results, performance, or achievements to differ materially from those expressed in any of our forward-looking statements. These factors include:

- overall economic and business conditions;
  - competitive factors in the industries in which we conduct our business;
- changes in governmental regulation;
- changes in tax requirements, including tax rate changes, new tax laws, and revised tax law interpretations;
- changes in GAAP or interpretations of GAAP by governmental agencies and self-regulatory groups;
- interest rate fluctuations, foreign currency rate fluctuations, and other capital market conditions; and
- economic and political conditions in international markets, including governmental changes and restrictions on the ability to transfer capital across borders.

Our common stock, traded on the New York Stock Exchange, has in the past experienced, and may continue to experience, significant fluctuations in price and volume. We believe that the financial performance and activities of other publicly traded companies in the electronic component industry could cause the price of our common stock to fluctuate substantially without regard to our operating performance.

We operate in a continually changing business environment, and new factors emerge from time to time. Other unknown and unpredictable factors also could have a material adverse effect on our future financial condition and results of operations.

### Item 1B. UNRESOLVED STAFF COMMENTS

None.

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Item 2. PROPERTIES

At December 31, 2013, our business had 49 manufacturing locations. Our manufacturing facilities include owned and leased locations. Some locations include both owned and leased facilities in the same location. The list of manufacturing facilities below excludes manufacturing facilities that are presently idle due to our restructuring activities. See Note 4 to our consolidated financial statements for further information related to our restructuring efforts, as well as additional information in "Cost Management" included in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

In the opinion of management, our properties and equipment generally are in good operating condition and are adequate for our present needs. Owning many of our manufacturing facilities provides us meaningful financial and operating benefits, including long-term stability and a necessary buffer for economic downturns. We do not anticipate difficulty in renewing existing leases as they expire or in finding alternative facilities.

The principal locations of our owned manufacturing facilities, along with available space including administrative offices, are as follows:

<u>Owned Locations</u>	<u>Business Segment</u>	<u>Approx. Available Space (Square Feet)</u>
<u>United States</u>		
Santa Clara, CA	MOSFETs	227,000
Columbus, NE	Resistors & Inductors	158,000
Yankton, SD	Resistors & Inductors	58,000
Warwick, RI	Resistors & Inductors	55,000
Bennington, VT	Capacitors	54,000
Niagara Falls, NY	Resistors & Inductors	38,000
Marshall, MN	Resistors & Inductors	22,000
<u>Non-U.S.</u>		
Israel		
Dimona	Resistors & Inductors and Capacitors	404,000
Migdal Ha'Emek	Capacitors	288,000
Be'er Sheva	Resistors & Inductors and Capacitors	276,000
People's Republic of China		
Tianjin	Diodes	374,000
Shanghai	Optoelectronic Components	195,000
Xi'an	MOSFETS and Diodes	121,000
Germany		
Selb	Resistors & Inductors and Capacitors	306,000
Heide	Resistors & Inductors	161,000
Landshut	Capacitors	72,000
Fichtelberg	Resistors & Inductors	24,000
Czech Republic		
Blatna	Capacitors	191,000
Dolni Rychnov	Resistors & Inductors and Capacitors	182,000
Prachatice	Resistors & Inductors	91,000
Volary	Resistors & Inductors	35,000
Melaka, Malaysia	Optoelectronic Components	480,000

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Republic of China (Taiwan)

Taipei	Diodes	366,000
Kaohsiung	MOSFETs	52,000
France		
Nice	Resistors & Inductors	215,000
Chateau Gontier	Resistors & Inductors	84,000
Hyeres	Resistors & Inductors	65,000

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<u>Owned Locations (continued)</u>	<u>Business Segment</u>	<u>Approx. Available Space (Square Feet)</u>
Loni, India	Resistors & Inductors and Capacitors	350,000
Zwolle, Netherlands	Capacitors	283,000
Famalicao, Portugal	Capacitors	167,000
Vocklabruck, Austria	Diodes	153,000
Manila, Philippines	Diodes and Optoelectronic Components	144,000
Turin, Italy	Diodes	127,000
Budapest, Hungary	Diodes	116,000
Juarez, Mexico	Resistors & Inductors	57,000

The principal locations of our leased manufacturing facilities, along with available space including administrative offices, are as follows:

<u>Leased Locations</u>	<u>Business Segment</u>	<u>Approx. Available Space (Square Feet)</u>
<u>United States</u>		
Ontario, CA	Resistors & Inductors	46,000
Milwaukee, WI	Resistors & Inductors	42,000
Dover, NH	Resistors & Inductors	35,000
Duluth, MN	Resistors & Inductors	10,000
<u>Non-U.S.</u>		
People's Republic of China		
Danshui	Capacitors	446,000
Shanghai	MOSFETS	217,000
Zhuhai	Resistors & Inductors	129,000
Klagenfurt, Austria	Capacitors	130,000
Juarez, Mexico	Resistors & Inductors	128,000
Germany		
Itzehoe	MOSFETS	207,000
Heilbronn	Diodes and Optoelectronic Components	48,000
Mumbai, India	Diodes	34,000
Santo Domingo, Dominican Republic	Resistors & Inductors	16,000
Prestice, Czech Republic	Resistors & Inductors	13,000

### Item 3. LEGAL PROCEEDINGS

From time to time we are involved in routine litigation incidental to our business. Management believes that such matters, either individually or in the aggregate, should not have a material adverse effect on our business or financial condition.

#### Intellectual Property Matters

We are engaged in discussions with various parties regarding patent licensing and cross patent licensing issues. In addition, we have observed that in the current business environment, electronic component and semiconductor companies have become more aggressive in asserting and defending patent claims against competitors. We will

continue to vigorously defend our intellectual property rights, and we may become party to disputes regarding patent licensing and cross patent licensing. An unfavorable outcome regarding one of these intellectual property matters could have a material adverse effect on our business and operating results.

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When we believe other companies are misappropriating our intellectual property rights, we vigorously enforce those rights through legal action, and we intend to continue to do so. During the past few years, we settled several suits which we had initiated to enforce our intellectual property rights. We are receiving royalties on sales of these companies' products which use our technology. We are continuing to assert our legal rights against other parties which we believe are misappropriating our intellectual property rights.

#### Siliconix Stockholder Matters

##### Proctor Litigation

In January 2005, an amended class action complaint was filed in the Superior Court of California on behalf of all non-Vishay stockholders of Siliconix against Vishay, Ernst & Young LLP (the independent registered public accounting firm that audits the Company's financial statements), Dr. Felix Zandman, former Executive Chairman and Chief Technical and Business Development Officer of Vishay, and as a nominal defendant, Siliconix. The suit made various claims against Vishay and the other defendants for actions allegedly taken in respect of Siliconix during the period when Vishay owned an 80.4% interest in Siliconix. The action, which we refer to as the Proctor litigation on account of the lead plaintiff, sought injunctive relief and unspecified damages.

In May 2005, Vishay successfully completed a tender offer to acquire all shares of Siliconix that were not already owned by Vishay. Following the announcement of Vishay's intent to make this tender offer, several purported class-action complaints were filed in the Delaware Court of Chancery. These actions were consolidated into a single class action and a settlement agreement was reached with the plaintiffs, who effectively represented all non-Vishay stockholders of Siliconix. The settlement agreement was approved by the Delaware Court of Chancery in October 2005.

The plaintiffs in the Proctor litigation filed an amended complaint in the Superior Court of California in November 2005. In June 2006, the Delaware Court of Chancery issued a permanent injunction restraining the Proctor plaintiffs from prosecuting the Proctor action. An appeal of the injunction order brought by a former stockholder of Siliconix was dismissed by the Delaware Supreme Court in January 2007.

In June 2006, the Proctor litigation was removed from the Superior Court of California to federal District Court. The District Court granted a motion by Ernst & Young to dismiss the complaint and a motion by Vishay for summary judgment, effective October 15, 2007. The plaintiffs appealed to the Ninth Circuit Court of Appeals and on October 9, 2009, the Court of Appeals affirmed the dismissal of Proctor's class action claim and remanded the remaining two claims to state court. On July 26, 2011, the Superior Court dismissed the remaining claims against Vishay with prejudice. On September 20, 2011, the plaintiffs filed a notice of appeal. On December 11, 2012, the Court of Appeal of the State of California, Sixth Appellate District, heard oral arguments from the parties on the matter. On February 19, 2013, the Court of Appeal affirmed the Superior Court's dismissal of the remaining claims. On April 2, 2013 the plaintiffs filed a petition for review with the Supreme Court of the State of California requesting that the Supreme Court of California review the decision of the Court of Appeal of the State of California affirming the Superior Court's dismissal of the Proctor Litigation. Vishay opposed this petition. The Supreme Court of California denied the plaintiff's petition to review the case on June 12, 2013.

#### Environmental Matters

Vishay is involved in environmental remediation programs at various sites currently or formerly owned by Vishay and its subsidiaries both within and outside of the U.S., in addition to involvement as a potentially responsible party ("PRP") at Superfund sites. Certain obligations as a PRP have arisen in connection with business acquisitions. The remediation programs are on-going and the ultimate cost of site cleanup is difficult to predict given the uncertainties regarding the extent of the required cleanup, the interpretation of applicable laws and regulations, and alternative cleanup methods. See also Note 13 to our consolidated financial statements.



Item 4. MINE SAFETY DISCLOSURES

None.

EXECUTIVE OFFICERS OF THE REGISTRANT

The following table sets forth certain information regarding our executive officers as of February 19, 2014:

<u>Name</u>	<u>Age</u>	<u>Positions Held</u>
Marc Zandman*	52	Executive Chairman of the Board, Chief Business Development Officer, and President, Vishay Israel Ltd.
Dr. Gerald Paul*	65	Chief Executive Officer, President, and Director
Lori Lipcaman	55	Executive Vice President and Chief Financial Officer
Dieter Wunderlich	61	Executive Vice President and Chief Operating Officer
Johan Vandoorn	56	Executive Vice President and Chief Technical Officer
David Valletta	53	Executive Vice President Worldwide Sales

\* Member of the Executive Committee of the Board of Directors.

Marc Zandman was appointed Executive Chairman of the Board and Chief Business Development Officer effective June 5, 2011. Mr. Zandman has served as a Director of Vishay since 2001 and President of Vishay Israel Ltd. since 1998. Mr. Zandman previously was Vice Chairman of the Board from 2003 to June 2011, and Chief Administration Officer from 2007 to June 2011. Mr. Zandman was Group Vice President of Vishay Measurements Group from 2002 to 2004. Mr. Zandman has served in various other capacities with Vishay since 1984. He is the son of the late Dr. Felix Zandman, Vishay's Founder. Mr. Zandman controls, on a shared basis with Ruta Zandman and Ziv Shoshani, approximately 31.2% of the total voting power of our capital stock as of December 31, 2013. He also is non-executive Chairman of Vishay Precision Group, Inc., an independent, publicly-traded company spun-off from Vishay Intertechnology in 2010.

Dr. Gerald Paul was appointed Chief Executive Officer effective January 1, 2005. Dr. Paul has served as a Director of the Company since 1993, and has been President of the Company since March 1998. Dr. Paul also was Chief Operating Officer from 1996 to 2006. Dr. Paul previously was an Executive Vice President of the Company from 1996 to 1998, and President of Vishay Electronic Components, Europe from 1994 to 1996. Dr. Paul has been Managing Director of Vishay Electronic GmbH, a subsidiary of the Company, since 1991. Dr. Paul has been employed by Vishay and a predecessor company since 1978.

Lori Lipcaman was appointed Executive Vice President and Chief Financial Officer of the Company effective September 1, 2011. Ms. Lipcaman had been appointed Executive Vice President Finance and Chief Accounting Officer in September 2008. Previously, she served as Vishay's Corporate Senior Vice President, Operations Controller, from March 1998 to September 2008. Prior to that, she served in various positions of increasing responsibility in finance and controlling since joining the Company in May 1989.

Dieter Wunderlich was appointed Executive Vice President and Chief Operating Officer effective August 1, 2011. Mr. Wunderlich has held various positions of increasing responsibility since Vishay's acquisition of Draloric Electronic GmbH ("Draloric") in 1987, including Executive Vice President – Semiconductors (2009 – 2012). Mr. Wunderlich's experience with Vishay includes worldwide or regional operations leadership roles within each of Vishay's five business reporting segments. Mr. Wunderlich had been employed by Draloric since 1975.



Johan Vandoorn was appointed Executive Vice President and Chief Technical Officer effective August 1, 2011. Mr. Vandoorn is responsible for Vishay's technical development and internal growth programs. Mr. Vandoorn has held various positions of increasing responsibility since Vishay's acquisition of BCcomponents Holdings BV ("BCcomponents") in 2002, including Executive Vice President – Passive Components (2006 – 2012). Mr. Vandoorn had been Vice President – Global Operations of BCcomponents from 2000 until its acquisition by Vishay, and previously worked for Philips Components ("Philips") from 1980 until Philips sold the BCcomponents business to a private equity firm in 1998.

David Valletta serves as Vishay's Executive Vice President – Worldwide Sales, a position he has held since 2007. Mr. Valletta has held various positions of increasing responsibility since Vishay's acquisition of Vitramon in 1994. Prior to joining Vitramon, Mr. Valletta also worked for AVX Corporation. His experience with Vishay includes various positions within the Americas region in direct and distribution sales management and global sales responsibility for the Company's key strategic customers.

## PART II

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

Our common stock is listed on the New York Stock Exchange under the symbol VSH. The following table sets forth the high and low sales prices for our common stock as reported on the New York Stock Exchange composite tape for the indicated fiscal quarters. Holders of record of our common stock totaled approximately 1,100 at February 17, 2014. Because many of the shares of our common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of beneficial owners represented by these stockholders of record.

The following table sets forth, for the indicated periods, the high and low sales prices of our common stock.

	2013		2012	
	High	Low	High	Low
Fourth quarter	\$13.55	\$11.98	Fourth quarter	\$10.63 \$8.21
Third quarter	\$15.39	\$11.93	Third quarter	\$11.04 \$8.10
Second quarter	\$15.14	\$11.54	Second quarter	\$12.65 \$8.76
First quarter	\$13.98	\$10.19	First quarter	\$13.52 \$9.14

At February 17, 2014, we had outstanding 12,129,227 shares of Class B common stock, par value \$.10 per share, each of which entitles the holder to ten votes. The Class B common stock generally is not transferable except in certain very limited instances, and there is no market for those shares. The Class B common stock is convertible, at the option of the holder, into common stock on a share for share basis. As a result of the passing of our founder and former Executive Chairman, Dr. Felix Zandman, Mrs. Ruta Zandman (a member of our Board of Directors) controls the voting of, solely or on a shared basis with Marc Zandman (our Executive Chairman) and Ziv Shoshani (a member of our Board of Directors), approximately 89.4% of our Class B common stock, representing 42.4% of the total voting power of our capital stock.

On February 3, 2014, our Board of Directors instituted a quarterly dividend payment program and declared the first cash dividend in the history of Vishay. The initial cash dividend of \$0.06 per share of common stock and Class B common stock will be paid on March 27, 2014 to stockholders of record at the close of business on March 3, 2014. The amount and timing of any future dividends remains subject to authorization of our Board of Directors. Certain of

our debt obligations contain restrictions as to the payment of cash dividends. See "Financial Condition, Liquidity, and Capital Resources" included in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

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## Stock Performance Graph

The line graph below compares the cumulative total stockholder return on Vishay's common stock over a 5-year period with the returns on the Standard & Poor's MidCap 400 Stock Index (of which Vishay is a component), the Standard & Poor's 500 Stock Index, and a peer group of companies selected by our management. The peer group is made up of five publicly-held manufacturers of semiconductors, resistors, capacitors, and other electronic components.\* Management believes that the product offerings of the companies contained in the peer group are more similar to our product offerings than those of the companies contained in any published industry index. The return of each peer issuer has been weighted according to the respective issuer's stock market capitalization. The line graph assumes that \$100 had been invested at December 31, 2008 and assumes that all dividends were reinvested. The cash equivalent of the shares received in the spin-off of VPG is included in Vishay's results below.

Company Name / Index	Base	Years Ending December 31,				
	Period	2009	2010	2011	2012	2013
Vishay Intertechnology, Inc.	100	244.15	466.69	285.80	337.94	421.55
S&P 500 Index	100	126.46	145.51	148.59	172.37	228.19
S&P MidCap 400 Index	100	137.38	173.98	170.96	201.53	269.04
Peer Group*	100	200.94	257.63	194.98	184.01	219.66

\*AVX Corporation, Fairchild Semiconductor International Inc., International Rectifier Corporation, KEMET Corporation, and ON Semiconductor Corporation.

Item 6. SELECTED FINANCIAL DATA

The following table sets forth selected consolidated financial information as of and for the fiscal years ended December 31, 2013, 2012, 2011, 2010, and 2009. This table should be read in conjunction with our consolidated financial statements and the related notes thereto included elsewhere in this Form 10-K (in thousands, except per share amounts):

	As of and for the years ended December 31,				
	2013 (1)	2012 (2)	2011 (3)	2010 (4)	2009 (5)
<b>Statement of Operations Data:</b>					
Net revenues	\$2,370,979	\$2,230,097	\$2,594,029	\$2,725,092	\$2,042,033
Costs of products sold	1,803,719	1,703,424	1,874,043	1,917,607	1,653,872
Gross profit	567,260	526,673	719,986	807,485	388,161
Selling, general, and administrative expenses	368,542	349,625	367,623	389,547	359,162
Restructuring and severance costs	2,814	-	-	-	37,874
Executive compensation charges (credit)	(1,778 )	-	5,762	-	57,824
Gain on sale of property	-	(12,153 )	-	-	-
Asset write-downs	-	-	-	-	681
Unusual items	-	-	-	-	(28,195 )
Operating income (loss)	197,682	189,201	346,601	417,938	(39,185 )
Other income (expense)					
Interest expense	(23,130 )	(22,604 )	(19,277 )	(11,036 )	(10,321 )
Other	1,853	3,440	3,792	(1,369 )	9,791
Total other income (expense)	(21,277 )	(19,164 )	(15,485 )	(12,405 )	(530 )
Income (loss) before taxes and noncontrolling interest	176,405	170,037	331,116	405,533	(39,715 )
Income taxes	52,636	46,506	91,119	45,240	16,800
Net earnings (loss)	123,769	123,531	239,997	360,293	(56,515 )
Noncontrolling interest	789	793	1,176	1,187	673
Net earnings (loss) attributable to Vishay stockholders	\$122,980	\$122,738	\$238,821	\$359,106	\$(57,188 )
Basic earnings (loss) per share attributable to Vishay stockholders:	\$0.85	\$0.82	\$1.49	\$1.96	\$(0.31 )
Diluted earnings (loss) per share attributable to Vishay stockholders:	\$0.81	\$0.79	\$1.42	\$1.89	\$(0.31 )
Weighted average shares outstanding – basic	144,856	149,020	160,094	183,618	186,605
Weighted average shares outstanding – diluted	151,417	155,844	168,514	190,227	186,605
<b>Balance Sheet Data:</b>					
Total assets	\$3,237,139	\$3,016,277	\$2,993,730	\$2,966,093	\$2,719,546
Long-term debt, less current portion	364,911	392,931	399,054	431,682	320,052
Working capital	1,531,615	1,379,093	1,390,888	1,267,343	1,000,042
Total Vishay stockholders' equity	1,872,756	1,623,328	1,603,006	1,491,731	1,516,446





(1) Includes the results of MCB Industrie, from June 13, 2013. Also includes a net pretax reversal of stock-based compensation expense recognized for the performance-based RSUs scheduled to vest on January 1, 2014, which were originally reported as a separate line item upon the cessation of employment of certain former executive officers in 2011 of \$1,778,000, a \$2,867,000 one-time tax benefit due to a new law enacted in Israel in July 2013 which effectively increases the corporate income tax rate on certain types of income earned after January 1, 2014, and, therefore, increases our deferred tax assets, a \$1,330,000 one-time tax benefit due to the retroactive enactment of the American Taxpayer Relief Act of 2012 that was signed into law on January 2, 2013, partially offset by \$2,814,000 of restructuring and severance costs. These items, net of their related tax consequences, had a positive \$0.02 effect on earnings per share attributable to Vishay stockholders. These items are more fully described in the notes to the consolidated financial statements.

(2) Includes the results of HiRel Systems LLC from January 13, 2012. Also includes net pretax gain on the sale of property in Belgium vacated as a result of restructuring in prior years of \$12,153,000 and a \$4,036,000 one-time tax benefit related to the release of deferred tax valuation allowances in Israel following a merger of several of our wholly-owned subsidiaries in Israel which will allow for the realization of these tax benefits. These items, net of their related tax consequences, had a positive \$0.08 effect on earnings per share attributable to Vishay stockholders. These items are more fully described in the notes to the consolidated financial statements.

Includes the results of the resistor businesses of Huntington Electric from September 28, 2011. Also includes net pretax charges of \$5,762,000 to accelerate the recognition of certain executive compensation expenses upon the passing of our founder and former Executive Chairman of the Board, Dr. Zandman, and for elements of executive compensation payable upon the resignation of our former Chief Financial Officer, Dr. Lior Yahalomi. Also includes \$10,024,000 of one-time tax expense related to the write-down of deferred tax assets in Israel to reflect the lower corporate income tax rate enacted in January 2011 on certain types of income earned after December 31, 2010 and \$6,538,000 of one-time tax benefits recorded in the fourth fiscal quarter primarily related to the release of deferred tax valuation allowances in various jurisdictions. These items, net of their related tax consequences, had a negative \$0.04 effect on earnings per share attributable to Vishay stockholders. These items are more fully described in the notes to the consolidated financial statements.

(3) Includes the results of operations of VPG through the date of the spin-off, July 6, 2010. VPG contributed \$101,089,000 of net revenues, \$9,716,000 of income before taxes, \$5,811,000 of net earnings attributable to Vishay stockholders, and \$0.03 per diluted share attributable to Vishay stockholders to our results in 2010. Also includes a \$59,484,000 one-time tax benefit recorded in the fourth fiscal quarter of 2010, which had a \$0.31 effect on earnings per share attributable to Vishay stockholders.

(4) Includes net pretax charges of \$96,379,000 for restructuring and severance costs, asset write-downs, and executive compensation charges. These charges were partially offset by a \$28,195,000 settlement agreement gain. These items, net of their related tax consequences, had a negative \$0.33 effect on earnings per share attributable to Vishay stockholders. VPG contributed \$171,991,000 of net revenues, \$6,778,000 of income before taxes, \$1,704,000 of net earnings attributable to Vishay stockholders, and \$0.01 per share attributable to Vishay stockholders to our results in 2009.

Management believes that stating the impact on net earnings of items such as businesses that have been spun off, restructuring and severance costs, executive compensation charges (credits), material gains and losses on sales of property, asset write-downs, special tax items, and other items is meaningful to investors because it provides insight with respect to intrinsic operating results of the Company.

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

Overview

Vishay Intertechnology, Inc. is a global manufacturer and supplier of semiconductors and passive components, including power MOSFETs, power integrated circuits, transistors, diodes, optoelectronic components, resistors, capacitors, and inductors. Discrete semiconductors and passive components manufactured by Vishay are used in virtually all types of electronic products, including those in the industrial, computing, automotive, consumer electronic products, telecommunications, power supplies, military/aerospace, and medical industries.

We operate in five product segments, MOSFETs, Diodes, Optoelectronic Components, Resistors & Inductors, and Capacitors.

Since 1985, we have pursued a business strategy of growth through focused research and development and acquisitions. Through this strategy, we have grown to become one of the world's largest manufacturers of discrete semiconductors and passive components. We expect to continue our strategy of acquisitions while also maintaining a prudent capital structure.

We are focused on enhancing stockholder value and improving earnings per share. In addition to our growth plan, we also have opportunistically repurchased our stock. We have repurchased 44.3 million shares of our common stock since the fourth fiscal quarter of 2010, representing 24% of our shares outstanding before we began this initiative. The exchange of \$56.4 million principal amount of our exchangeable unsecured notes by a holder of the notes in the third fiscal quarter of 2013 increased the number of our common shares outstanding by 3.7 million, but did not affect the number of weighted average shares outstanding used for computing diluted earnings per share because our earnings per share computation assumes that the exchangeable unsecured notes would be converted. On February 3, 2014, our Board of Directors instituted a quarterly dividend payment program and declared the first cash dividend in the history of Vishay. The permitted capacity to repurchase shares of stock or pay dividends under our credit facility increases each quarter by an amount equal to 20% of net income. At December 31, 2013, our total permitted capacity to repurchase shares of stock or pay dividends under our credit facility is \$204.6 million. Although we have no current plans, we will continue to evaluate attractive stock repurchase opportunities.

Our business and operating results have been and will continue to be impacted by worldwide economic conditions. Our revenues are dependent on end markets that are impacted by consumer and industrial demand, and our operating results can be adversely affected by reduced demand in those global markets. We continue to monitor the current economic environment and its potential effects on our customers and the end markets that we serve. Additionally, we continue to closely monitor our costs, inventory, and capital resources to respond to changing conditions and to ensure we have the management, business processes, and resources to meet our future needs. In response to the current economic environment, we began implementing a targeted cost reduction program in the fourth fiscal quarter of 2013 to support our profitability without jeopardizing our growth plan. See additional information regarding our competitive strengths and key challenges as disclosed in Part 1.

We utilize several financial metrics, including net revenues, gross profit margin, segment operating income, end-of-period backlog, book-to-bill ratio, inventory turnover, change in average selling prices, net cash and short-term investments (debt), and free cash generation to evaluate the performance and assess the future direction of our business. (See further discussion in "Financial Metrics" and "Financial Condition, Liquidity, and Capital Resources.") Despite the higher net revenues in the second half of 2013, it did not meet management's expectations and nearly all of the remaining key financial metrics were lower compared to the first half of 2013. The year 2013 was slightly

stronger than the year 2012, which resulted in an increase of nearly all key financial metrics compared with the prior year.

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Net revenues for the year ended December 31, 2013 were \$2.371 billion, compared to net revenues of \$2.230 billion and \$2.594 billion for the years ended December 31, 2012 and 2011, respectively. The net earnings attributable to Vishay stockholders for the year ended December 31, 2013 were \$123.0 million, or \$0.81 per diluted share, compared to net earnings attributable to Vishay stockholders of \$122.7 million, or \$0.79 per diluted share, and \$238.8 million, or \$1.42 per diluted share, for the years ended December 31, 2012 and 2011, respectively.

The results of operations for the years ended December 31, 2013, 2012, and 2011 include items affecting comparability as listed in the reconciliation below. The reconciliation below includes certain financial measures which are not recognized in accordance with GAAP, including adjusted net earnings and adjusted net earnings per share. These non-GAAP measures should not be viewed as an alternative to GAAP measures of performance. Non-GAAP measures such as adjusted net earnings and adjusted net earnings per share do not have uniform definitions. These measures, as calculated by Vishay, may not be comparable to similarly titled measures used by other companies. Management believes that these measures are meaningful because they provide insight with respect to our intrinsic operating results. Reconciling items to arrive at adjusted net earnings represent significant charges or credits that are important to understanding our intrinsic operations.

The items affecting comparability are (in thousands, except per share amounts):

	Years ended December 31,		
	2013	2012	2011
GAAP net earnings attributable to Vishay stockholders	\$122,980	\$122,738	\$238,821
<u>Reconciling items affecting operating margin:</u>			
Restructuring and severance costs	\$2,814	\$-	\$-
Executive compensation charges (credit)	(1,778 )	-	5,762
Gain on sale of property	-	(12,153 )	-
<u>Reconciling items affecting tax expense (benefit):</u>			
Tax effects of items above and other one-time tax expense (benefit)	\$(4,552 )	\$95	\$1,383
Adjusted net earnings	\$119,464	\$110,680	\$245,966
Adjusted weighted average diluted shares outstanding	151,417	155,844	168,514
Adjusted earnings per diluted share *	\$0.79	\$0.71	\$1.46

\* Includes add-back of interest on exchangeable notes in periods where the notes are dilutive.

Our results for 2013 and 2012 demonstrate our ability to react quickly to changing economic environments and successfully implement cost reduction measures when necessary to sustain earnings. Despite revenues below our expected run-rate, our pre-tax results were as we would expect based on our business model. Our results for the year ended December 31, 2011 were also affected by macroeconomic concerns, which reduced demand for our products in the last six fiscal months of the year. This period of macroeconomic concern followed a period of favorable business conditions through the first six fiscal months of 2011 in which we achieved significantly higher annualized earnings than before the beginning of the 2008-2009 global economic recession at the same sales volume.

## Financial Metrics

We utilize several financial metrics to evaluate the performance and assess the future direction of our business. These key financial measures and metrics include net revenues, gross profit margin, operating margin, segment operating income, end-of-period backlog, and the book-to-bill ratio. We also monitor changes in inventory turnover and average selling prices ("ASP").

Gross profit margin is computed as gross profit as a percentage of net revenues. Gross profit is generally net revenues less costs of products sold, but also deducts certain other period costs, particularly losses on purchase commitments and inventory write-downs. Losses on purchase commitments and inventory write-downs have the impact of reducing gross profit margin in the period of the charge, but result in improved gross profit margins in subsequent periods by reducing costs of products sold as inventory is used. Gross profit margin is clearly a function of net revenues, but also reflects our cost management programs and our ability to contain fixed costs.

Operating margin is computed as gross profit less operating expenses as a percentage of net revenues. We evaluate business segment performance on segment operating margin. Only dedicated, direct selling, general, and administrative expenses of the segments are included in the calculation of segment operating income. Segment operating margin is computed as operating income less items such as restructuring and severance costs, asset write-downs, goodwill and indefinite-lived intangible asset impairments, inventory write-downs, gain or losses on purchase commitments, global operations, sales and marketing, information systems, finance and administrative groups, and other items, expressed as a percentage of net revenues. We believe that evaluating segment performance excluding such items is meaningful because it provides insight with respect to intrinsic operating results of the segment. Operating margin is clearly a function of net revenues, but also reflects our cost management programs and our ability to contain fixed costs.

End-of-period backlog is one indicator of future revenues. We include in our backlog only open orders that we expect to ship in the next twelve months. If demand falls below customers' forecasts, or if customers do not control their inventory effectively, they may cancel or reschedule the shipments that are included in our backlog, in many instances without the payment of any penalty. Therefore, the backlog is not necessarily indicative of the results to be expected for future periods.

An important indicator of demand in our industry is the book-to-bill ratio, which is the ratio of the amount of product ordered during a period as compared with the product that we ship during that period. A book-to-bill ratio that is greater than one indicates that our backlog is building and that we are likely to see increasing revenues in future periods. Conversely, a book-to-bill ratio that is less than one is an indicator of declining demand and may foretell declining revenues.

We focus on our inventory turnover as a measure of how well we are managing our inventory. We define inventory turnover for a financial reporting period as our costs of products sold for the four fiscal quarters ending on the last day of the reporting period divided by our average inventory (computed using each fiscal quarter-end balance) for this same period. A higher level of inventory turnover reflects more efficient use of our capital.

Pricing in our industry can be volatile. We analyze trends and changes in average selling prices to evaluate likely future pricing. The erosion of average selling prices of established products is typical for semiconductor products. We attempt to offset this deterioration with ongoing cost reduction activities and new product introductions. Our specialty passive components are more resistant to average selling price erosion.

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The quarter-to-quarter trends in these financial metrics can also be an important indicator of the likely direction of our business. The following table shows net revenues, gross profit margin, operating margin, end-of-period backlog, book-to-bill ratio, inventory turnover, and changes in ASP for our business as a whole during the five fiscal quarters beginning with the fourth fiscal quarter of 2012 through the fourth fiscal quarter of 2013 (dollars in thousands):

	4th Quarter 2012	1st Quarter 2013	2nd Quarter 2013	3rd Quarter 2013	4th Quarter 2013
Net revenues	\$530,570	\$554,254	\$597,665	\$602,890	\$616,170
Gross profit margin	20.5 %	24.7 %	23.9 %	23.8 %	23.4 %
Operating margin <sup>(1)</sup>	4.1 %	8.2 %	8.7 %	8.8 %	7.6 %
End-of-period backlog <sup>(2)</sup>	\$506,000	\$578,100	\$646,700	\$613,800	\$611,400
Book-to-bill ratio	0.95	1.14	1.08	0.93	0.99
Inventory turnover	3.99	4.04	4.21	4.08	4.23
Change in ASP vs. prior quarter	-1.6 %	-0.8 %	-1.1 %	-0.6 %	-0.7 %

(1) Operating margin for the second fiscal quarter of 2013 includes a \$1.8 million stock compensation credit related to performance-based stock compensation for certain former executives, following a determination that achievement of the three-year performance targets was no longer probable (see Note 12 to our consolidated financial statements). Operating margin for the fourth fiscal quarter of 2013 includes a \$2.8 million restructuring and severance expense recorded in the fourth fiscal quarter of 2013 (see Note 4 to our consolidated financial statements).

(2) End-of-period backlog for the second fiscal quarter of 2013 reflects a total of \$15.5 million related to the backlog of MCB Industrie S.A. as of the date of acquisition.

See "Financial Metrics by Segment" below for net revenues, book-to-bill ratio, and gross profit margin broken out by segment.

Following a period of low distributor demand and a deteriorating business environment experienced in the second half of 2012, our results improved through the first half of 2013, driven by the restocking of distributor inventory and improving customer demand. The third fiscal quarter of 2013 was burdened by a sudden decrease in orders from distributors and produced disappointing results, but orders from distributors increased in the fourth fiscal quarter, which led to an increase in revenues and backlog versus the prior fiscal quarter and prior year periods. Average selling prices continue to decline primarily due to our commodity semiconductor products.

Gross margins were negatively impacted by additional depreciation associated with our cost reduction programs in the fourth fiscal quarter of 2013. Gross margins improved versus the prior year periods due to the increased sales volume.

Due to the increase in orders, the book-to-bill ratio increased to 0.99 in the fourth fiscal quarter of 2013 from 0.93 in the third fiscal quarter of 2013. The book-to-bill ratios for distributors and original equipment manufacturers ("OEM") were 0.98 and 0.99, respectively, versus ratios of 0.91 and 0.96, respectively, during the third fiscal quarter of 2013.

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Financial Metrics by Segment

The following table shows net revenues, book-to-bill ratio, gross profit margin, and segment operating margin broken out by segment for the five fiscal quarters beginning with the fourth fiscal quarter of 2012 through the fourth fiscal quarter of 2013 (dollars in thousands):

	4th Quarter 2012	1st Quarter 2013	2nd Quarter 2013	3rd Quarter 2013	4th Quarter 2013
<b>MOSFETs</b>					
Net revenues	\$104,156	\$100,888	\$115,563	\$115,168	\$117,858
Book-to-bill ratio	0.90	1.22	1.11	0.94	0.96
Gross profit margin	9.6 %	12.8 %	14.2 %	13.7 %	12.1 %
Segment operating margin	0.1 %	2.8 %	4.9 %	4.6 %	4.5 %
<b>Diodes</b>					
Net revenues	\$116,494	\$125,112	\$140,623	\$140,790	\$140,739
Book-to-bill ratio	1.01	1.28	1.17	0.88	0.98
Gross profit margin	17.3 %	21.8 %	22.3 %	23.0 %	21.4 %
Segment operating margin	12.2 %	17.1 %	18.0 %	18.6 %	16.8 %
<b>Optoelectronic Components</b>					
Net revenues	\$50,267	\$56,226	\$58,397	\$56,847	\$56,775
Book-to-bill ratio	1.03	1.08	1.00	0.87	1.05
Gross profit margin	32.8 %	35.2 %	32.8 %	35.5 %	31.1 %
Segment operating margin	25.8 %	28.8 %	26.6 %	29.0 %	24.7 %
<b>Resistors &amp; Inductors</b>					
Net revenues	\$153,200	\$165,866	\$171,333	\$178,175	\$190,874
Book-to-bill ratio	0.94	1.07	1.04	1.04	0.95
Gross profit margin	28.4 %	31.7 %	31.7 %	30.4 %	31.9 %
Segment operating margin	23.1 %	26.6 %	26.6 %	25.3 %	27.1 %
<b>Capacitors</b>					
Net revenues	\$106,453	\$106,162	\$111,749	\$111,910	\$109,924
Book-to-bill ratio	0.93	1.06	1.05	0.84	1.07



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Gross profit margin	17.5	%	22.8	%	19.2	%	18.6	%	19.6	%
Segment operating margin	12.2	%	17.4	%	13.9	%	13.3	%	14.2	%

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## Acquisition and Divestiture Activity

As part of our growth strategy, we seek to expand through targeted acquisitions of other manufacturers of electronic components that have established positions in major markets, reputations for product quality and reliability, and product lines with which we have substantial marketing and technical expertise. This includes exploring opportunities to acquire targets to gain market share, penetrate different geographic markets, enhance new product development, round out our existing product lines, or grow our high margin niche market businesses. Acquisitions of passive components businesses would likely be made to strengthen and broaden our position as a specialty product supplier; acquisitions of discrete semiconductor businesses would be made to increase market share and to generate synergies. To limit our financial exposure, we have implemented a policy not to pursue acquisitions if our post-acquisition debt would exceed 2.5x our pro forma earnings before interest, taxes, depreciation, and amortization ("EBITDA"). For these purposes, we calculate pro forma EBITDA as the adjusted EBITDA of Vishay and the target for Vishay's four preceding fiscal quarters, with a pro forma adjustment for savings which management estimates would have been achieved had the target been acquired by Vishay at the beginning of the four fiscal quarter period.

Our growth plan targets adding, through acquisitions, an average of approximately \$100 million of revenues per year. Depending on the opportunities available, we might make several smaller acquisitions or a few larger acquisitions. We intend to make such acquisitions using mainly cash, rather than debt or equity, although we do have capacity under our revolving credit facility if necessary. We are not currently targeting acquisitions with a purchase price larger than \$500 million.

There is no assurance that we will be able to identify and acquire additional suitable acquisition candidates at price levels and on terms and conditions we consider acceptable.

### 2013 Activities

On June 13, 2013, we acquired MCB Industrie S.A. ("MCB Industrie") in France, a well-established manufacturer of specialty resistors and sensors, for \$23.0 million, net of cash acquired. The products and technology portfolio acquired is expected to enable us to expand our presence in the European industrial market. For financial reporting purposes, the results of operations for this business have been included in the Resistors & Inductors segment from June 13, 2013.

### 2012 Activities

On January 13, 2012, we acquired HiRel Systems LLC, a leading supplier of high reliability transformers, inductors, coils, and power conversion products, for approximately \$85.5 million. The products and technology portfolio acquired further enhance our inductors portfolio, particularly in the field of custom magnetics for medical, military, aerospace and aviation, and applications in the industrial and commercial field such as renewable energy and test and measurement equipment. For financial reporting purposes, the results of operations for this business have been included in the Resistors & Inductors segment from January 13, 2012.

### 2011 Activities

On September 28, 2011, we acquired the resistor businesses of Huntington Electric, Inc., for approximately \$19.3 million. The businesses acquired further enhance our broad resistor portfolio, particularly in the high power and high current ranges, as well as with resistor assemblies for industrial applications. For financial reporting purposes, the results of operations for these businesses have been included in the Resistors & Inductors segment from September 28, 2011.



## Cost Management

We place a strong emphasis on controlling our costs.

The erosion of average selling prices of established products, particularly our semiconductor products, that is typical of our industry and inflation drive us to continually seek ways to reduce our variable costs. Our variable cost reduction efforts include expending capital to increase automation and maximize the efficiency in our production facilities, consolidating materials purchasing across regions and divisions to achieve economies of scale, materials substitution, maintaining an appropriate mix of in-house production and subcontractor production, increasing wafer size and shrinking dies to maximize efficiency in our semiconductor production processes, and other yield improvement activities.

Our cost management strategy also includes a focus on controlling fixed costs. We seek to maintain selling, general, and administrative expenses at current quarterly levels, excluding foreign currency exchange effects and substantially independent of sales volume changes. Our fixed cost control efforts include automating administrative processes through the expansion of IT systems, gradually migrating to common IT systems across our organization, streamlining our legal entity structure, and reducing our external resource needs by utilizing more cost-effective in-house personnel, while utilizing external resources when day-to-day expertise is not required in-house.

Historically, our primary cost reduction technique was through the transfer of production to the extent possible from high-labor-cost countries, such as the United States and Western Europe, to lower-labor-cost countries, such as the Czech Republic, Hungary, Israel, India, Malaysia, Mexico, the People's Republic of China, and the Philippines. Between 2001 and 2009, we recorded, in the consolidated statements of operations, restructuring and severance costs totaling \$320 million and related asset write-downs totaling \$89 million in order to reduce our cost structure going forward. We also incurred significant costs to restructure and integrate acquired businesses, which was included in the cost of the acquisitions under then-applicable GAAP.

We did not initiate any new restructuring projects in 2010, 2011, or 2012 and thus did not record any restructuring and severance expenses during such periods. Occasionally, our ongoing cost containment activities are not adequate and we must take actions to maintain our cost competitiveness. On October 28, 2013, we announced various cost reduction programs as part of our continuous efforts to improve efficiency and operating performance. We recorded \$2.8 million of restructuring and severance expenses in the fourth fiscal quarter of 2013 for the expenses that were recognizable under GAAP during the period. The remaining expenses associated with the programs will be recorded as they become recognizable under GAAP.

The programs primarily focus on a plan to enhance the competitiveness of our MOSFETs segment and a voluntary separation / early retirement offer to certain employees Company-wide. We also plan to implement two other smaller cost reduction programs concerning the manufacturing of products within our Diodes segment. The programs in total are expected to lower costs by approximately \$36 million per year when fully implemented at expected cash costs of approximately \$32 million.

The project for the MOSFETs segment will extend over a period of approximately two years. The manufacture of wafers for a substantial share of products will be transferred into a more cost-efficient fab. As a consequence, certain other wafer manufacturing currently occurring in-house will be transferred to third-party foundries.

The total cash costs associated with the MOSFETs initiatives, principally severance, are expected to be approximately \$16 million. Once fully implemented, we anticipate that the MOSFETs programs will result in an annual reduction in variable and fixed manufacturing costs of approximately \$23 million at current volumes.

The voluntary separation / early retirement offer has been made to employees worldwide who are eligible because they have met job classification, age, and/or years-of-service criteria as of October 31, 2013. The program benefits vary by country and job classification, but generally offer a cash loyalty bonus. All responses are due, subject to applicable rescission rights, on or before March 28, 2014. Accordingly, we expect most costs associated with this program will be recorded in the first fiscal quarter of 2014. The voluntary separation / early retirement program will not impact manufacturing operations or our growth plan. Our named executive officers (as defined in our proxy statement) and certain other key employees, generally research, development, and engineering personnel, are not eligible for the voluntary separation / early retirement program. The effective separation / retirement date for most eligible employees who accept the offer will be June 30, 2014 or earlier, with a few exceptions to allow for a transition period.

As expected, as of December 31, 2013, only a limited number of employees have tendered irrevocable voluntary termination notices. We have received satisfactory expressions of interest and we expect most formal responses to be received closer to the March 28 deadline.

We estimate that total costs associated with the voluntary separation / early retirement program will be approximately \$13 million, based on the expected acceptance rate. Once fully implemented, the Company anticipates that the program will result in an annual reduction in fixed costs of approximately \$10 million, split approximately one-third in manufacturing and two-thirds in selling, general, and administrative expenses.

Two other smaller cost reduction programs relate to the transfer of production of certain products within our Diodes segment, which will be implemented in the course of 2014. Both programs are connected to production moves, in order to take advantage of lower labor costs in one program and from the consolidation of manufacturing locations in the other. The total cash costs associated with these production transfers are expected to be approximately \$3 million, and will result in annual cost savings of approximately \$3 million when fully implemented.

We believe that our manufacturing footprint is suitable to serve our customers and end markets, while maintaining lower manufacturing costs. Except for the distinct and targeted programs noted above, we do not anticipate any other material restructuring activities during the remainder of 2013 or 2014. As we have demonstrated the past two years, we believe that we can substantially maintain our trained workforce, even at lower manufacturing activity levels, by reducing hours and limiting the use of subcontractors and foundries. However, a continued sluggish business environment for the electronics industry or the recurrence of a significant economic downturn may require us to implement additional restructuring initiatives.

Our long-term strategy includes growth through the integration of acquired businesses, and GAAP requires plant closure and employee termination costs that we incur in connection with our acquisition activities to be recorded as expenses in our consolidated statement of operations, as such expenses are incurred. We have not incurred any material plant closure or employee termination costs related to our acquisitions of Huntington Electric, HiRel Systems, LLC, or MCB Industrie, but we expect to have some level of future restructuring expenses due to acquisitions.

Even as we seek to manage our costs, we continue to pursue our growth plans through investing in capacities for strategic product lines, and through increasing our resources for R&D, technical marketing, and field application engineering; supplemented by opportunistic acquisitions of specialty businesses.

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### Growth Plan

We are focused on enhancing stockholder value and improving earnings per share by growing our business and opportunistically repurchasing our stock. We plan to grow our business through intensified internal growth supplemented by opportunistic acquisitions, while at the same time maintaining a prudent capital structure. To foster intensified internal growth, we have increased our R&D and engineering technical staff by 18% since 2009 and plan to further increase it; we are expanding critical manufacturing capacities; we are increasing our technical field sales force in Asia by about 25% to increase our market access to the industrial segment and increase the design-in of our products in local markets; and we are directing increased funding and focus on developing products to capitalize on the connectivity, mobility, and sustainability growth drivers of our business. These efforts as well as our broad and innovative product portfolio and strong position in distribution worldwide have us positioned very well in case of a dramatic upturn in the economy. Our growth plan also targets adding, through acquisitions, \$100 million of revenues per year on average. Since 2011, we have acquired the specialty product businesses of Huntington Electric, HiRel Systems, LLC, and MCB Industrie and we continue to explore additional acquisition opportunities despite the current economic volatility.

### Foreign Currency Translation

We are exposed to foreign currency exchange rate risks, particularly due to transactions in currencies other than the functional currencies of certain subsidiaries. While we have in the past used forward exchange contracts to hedge a portion of our projected cash flows from these exposures, we generally have not done so in recent periods.

GAAP requires that entities identify the "functional currency" of each of their subsidiaries and measure all elements of the financial statements in that functional currency. A subsidiary's functional currency is the currency of the primary economic environment in which it operates. In cases where a subsidiary is relatively self-contained within a particular country, the local currency is generally deemed to be the functional currency. However, a foreign subsidiary that is a direct and integral component or extension of the parent company's operations generally would have the parent company's currency as its functional currency. We have both situations among our subsidiaries.

### Foreign Subsidiaries which use the Local Currency as the Functional Currency

We finance our operations in Europe and certain locations in Asia in local currencies, and accordingly, these subsidiaries utilize the local currency as their functional currency. For those subsidiaries where the local currency is the functional currency, assets and liabilities in the consolidated balance sheets have been translated at the rate of exchange as of the balance sheet date. Translation adjustments do not impact the results of operations and are reported as a separate component of stockholders' equity.

For those subsidiaries where the local currency is the functional currency, revenues and expenses are translated at the average exchange rate for the year. While the translation of revenues and expenses into U.S. dollars does not directly impact the consolidated statement of operations, the translation effectively increases or decreases the U.S. dollar equivalent of revenues generated and expenses incurred in those foreign currencies. The dollar generally was weaker during the year ended December 31, 2013 compared to the prior year, with the translation of foreign currency revenues and expenses into U.S. dollars generally increasing reported revenues and expenses versus the prior year.

### Foreign Subsidiaries which use the U.S. Dollar as the Functional Currency

Our operations in Israel and most significant locations in Asia are largely financed in U.S. dollars, and accordingly, these subsidiaries utilize the U.S. dollar as their functional currency. For those foreign subsidiaries where the U.S. dollar is the functional currency, all foreign currency financial statement amounts are remeasured into U.S. dollars. Exchange gains and losses arising from remeasurement of foreign currency-denominated monetary assets and liabilities are included in the results of operations. While these subsidiaries transact most business in U.S. dollars, they may have significant costs, particularly payroll-related, which are incurred in the local currency. The cost of products

sold and selling, general, and administrative expense for the year ended December 31, 2013 have been slightly unfavorably impacted (compared to the prior year) by local currency transactions of subsidiaries which use the U.S. dollar as their functional currency.

See Item 7A for additional discussion of foreign currency exchange risk.

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## Critical Accounting Policies and Estimates

Our significant accounting policies are summarized in Note 1 to our consolidated financial statements. We identify here a number of policies that entail significant judgments or estimates.

### Revenue Recognition

We recognize revenue on product sales during the period when the sales process is complete. This generally occurs when products are shipped to the customer in accordance with terms of an agreement of sale, title and risk of loss have been transferred, collectibility is reasonably assured, and pricing is fixed or determinable. For a small percentage of sales where title and risk of loss passes at point of delivery, we recognize revenue upon delivery to the customer, assuming all other criteria for revenue recognition are met. We historically have had agreements with distributors that provided limited rights of product return. We have modified these arrangements to allow distributors a limited credit for unsaleable products, which we term a "scrap allowance." Consistent with industry practice, we also have a "stock, ship and debit" program whereby we consider, and grant at our discretion, requests by distributors for credits on previously purchased products that remain in distributors' inventory, to enable the distributors to offer more competitive pricing. In addition, we have contractual arrangements whereby we provide distributors with protection against price reductions that we initiate after the sale of product to the distributor and prior to resale by the distributor.

We record end of period accruals for each of the programs based upon our estimate of future credits under the programs that will be attributable to sales recorded through the end of the period. We calculate reductions of revenue attributable to each of the programs during any period by computing the change in the accruals from the prior period and adding the credits actually given to distributors during the period under the programs. These procedures require the exercise of significant judgments, but we believe they enable us to reasonably estimate future credits under the programs.

Recording and monitoring of these accruals takes place at our subsidiaries and divisions, with input from sales and marketing personnel and review, assessment, and, if necessary, adjustment by corporate management. While our subsidiaries and divisions utilize different methodologies based on their individual experiences, all of the methodologies take into account certain elements that management considers relevant, such as sales to distributors during the relevant period, inventory levels at the distributors, current and projected market trends and conditions, recent and historical activity under the relevant programs, changes in program policies, and open requests for credits. In our judgment, the different methodologies provide us with equally reliable estimates upon which to base our accruals. We do not track the credits that we record against specific products sold from distributor inventories, so as to directly compare revenue reduction for credits recorded during any period with credits ultimately awarded in respect of products sold during that period. Nevertheless, we believe that we have an adequate basis to assess the reasonableness and reliability of our estimates.

We recognize royalty revenue in accordance with agreed upon terms when performance obligations are satisfied, the amount is fixed or determinable, and collectibility is reasonably assured. We earn royalties at the point of sale of products which incorporate licensed intellectual property. The amount of royalties recognized is determined based on our licensees' periodic reporting to us and judgments and estimates by our management that we believe are reasonable. However, it is possible that actual results may differ from our estimates.



## Inventories and Purchase Commitments

We value our inventories at the lower of cost or market, with cost determined under the first-in, first-out method and market based upon net realizable value. The valuation of our inventories requires our management to make market estimates. For work in process goods, we are required to estimate the cost to completion of the products and the prices at which we will be able to sell the products. For finished goods, we must assess the prices at which we believe the inventory can be sold. Inventories are also adjusted for estimated obsolescence and written down to net realizable value based upon estimates of future demand, technology developments and market conditions.

Certain metals used in the manufacture of our products are traded on active markets, and can be subject to significant price volatility. Our policy is to enter into short-term commitments to purchase defined portions of annual consumption of these metals if market prices decline below budget. We record losses and related liabilities when the contractually obligated purchase price under our purchase commitments exceed quoted market prices for the metals.

## Goodwill

Goodwill represents the excess of the cost of a business acquired over the fair value of the related net assets at the date of acquisition. Goodwill is not amortized but rather tested for impairment at least annually. These impairment tests must be performed more frequently whenever events or changes in circumstances indicate that the asset might be impaired.

When testing goodwill for impairment, we have the option of performing a qualitative assessment before performing the two-step quantitative impairment test. If we determine, on the basis of qualitative factors, that the fair value of the reporting unit is not more likely than not less than the carrying amount, the two-step impairment test is not required. If we determine that the fair value of the reporting unit is more likely than not less than the carrying amount, the two-step impairment test is required. In the first step of the quantitative impairment test, we determine the fair value of the reporting unit and compare the fair value to the net book value of the reporting unit. The fair value of the reporting unit is determined using various valuation techniques, including a comparable companies market multiple approach and a discounted cash flow analysis (an income approach). The comparable companies utilized are generally the members of our peer group included in the presentation of our stock performance graph in Item 5 of our Annual Report on Form 10-K.

In step two of the quantitative impairment test, we determine the implied fair value of goodwill in the same manner as if we had acquired those business units. Specifically, we must allocate the fair value of the reporting unit to all of the assets of that unit, including any unrecognized intangible assets, in a hypothetical calculation that would yield the implied fair value of goodwill. The impairment loss is measured as the difference between the book value of the goodwill and the implied fair value of the goodwill computed in step two.

Fair value of reporting units, and the underlying assets and liabilities of those reporting units, is measured at a point in time, and reflects specific market conditions as of the measurement date. We perform our annual impairment test as of the first day of the fourth fiscal quarter.

The determination of the fair value of the reporting units and the allocation of that value to individual assets and liabilities within those reporting units requires us to make significant estimates and assumptions. These estimates and assumptions primarily include, but are not limited to: the selection of appropriate peer group companies; control premiums appropriate for acquisitions in the industries in which we compete; the discount rate; terminal growth rates; and forecasts of revenue, operating income, depreciation and amortization, and capital expenditures. The allocation requires several analyses to determine fair value of assets and liabilities including, among others, completed technology, tradenames, in-process research and development, customer relationships, and certain property and equipment (valued at replacement costs).

Due to the inherent uncertainty involved in making these estimates, actual financial results could differ from those estimates. In addition, changes in assumptions concerning future financial results or other underlying assumptions could have a significant impact on either the fair value of the reporting unit or the amount of the goodwill impairment charge.

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## Impairment of Long-Lived Assets and Indefinite-Lived Intangible Assets

We assess the impairment of our long-lived assets, other than goodwill and indefinite-lived tradenames, including property and equipment, long-term prepaid assets, and identifiable intangible assets subject to amortization, whenever events or changes in circumstances indicate the carrying value may not be recoverable. Long-lived assets are grouped at the lowest level of independent cash flows and evaluated as a group. Factors we consider important, which could trigger an impairment review, include significant changes in the manner of our use of the assets, changes in historical or projected operating performance, and significant negative economic trends. The carrying value of a long-lived asset group is considered impaired when the total projected undiscounted cash flows from such asset group are separately identifiable and are less than the carrying value. In that event, a loss is recognized based on the amount by which the carrying value exceeds the fair market value of the long-lived asset group, primarily determined using discounted future cash flows.

Indefinite-lived intangible assets (which for us are comprised entirely of tradenames) are not amortized, but similar to goodwill, are tested for impairment at least annually. These tests are performed more frequently if there are triggering events. When testing an indefinite-lived intangible asset for impairment we have the option of performing a qualitative assessment before calculating the fair value of the asset. If we determine, on the basis of qualitative factors, that the fair value of the indefinite-lived intangible asset is not more likely than not impaired, we would not need to calculate the fair value of the asset. The fair value of the tradenames is measured as the discounted cash flow savings realized from owning such tradenames and not having to pay a royalty for their use.

The evaluation of the recoverability of long-lived assets, and the determination of their fair value, requires us to make significant estimates and assumptions. These estimates and assumptions primarily include, but are not limited to: the identification of the asset group at the lowest level of independent cash flows and the principal asset of the group; the discount rate; terminal growth rates; and forecasts of revenue, operating income, depreciation and amortization, and capital expenditures.

The evaluation of the fair value of indefinite-lived trademarks also requires us to make significant estimates and assumptions. These estimates and assumptions primarily include, but are not limited to: the assumed market-royalty rate; the discount rate; terminal growth rates; and forecasts of revenue.

Due to the inherent uncertainty involved in making these estimates, actual results could differ from those estimates. In addition, changes in underlying assumptions would have a significant impact on the conclusion that an asset group's carrying value is recoverable, that an indefinite-lived asset is not impaired, or the determination of any impairment charge if it was determined that the asset values were indeed impaired.

## Accounts Receivable

Our accounts receivable represent a significant portion of our current assets. We are required to estimate the collectibility of our receivables and to establish allowances for the amount of receivables that will prove uncollectible. We base these allowances on our historical collection experience, the length of time our receivables are outstanding, the financial circumstances of individual customers, and general business and economic conditions. Due to our large number of customers and their dispersion across many countries and industries, we have limited exposure to concentrations of credit risk. As of December 31, 2013, one customer comprised 13.9% of our accounts receivable balance. This customer comprised 14.7% of our accounts receivable balance as of December 31, 2012. No other customer accounted for more than 10% of our accounts receivable balance as of December 31, 2013 or December 31, 2012. We continually monitor the credit risks associated with our accounts receivable and adjust the allowance for uncollectible accounts accordingly. We believe that our accounts receivable credit risk exposure beyond such allowance is not material to the financial statements.

## Pension and Other Postretirement Benefits

Our defined benefit plans are concentrated in the United States, Germany, and the Republic of China (Taiwan). Our U.S. plans include a plan qualified under the Employee Retirement Security Act of 1974 ("ERISA") and various non-qualified plans. The table below summarizes information about our pension and other postretirement benefit plans. This information should be read in conjunction with Note 11 to our consolidated financial statements (amounts in thousands):

	Benefit obligation	Plan assets	Funded position	Informally funded assets	Net position	Unrecognized actuarial items
U.S. qualified pension plan	\$ 279,925	\$ 295,633	\$ 15,708	\$ -	\$ 15,708	\$ 78,324
U.S. non-qualified pension plans	35,448	-	(35,448 )	22,899	(12,549 )	6,060
German pension plans	187,335	-	(187,335)	4,682	(182,653)	39,223
Taiwanese pension plans	62,983	21,822	(41,161 )	-	(41,161 )	18,360
Other pension plans	30,208	27,037	(3,171 )	-	(3,171 )	4,069
OPEB plans	14,845	-	(14,845 )	2,674	(12,171 )	(4,536 )
Other retirement obligations	14,017	-	(14,017 )	-	(14,017 )	-
	\$ 624,761	\$ 344,492	\$ (280,269)	\$ 30,255	\$ (250,014)	\$ 141,500

Accounting for defined benefit pension and other postretirement plans involves numerous assumptions and estimates. The discount rate at which obligations could effectively be settled and the expected long-term rate of return on plan assets are two critical assumptions in measuring the cost and benefit obligations of our pension and other postretirement benefit plans. Other important assumptions include the anticipated rate of future increases in compensation levels, estimated mortality, and for certain postretirement medical plans, increases or trends in health care costs. Management reviews these assumptions at least annually. We use independent actuaries and investment advisers to assist us in formulating assumptions and making estimates. These assumptions are updated periodically to reflect the actual experience and expectations on a plan specific basis as appropriate.

In the U.S., we utilize published long-term high quality bonds to determine the discount rate at the measurement date. In Germany and the Republic of China (Taiwan), we utilize published long-term government bond rates to determine the discount rate at the measurement date. We utilize bond yields at various maturity dates that reflect the timing of expected future benefit payments. We believe the discount rates selected are the rates at which these obligations could effectively be settled.

For our U.S. qualified plan, we establish strategic asset allocation percentage targets and appropriate benchmarks for significant asset classes with the aim of achieving a prudent balance between return and risk. Based on current market interest rate conditions and the current market value of the plan assets, our qualified defined benefit plan in the U.S. is fully-funded. Accordingly, we have revised the asset allocation strategy for this plan with the intention of further reducing risk.

Non-qualified plans in the U.S. are considered by law to be unfunded. However, the Company maintains assets in a rabbi trust to fund benefit payments under certain of these plans. Such assets would be subject to creditor claims under certain conditions. (See also Notes 11 and 18 to our consolidated financial statements.)

Many of our non-U.S. plans are unfunded based on local laws and customs. For those non-U.S. plans that do maintain investments, their asset holdings are primarily cash and fixed income securities, based on local laws and customs. Some non-U.S. plans also informally fund their plans by holding certain available-for-sale investments. Such assets would be subject to creditor claims under certain conditions. (See also Note 18 to our consolidated financial statements.)

We set the expected long-term rate of return based on the expected long-term average rates of return to be achieved by the underlying investment portfolios. In establishing this rate, we consider historical and expected returns for the asset classes in which the plans are invested, advice from pension consultants and investment advisors, and current economic and capital market conditions. The expected return on plan assets is incorporated into the computation of pension expense. The difference between this expected return and the actual return on plan assets is deferred. The net deferral of past asset losses (gains) affects the calculated value of plan assets and, ultimately, future pension expense (income).

We expect net periodic pension cost in 2014 to be less than net periodic pension cost recognized in 2013, with a decrease in the amortization of unrecognized losses partially offset by lower expected returns on assets subsequent to implementation of our asset de-risking strategies.

During the fourth fiscal quarter of 2008, we adopted amendments to our principal U.S. defined benefit pension plans, such that effective January 1, 2009, the plans were frozen. Pursuant to these amendments, no new employees may participate in the plans, no further participant contributions will be required or permitted, and no further benefits shall accrue after December 31, 2008. Accordingly, net periodic pension cost for U.S. plans no longer include any service cost.

We continue to seek to de-risk our pension exposures, especially given the frozen status of the U.S. plans and the current funded status. Such actions could result in increased net periodic pension cost due to lower expected rates of return on plan assets and/or possible charges to recognize unamortized actuarial items if all or a portion of the obligations were to be settled.

We believe that the current assumptions used to estimate plan obligations and annual expenses are appropriate. However, if economic conditions change or if our investment strategy changes, we may be inclined to change some of our assumptions, and the resulting change could have a material impact on the consolidated statements of operations and on the consolidated balance sheet.

## Income Taxes

We are subject to income taxes in the U.S. and numerous foreign jurisdictions. Significant judgment is required in evaluating our tax positions and determining our provision for income taxes. During the ordinary course of business, there are many transactions and calculations for which the ultimate tax determination is uncertain. We establish reserves for tax-related uncertainties based on estimates of whether, and the extent to which, additional taxes will be due. These reserves are established when we believe that certain positions might be challenged despite our belief that our tax return positions are fully supportable. We adjust these reserves in light of changing facts and circumstances and the provision for income taxes includes the impact of reserve provisions and changes to reserves that are considered appropriate.

These accruals are based on management's best estimate of potential tax exposures. When particular matters arise, a number of years may elapse before such matters are examined and finally resolved. Favorable resolution of such matters could be recognized as a reduction to our effective tax rate in the year of resolution. Unfavorable resolution of any particular issue could increase the effective tax rate and may require the use of cash in the year of resolution.

We and our subsidiaries file U.S. federal income tax returns, as well as tax returns in multiple state and foreign jurisdictions. The U.S. Internal Revenue Service is currently conducting an examination of our U.S. federal tax returns for the years 2010 and 2011. Because of net operating losses which were fully utilized on the 2010 tax return, our U.S. federal tax returns for 2003 through 2009 remain subject to examination. Most principal subsidiaries in Israel are currently under examination for tax years 2008 through 2010. The tax returns of other significant non-U.S. subsidiaries which are currently under examination include India (2004 through 2011), China (2009), and the Republic of Taiwan (2007 through 2012). In 2013, we settled an examination of the 2005 through 2008 tax years for our subsidiaries in Germany. We and our subsidiaries also file income tax returns in other taxing jurisdictions in the U.S. and around the world, many of which are still open to examinations.

We account for uncertainty in income tax positions using the minimum recognition threshold a tax position is required to meet before being recognized in the financial statements as prescribed in GAAP. For a tax benefit to be recognized, a tax position must be "more likely than not" to be sustained upon examination by taxing authorities.

We have recorded deferred tax assets representing future tax benefits, but may not be able to realize these future tax benefits in certain jurisdictions. Significant judgment is required in determining the expected future realizability of these deferred tax assets. We periodically evaluate the realizability of our deferred tax assets by assessing the valuation allowance and by adjusting the amount of such allowance, if necessary. The factors used to assess the likelihood of realization include deferred tax liabilities, our forecast of future taxable income, and available tax planning strategies that could be implemented to realize the net deferred tax assets.

Substantially all earnings generated by our non-U.S. subsidiaries are deemed to be reinvested outside of the United States indefinitely. Accordingly, no provision has been made for U.S. federal and state income taxes on these foreign earnings. Upon distribution of those earnings in the form of dividends or otherwise, we would be subject to U.S. income taxes (subject to an adjustment for foreign tax credits), state income taxes, incremental foreign income taxes, and withholding taxes payable to various foreign countries.

Additional information about income taxes is included in Note 5 to our consolidated financial statements.

## Results of Operations

Statement of operations' captions as a percentage of net revenues and the effective tax rates were as follows:

	Years ended		
	December 31,		
	2013	2012	2011
Costs of products sold	76.1 %	76.4 %	72.2 %
Gross profit	23.9 %	23.6 %	27.8 %
Selling, general, and administrative expenses	15.5 %	15.7 %	14.2 %
Operating income	8.3 %	8.5 %	13.4 %
Income before taxes and noncontrolling interest	7.4 %	7.6 %	12.8 %
Net earnings attributable to Vishay stockholders	5.2 %	5.5 %	9.2 %
<hr/> Effective tax rate	29.8 %	27.4 %	27.5 %

## Net Revenues

Net revenues were as follows (dollars in thousands):

	Years Ended December 31,		
	2013	2012	2011
Net revenues	\$2,370,979	\$2,230,097	\$2,594,029
Change versus prior year	\$140,882	\$(363,932 )	
Percentage change versus prior year	6.3 %	-14.0 %	

Changes in net revenues were attributable to the following:

	2013		2012	
	vs.	2012	vs.	2011
Change attributable to:				
Change in volume	8.3 %	-11.5 %		
Decrease in average selling prices	-3.1 %	-3.7 %		
Foreign currency effects	0.8 %	-2.1 %		
Acquisitions	0.8 %	2.3 %		
Other	-0.5 %	1.0 %		
Net change	6.3 %	-14.0 %		

Overall, the business conditions in 2013 were better than the 2012 conditions, but both years were below our expected run-rate. Our revenue results for the year ended December 31, 2011 also represent the effects of macroeconomic concerns, which reduced demand for our products in the last six fiscal months of the year, and the resulting quick adaptation of our manufacturing capacities in response thereto. This period of macroeconomic concerns followed a period of favorable business conditions through the first six fiscal months of 2011 in which we achieved significantly higher annualized earnings than before the beginning of the 2008-2009 global economic recession at the same sales volume.





We deduct, from the sales that we record to distributors, allowances for future credits that we expect to provide for returns, scrapped product, and price adjustments under various programs made available to the distributors. We make deductions corresponding to particular sales in the period in which the sales are made, although the corresponding credits may not be issued until future periods. We estimate the deductions based on sales levels to distributors, inventory levels at the distributors, current and projected market trends and conditions, recent and historical activity under the relevant programs, changes in program policies, and open requests for credits. We recorded deductions from gross sales under our distributor incentive programs of \$84.3 million, \$72.7 million, and \$80.3 million, for the years ended December 31, 2013, 2012, and 2011, respectively, or, as a percentage of gross sales, 3.4%, 3.2%, and 3.0%, respectively. Actual credits issued under the programs for the years ended December 31, 2013, 2012, and 2011 were approximately \$83.2 million, \$76.9 million, and \$82.3 million, respectively. Increases and decreases in these incentives are largely attributable to the then-current business climate.

Royalty revenues, included in net revenues on the consolidated statements of operations, were \$6.4 million, \$7.1 million, and \$6.6 million, for the years ended December 31, 2013, 2012, and 2011, respectively.

#### Gross Profit and Margins

Gross profit margins for the year ended December 31, 2013 were 23.9%, as compared to 23.6% for year ended December 31, 2012.

Gross profit margins for the year ended December 31, 2012 were 23.6%, as compared to 27.8% for year ended December 31, 2011. This decrease in gross profit margin reflects significantly lower volume and lower average selling prices.

## Segments

Analysis of revenues and gross profit margins for our segments is provided below.

MOSFETs

Net revenues of the MOSFETs segment were as follows (dollars in thousands):

	Years ended December 31,		
	2013	2012	2011
Net revenues	\$449,477	\$433,682	\$537,980
Change versus comparable prior year period	\$15,795	\$(104,298)	
Percentage change versus comparable prior year period	3.6 %	-19.4 %	

Changes in MOSFETs segment net revenues were attributable to the following:

	2013	2012
	vs.	vs.
	2012	2011
Change attributable to:		
Change in volume	11.2 %	-10.9 %
Decrease in average selling prices	-6.3 %	-9.9 %
Foreign currency effects	0.2 %	-0.7 %
Other	-1.5 %	2.1 %
Net change	3.6 %	-19.4 %

Gross profit as a percentage of net revenues for the MOSFETs segment was as follows:

	Years ended		
	December 31,		
	2013	2012	2011
Gross margin percentage	13.2 %	13.1 %	23.3 %

The MOSFETs segment was positively affected by increased demand from OEM customers in Asia in 2013. The gross profit margin remained below expectations in 2013 as the increase in volume and lower materials prices were almost fully offset by the decrease in average selling prices and the negative effect of additional depreciation associated with our cost reduction program. The decrease in gross profit margin from 2011 to 2012 is primarily due to decreases in sales volume and average selling prices. Also, a non-recurring manufacturing issue associated with purchased materials affected the 2012 results.

We have experienced significant declines in average selling prices in 2013 and 2012. The decline in 2013 is partially due to lower materials prices. The decline in 2012 is partially due to selective volume based pricing for our MOSFETs products that we implemented in the second fiscal quarter of 2012.

On October 28, 2013, we announced a cost reduction program to enhance the competitiveness of our MOSFETs segment. See "Cost Management" above.

We continue to be optimistic about the long-term prospects of the MOSFETs segment and continue to make capital and R&D investments in this business.

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Diodes

Net revenues of the Diodes segment were as follows (dollars in thousands):

	Years ended December 31,		
	2013	2012	2011
Net revenues	\$547,264	\$496,744	\$607,493
Change versus comparable prior year period	\$50,520	\$(110,749)	
Percentage change versus comparable prior year period	10.2 %	-18.2 %	%

Changes in Diodes segment net revenues were attributable to the following:

	2013	2012
	vs. 2012	vs. 2011
Change attributable to:		
Change in volume	13.8 %	-14.9 %
Decrease in average selling prices	-3.0 %	-2.8 %
Foreign currency effects	0.2 %	-1.4 %
Other	-0.8 %	0.9 %
Net change	10.2 %	-18.2 %

Gross profit as a percentage of net revenues for the Diodes segment was as follows:

	Years ended December 31,		
	2013	2012	2011
Gross margin percentage	22.2 %	20.0 %	23.7 %

The Diodes segment was positively affected by the increased demand from distributors in Asia in 2013, but negatively affected by the low demand from distributors in Asia in 2012. The increase in gross profit margin from 2012 to 2013 is primarily due to the increase in sales volume, manufacturing efficiencies, and lower materials prices, partially offset by decreased average selling prices. The decrease in the Diodes segment gross profit margin from 2011 to 2012 is primarily due to the decrease in sales volume.

Typical pricing pressure for our established Diodes products continues. We have experienced moderate price declines versus the prior year periods.

The cost reduction programs announced on October 28, 2013 include two smaller projects to improve the results of the Diodes segment. These projects demonstrate our ongoing effort to improve the results of this segment. See "Cost Management" above.

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Optoelectronic Components

Net revenues of the Optoelectronic Components segment were as follows (dollars in thousands):

	Years ended December 31,		
	2013	2012	2011
Net revenues	\$228,245	\$209,194	\$229,886
Change versus comparable prior year period	\$19,051	\$(20,692)	
Percentage change versus comparable prior year period	9.1	% -9.0	%

Changes in Optoelectronic Components segment net revenues were attributable to the following:

	2013	2012
	vs. 2012	vs. 2011
Change attributable to:		
Change in volume	10.6 %	-3.1 %
Decrease in average selling prices	-2.3 %	-3.5 %
Foreign currency effects	1.3 %	-2.8 %
Other	-0.5 %	0.4 %
Net change	9.1 %	-9.0 %

Gross profit as a percentage of net revenues for the Optoelectronic Components segment was as follows:

	Years ended December 31,		
	2013	2012	2011
Gross margin percentage	33.6%	32.5%	32.5%

The Optoelectronic Components segment was relatively stable due to the continued strong demand of the automotive and industrial markets despite being negatively affected by the low demand from distributors in Asia in 2012. The Optoelectronic Components segment has now fully recovered with primarily volume-driven gross margin improvement. The increase in gross profit margin in 2013 is due to increases in volume, partially offset by lower average selling prices. The segment gross profit margin remained high in 2012 despite a decrease in sales volume and average selling prices.

Typical pricing pressure for our established Optoelectronic Components products continues. We have experienced slight declines in 2013 versus 2012 and moderate declines in 2012 versus 2011.

Resistors & Inductors

Net revenues of the Resistors & Inductors segment were as follows (dollars in thousands):

	Years ended December 31,		
	2013	2012	2011
Net revenues	\$706,248	\$642,320	\$640,854
Change versus comparable prior year period	\$63,928	\$1,466	
Percentage change versus comparable prior year period	10.0	% 0.2	%

Changes in Resistors & Inductors segment net revenues were attributable to the following:

	2013	2012
	vs. 2012	vs. 2011
Change attributable to:		
Change in volume	8.0 %	-4.3 %
Decrease in average selling prices	-1.6 %	-1.5 %
Foreign currency effects	1.1 %	-3.1 %
Acquisitions	2.9 %	9.3 %
Other	-0.4 %	-0.2 %
Net change	10.0 %	0.2 %

Gross profit as a percentage of net revenues for the Resistors & Inductors segment was as follows:

	Years ended December 31,		
	2013	2012	2011
Gross margin percentage	31.4%	31.8%	33.4%

The Resistors & Inductors segment has experienced four consecutive quarters of revenue growth. The growth was experienced in almost all end markets and regions. The biggest source of growth was from distributors. The Resistors & Inductors segment was negatively affected in 2012 by a slowing of demand in Europe. The segment gross profit margin remained high, but decreased slightly versus 2012 due to the increased volume and reduced material prices not being able to fully offset the reduction in average selling prices. The segment gross profit margin remained high, but decreased slightly from 2011 to 2012 due to decreases in sales volume.

Along with our successful acquisitions of HiRel Systems and certain assets of Huntington Electric in the previous two years, MCB Industrie is positively contributing to gross margins of the Resistors & Inductors segment.

Average selling prices declined slightly in both 2013 versus 2012 and 2012 versus 2011.

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Capacitors

Net revenues of the Capacitors segment were as follows (dollars in thousands):

	Years ended December 31,		
	2013	2012	2011
Net revenues	\$439,745	\$448,157	\$577,816
Change versus comparable prior year period	\$(8,412 )	\$(129,659)	
Percentage change versus comparable prior year period	-1.9 %	-22.4 %	

Changes in Capacitors segment net revenues were attributable to the following:

	2013	2012
	vs. 2012	vs. 2011
Change attributable to:		
Decrease in volume	-0.6 %	-19.6%
Decrease in average selling prices	-2.4 %	-0.9 %
Foreign currency effects	1.2 %	-2.8 %
Other	-0.1 %	0.9 %
Net change	-1.9 %	-22.4%

Gross profit as a percentage of net revenues for the Capacitors segment was as follows:

	Years ended December 31,		
	2013	2012	2011
Gross margin percentage	20.0%	22.0%	28.0%

The Capacitors segment was negatively affected by the economic slow-down which began in the second half of 2012 and stagnation in demand for renewable energies as government spending declined. Additionally, the segment experienced a decrease in sales to the automotive industry in 2013, which was partially offset by increased distributions sales. The decrease in gross profit margin from 2012 to 2013 is primarily due to the decrease in sales volume and average selling prices. The decrease in gross profit margin from 2011 to 2012 is primarily due to the decrease in sales volume and some temporary inefficiencies. The Capacitors segment was adversely affected by high distributor inventory levels in the second half of 2011.

Lower demand and a reduction in material prices have increased the pressure on average selling prices. Average selling prices declined slightly in both 2013 versus 2012 and 2012 versus 2011.

## Selling, General, and Administrative Expenses

Selling, general, and administrative ("SG&A") expenses are summarized as follows (dollars in thousands):

	Years ended December 31,		
	2013	2012	2011
Total SG&A expenses	\$368,542	\$349,625	\$367,623
as a percentage of sales	15.5 %	15.7 %	14.2 %

The overall increase in SG&A expenses in the year ended December 31, 2013 versus the year ended December 31, 2012 is primarily attributable to less austere temporary cost reduction programs implemented in 2013 versus 2012 due to differences in economic environment. The overall decrease in SG&A expenses in the year ended December 31, 2012 versus the year ended December 31, 2011 is primarily attributable to cost containment initiatives and certain temporary cost reduction programs, lower bonus accruals for 2012, and a positive exchange rate impact, partially offset by SG&A expenses of acquired businesses. Several items included in SG&A expenses impact the comparability of these amounts, as summarized below (in thousands):

	Years ended December 31,		
	2013	2012	2011
Amortization of intangible assets	\$15,068	\$14,754	\$14,684
Net losses (gains) on sales of assets	26	(741 )	(930 )

The acquisitions of the resistor businesses of Huntington Electric in the third fiscal quarter of 2011, HiRel Systems LLC in the first fiscal quarter of 2012, and MCB Industrie S.A. in the second fiscal quarter of 2013 increased our amortizable intangible assets balance by \$56.5 million. See Note 3 to our consolidated financial statements for an estimate of our annual amortization expense through 2018. Additional acquisition activity will increase these amounts.

Amortization expense remained stable in 2012 versus 2011 principally due to certain intangible assets becoming fully amortized, which was offset by the amortization of intangible assets recognized in the aforementioned acquisitions of the resistors businesses of Huntington Electric in the third fiscal quarter of 2011 and HiRel Systems LLC in the first fiscal quarter of 2012.

We also recorded a \$12.2 million gain on the sale of vacated property in Belgium in the second fiscal quarter of 2012 that is reported on a separate line in the consolidated statement of operations for the year ended December 31, 2012.

On October 28, 2013, we announced a voluntary separation / early retirement program targeting SG&A expenses. See "Cost Management" above.



## Other Income (Expense)

2013 Compared to 2012

Interest expense for the year ended December 31, 2013 increased by \$0.5 million versus the year ended December 31, 2012. The increase is primarily due to interest on convertible senior debentures due 2042 that were issued on May 31, 2012.

The following table analyzes the components of the line "Other" on the consolidated statements of operations (in thousands):

	Years ended December 31,		
	2013	2012	Change
Foreign exchange gain (loss)	\$(993 )	\$(3,654)	\$2,661
Interest income	4,566	7,626	(3,060)
Other	(1,720)	(532 )	(1,188)
	\$1,853	\$3,440	\$(1,587)

The decrease in interest income in the year ended December 31, 2013 versus the year ended December 31, 2012 is primarily due to lower interest rates on the short-term investments in 2013 versus 2012.

2012 Compared to 2011

Interest expense for the year ended December 31, 2012 increased by \$3.3 million versus the year ended December 31, 2011. The increase is primarily due to interest on convertible senior debentures due 2041 and due 2042 that were issued on May 13, 2011 and May 31, 2012, respectively.

The following table analyzes the components of the line "Other" on the consolidated statements of operations (in thousands):

	Years ended December 31,		
	2012	2011	Change
Foreign exchange gain (loss)	\$(3,654)	\$(8,249 )	\$4,595
Interest income	7,626	10,386	(2,760)
Sale of investments	-	1,396	(1,396)
Other	(532 )	259	(791 )
	\$3,440	\$3,792	\$(352 )

In the year ended December 31, 2011, we sold ancillary investments in the equity of two companies located outside of the U.S. for a total gain of \$1.4 million.

The decrease in interest income in the year ended December 31, 2012 versus the year ended December 31, 2011 is primarily due to lower interest rates on the short-term investments in 2012 versus 2011.

## Income Taxes

For the years ended December 31, 2013, 2012, and 2011, the effective tax rates were 29.8%, 27.4%, and 27.5%, respectively. The effective tax rates are generally less than the U.S. statutory rate primarily because of earnings in foreign jurisdictions and the release of deferred tax asset valuation allowances when facts and circumstances permit.

Income tax expense for the years ended December 31, 2013, 2012, and 2011 include certain discrete tax items for changes in uncertain tax positions, valuation allowances, tax rates, and other related items. These items total \$(4.2) million (tax benefit), \$(4.0) million (tax benefit), and \$3.5 million in 2013, 2012, and 2011, respectively.

For the year ended December 31, 2013, the discrete items include a \$2.9 million benefit recorded in the third fiscal quarter due to a new tax law enacted in Israel in July 2013 which effectively increases the corporate income tax rate on certain types of income earned after January 1, 2014, and, therefore, increases our deferred tax assets and a \$1.3 million benefit recorded in the first fiscal quarter due to the retroactive enactment of the American Taxpayer Relief Act of 2012, signed into law on January 2, 2013.

For the year ended December 31, 2012, the discrete item is the reduction of a valuation allowance on a deferred tax asset in Israel due to a merger of several of our wholly-owned subsidiaries in Israel in the fourth fiscal quarter, which will allow for the realization of these tax benefits that likely otherwise would have been forgone.

For the year ended December 31, 2011, the discrete items included a \$10.0 million expense for the effect of a tax rate change on deferred taxes in Israel recorded in the first fiscal quarter, reduced by \$1.0 million for a 2010 tax return filing in the fourth fiscal quarter, and partially offset by benefits related to reductions of valuation allowances in various jurisdictions of \$5.5 million recorded in the fourth fiscal quarter. The reductions of valuation allowances were principally in Belgium due to expected future income from a pending real estate sale.

We operate in a global environment with significant operations in various locations outside the United States. Accordingly, the consolidated income tax rate is a composite rate reflecting our earnings and the applicable tax rates in the various locations where we operate. Part of our strategy is to achieve cost savings through the transfer and expansion of manufacturing operations to countries where we can take advantage of lower labor costs and available tax and other government-sponsored incentives. Accordingly, our effective tax rate is generally less than the U.S. statutory tax rate. Changes in the effective tax rate are largely attributable to changes in the mix of pretax income among our various taxing jurisdictions.

Additional information about income taxes is included in Note 5 to our consolidated financial statements.

## Financial Condition, Liquidity, and Capital Resources

We focus on our ability to generate cash flows from operations. The cash generated from operations is used to fund our capital expenditure plans, and cash in excess of our capital expenditure needs is available to fund our acquisition strategy, to reduce debt levels, and to pay dividends and repurchase stock. We have generated cash flows from operations in excess of \$200 million in each of the past 12 years, and cash flows from operations in excess of \$100 million in each of the past 19 years.

We refer to the amount of cash generated from operations in excess of our capital expenditure needs and net of proceeds from the sale of assets as "free cash," a measure which management uses to evaluate our ability to fund acquisitions, repay debt, and otherwise enhance stockholder value through stock repurchases or dividends. Vishay has generated positive "free cash" in each of the past 17 years, and "free cash" in excess of \$80 million in each of the past 12 years. In this volatile economic environment, we continue to focus on the generation of free cash, including an emphasis on cost controls.

We continued to generate positive cash flows from operations and free cash in line with our history despite the volatile economic environment during the year ended December 31, 2013. There is no assurance, however, that we will be able to continue to generate cash flows from operations and free cash at the same levels, or at all, going forward if the current economic environment worsens.

Beginning in the fourth fiscal quarter of 2010, we have reacted to favorable market conditions to significantly reshape the company's capital structure. We have completed three issuances of low-coupon convertible debentures since the fourth fiscal quarter of 2010, each of which matures thirty years from the date of issuance. We utilized the proceeds of those debenture offerings to repurchase 44.3 million shares of our common stock, representing approximately 24% of our outstanding stock prior to implementing these initiatives. In the third fiscal quarter of 2013, a holder of our exchangeable unsecured notes exercised its option to exchange \$56.4 million principal amount of the notes for 3.7 million shares of our common stock. The exchange increases the number of our common shares outstanding, but has no effect on the calculation of the weighted average shares outstanding used for computing diluted earnings per share because our earnings per share computation assumes that the exchangeable unsecured notes would be converted, while also reducing our outstanding debt and improving our ratio of total debt to Vishay stockholders' equity.

We also entered into a new, larger, revolving credit facility in 2010, which was amended and restated on August 8, 2013. The amended and restated credit facility extends the term of our available credit, secures lower interest rates than we were previously paying for the next five years, and provides us with additional financial flexibility to pursue our growth plan. The total revolving commitment of our credit facility increased to \$640 million and we have the ability to request up to an additional \$50 million of incremental commitments, subject to the satisfaction of certain conditions. At December 31, 2013 and 2012, \$114 million and \$89 million, respectively, were outstanding under our credit facility. The credit facility provides a revolving commitment through August 8, 2018.

Borrowings under the credit facility bear interest at LIBOR plus an interest margin. The applicable interest margin is based on our leverage ratio. Based on our current leverage ratio, borrowings bear interest at LIBOR plus 1.75%. The interest rate on our borrowings will increase to LIBOR plus 2.00% if our leverage ratio equals or exceeds 2.50 to 1 and will decrease to LIBOR plus 1.50% if our leverage ratio decreases below 1.50 to 1. We are also required to pay facility fees on the entire commitment amount based on our leverage ratio. Based on our current leverage ratio, the facility fee is 0.35% per annum. Such facility fee will increase to 0.50% per annum if our leverage ratio equals or exceeds 2.50 to 1 and will decrease to 0.30% per annum if our leverage ratio decreases below 1.50 to 1.

The amendment and restatement of the credit facility also removed certain restrictions related to the incurrence and repayment of certain intercompany indebtedness, mergers, liquidations, and transfers of ownership of wholly owned subsidiaries that were present in the original credit agreement. These changes will enable us to streamline our complex subsidiary structure and provide greater operating flexibility.



The borrowings under the credit facility are secured by a lien on substantially all assets, including accounts receivable, inventory, machinery and equipment, and general intangibles (but excluding real estate, intellectual property registered or licensed for use in, or arising under the laws of, any country other than the United States, assets located outside of the United States and deposit and securities accounts), of Vishay and certain significant subsidiaries located in the United States, and pledges of stock in certain significant domestic and foreign subsidiaries; and are guaranteed by certain significant subsidiaries. Certain of our subsidiaries are permitted to borrow under the credit facility, subject to the satisfaction of specified conditions. Any borrowings by these subsidiaries under the credit facility will be guaranteed by Vishay and certain subsidiaries.

The credit facility also limits or restricts us, from, among other things, incurring indebtedness, incurring liens on assets, making investments and acquisitions, making asset sales, and making other restricted payments, and requires us to comply with other covenants, including the maintenance of specific financial ratios.

The financial maintenance covenants include (a) an interest expense coverage ratio of not less than 2.00 to 1; and (b) a leverage ratio of not more than 3.25 to 1 (and a pro forma ratio of 2.75 to 1 on the date of incurrence of additional debt). The computation of these ratios is prescribed in Article VI of the Credit Agreement between Vishay Intertechnology, Inc. and JPMorgan Chase Bank, N.A., which has been filed with the SEC as Exhibit 10.1 to our current report on Form 8-K filed August 8, 2013.

We were in compliance with all financial covenants under the credit facility at December 31, 2013. Our interest expense coverage ratio and leverage ratio were 12.46 to 1 and 1.86 to 1, respectively. We expect to continue to be in compliance with these covenants based on current projections.

If we are not in compliance with all of the required financial covenants, the credit facility could be terminated by the lenders, and all amounts outstanding pursuant to the credit facility could become immediately payable. Additionally, our exchangeable unsecured notes due 2102 and our convertible senior debentures due 2040, due 2041, and due 2042 have cross-default provisions that could accelerate repayment in the event the indebtedness under the credit facility is accelerated.

Our permitted capacity to repurchase shares of our outstanding common stock or pay cash dividends under the credit facility increases each quarter by an amount equal to 20% of net income. At December 31, 2013, our credit facility allowed us to repurchase our common stock or pay cash dividends up to \$204.6 million. On February 3, 2014, our Board of Directors instituted a quarterly dividend payment program and declared the first cash dividend in the history of Vishay. The initial cash dividend of \$0.06 per share of common stock and Class B common stock will be paid on March 27, 2014 to stockholders of record at the close of business on March 3, 2014. The amount and timing of any future stock repurchases or cash dividend payments remains subject to authorization of our Board of Directors.

The balance of our revolving credit facility was \$89 million at December 31, 2012. We borrowed \$189 million and repaid \$164 million on our credit facility during the year ended December 31, 2013. Included in both the amounts borrowed and repaid is \$108 million borrowed to repay the amounts outstanding on our credit facility at the time it was amended and restated. The average outstanding balance on our credit facility calculated at fiscal month-ends was \$103.3 million and the highest amount outstanding on our credit facility at a month end was \$114 million during the year ended December 31, 2013.

Management expects to continue to maintain the outstanding balance on the credit facility around its current level, and may periodically pay down the balance with available cash or use the credit facility to meet short-term financing needs. We expect that cash on-hand and cash flows from operations will be sufficient to meet our longer-term financing needs related to normal operating requirements, regular dividend payments, and our research and development and capital expenditure plans. Acquisition activity or share repurchases may require additional borrowing under our credit facility or may otherwise require us to incur additional debt. No principal payments on our outstanding debt are due before the maturity of our revolving credit facility in August 2018.

Substantially all of our December 31, 2013 cash and cash equivalents and short-term investments balances were held by our non-U.S. subsidiaries. At the present time, we expect the remaining cash and profits generated by foreign subsidiaries will continue to be reinvested outside of the U.S. indefinitely. If additional cash is needed to be repatriated to the U.S., we would be subject to additional U.S. income taxes (subject to an adjustment for foreign tax credits), state income taxes, incremental foreign income taxes, and withholding taxes payable to various foreign countries. Our substantially undrawn credit facility provides us with significant liquidity in the U.S.

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We invest a portion of our excess cash in highly liquid, high-quality instruments with maturities greater than 90 days, but less than 1 year, which we classify as short-term investments on our consolidated condensed balance sheets. As these investments were funded using a portion of excess cash and represent a significant aspect of our cash management strategy, we include the investments in the calculation of net cash and short-term investments (debt).

The interest rates on our short-term investments average 0.5% and are approximately 20 basis points higher than interest rates on our cash accounts. Transactions related to these investments are classified as investing activities on our consolidated condensed statements of cash flows.

The following table summarizes the components of net cash and short-term investments (debt) at December 31, 2013 and 2012, respectively (in thousands):

	December 31, 2013	December 31, 2012
Credit Facility	\$ 114,000	\$ 89,000
Exchangeable unsecured notes, due 2102	38,642	95,042
Convertible senior debentures, due 2040*	101,846	100,166
Convertible senior debentures, due 2041*	52,264	51,399
Convertible senior debentures, due 2042*	58,159	57,324
Total debt	364,911	392,931
Cash and cash equivalents	640,348	697,595
Short-term investments	511,231	294,943
Net cash and short-term investments (debt)	\$ 786,668	\$ 599,607

Measurements such as "free cash" and "net cash and short-term investments (debt)" do not have uniform definitions and are not recognized in accordance with GAAP. Such measures should not be viewed as alternatives to GAAP measures of performance or liquidity. However, management believes that "free cash" is a meaningful measure of our ability to fund acquisitions, repay debt, and otherwise enhance stockholder value through stock repurchases or dividends, and that an analysis of "net cash and short-term investments (debt)" assists investors in understanding aspects of our cash and debt management. These measures, as calculated by us, may not be comparable to similarly titled measures used by other companies.

Our financial condition as of December 31, 2013 continued to be strong, with a current ratio (current assets to current liabilities) of 4.4 to 1, as compared to 4.3 to 1 as of December 31, 2012. The slight increase is primarily due to an increase in cash and short-term investments in 2013. Our ratio of total debt to Vishay stockholders' equity was 0.19 to 1 at December 31, 2013 as compared to a ratio of 0.24 to 1 at December 31, 2012. The significant decrease in the ratio is primarily due to the exchange by a holder of \$56.4 million principal amount of our exchangeable unsecured notes for shares of our common stock in the third fiscal quarter of 2013.

Cash flows provided by operating activities were \$292.1 million for the year ended December 31, 2013, as compared to cash flows provided by operations of \$287.5 million for the year ended December 31, 2012.

Cash paid for property and equipment for the year ended December 31, 2013 was \$153.1 million, as compared to \$150.3 million for the year ended December 31, 2012. We expect capital spending of approximately \$160 million in 2014.

## Contractual Commitments and Off-Balance Sheet Arrangements

As of December 31, 2013 we had contractual obligations as follows (in thousands):

	Payments due by period				
	Total	Year 1	Years 2-3	Years 4-5	More than 5
Long-term debt	\$727,642	\$-	\$-	\$114,000	\$613,642
Interest payments on long-term debt	383,771	17,545	35,091	33,310	297,825
Operating and capital leases	82,100	26,954	38,175	14,173	2,798
Letters of credit	7,655	-	-	7,655	-
Expected pension and postretirement plan funding	393,905	34,435	69,834	82,740	206,896
Estimated costs to complete construction in progress	35,541	35,541	-	-	-
Uncertain tax positions, including interest and penalties	53,643	4,489	-	-	49,154
Purchase commitments	167,113	40,319	91,333	35,461	-
Other long-term liabilities	50,272	-	4,200	2,700	43,372
Executive employment agreement	10,000	10,000	-	-	-
Total contractual cash obligations	\$1,911,642	\$169,283	\$238,633	\$290,039	\$1,213,687

Commitments for long-term debt are based on the amount required to settle the obligation. Accordingly, the discounts associated with our convertible debentures due 2040, due 2041, and due 2042 are excluded from the calculation of long-term debt commitments in the table above.

Commitments for interest payments on long-term debt are cash commitments based on the stated maturity dates of each agreement, one of which bears a maturity date of 2102, and include facility fees under our revolving credit facility, which expires on August 8, 2018. Commitments for interest payments on long-term debt exclude non-cash interest expense related to the amortization of the discount associated with our convertible debentures due 2040, due 2041, and due 2042.

Various factors could have a material effect on the amount of future principal and interest payments. Among other things, approximately \$614 million of our outstanding debt instruments are convertible into or exchangeable for common stock at the option of the holder. Also, although we intend to net share settle our convertible senior debentures due 2040, due 2041, and due 2042, we have the option to settle these instruments in shares of common stock pursuant to the indenture governing these debentures. Additionally, interest commitments for our variable-rate exchangeable notes due 2102 and revolving credit facility are based on the rate prevailing at December 31, 2013, but actual rates are variable and are certain to change over time.

Our consolidated balance sheet at December 31, 2013 includes liabilities associated with uncertain tax positions in multiple taxing jurisdictions where we conduct business. Due to the uncertain and complex application of tax regulations, combined with the difficulty in predicting when tax examinations throughout the world may be concluded, we cannot make reliable estimates of the timing of the remaining cash outflows relating to these liabilities. Accordingly, we have classified the amount recorded as a current liability as payable within one year, and the remaining uncertain tax positions are classified as payments due after five years, although actual timing of payments may be sooner.

There are certain guarantees and indemnifications extended among Vishay and VPG in accordance with the terms of the Master Separation and Distribution Agreement and the Tax Matters Agreement. The guarantees primarily relate to certain contingent tax liabilities included in the Tax Matters Agreement. See Note 19 to our consolidated financial statements for further discussion of the Tax Matters Agreement. These obligations were not material to us as of



December 31, 2013, and are included in the uncertain tax positions disclosed above.

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We maintain long-term foundry agreements with subcontractors to ensure access to external front-end capacity for our semiconductor products. The purchase commitments in the table above represent the estimated minimum commitments for silicon wafers under these agreements. Our actual purchases in future periods are expected to be greater than these minimum commitments.

GAAP requires that management evaluate if purchase commitments are at prices in excess of current market prices. The purchase commitments for silicon wafers described above are for the manufacture of proprietary products using Vishay Siliconix-owned technology licensed to these subcontractors by Siliconix, and accordingly, management can only estimate the "market price" of the wafers which are the subject of these commitments. Management believes that these commitments are at prices which are not in excess of estimated current market prices.

Other long-term liabilities in the table above include obligations that are reflected on our consolidated balance sheets as of December 31, 2013. Other long-term liabilities for which we are unable to reasonably estimate the timing of the settlement are classified as payments due after five years in the table above, although actual timing of payments may be sooner.

As more fully described in Note 13 to our consolidated financial statements, on May 13, 2009, we entered into an amended and restated employment agreement with the late Dr. Felix Zandman, our founder and former Executive Chairman, Chief Technical and Business Development Officer. Pursuant to the amended and restated employment agreement, Dr. Zandman received \$10 million upon signing the agreement and five additional annual payments of \$10 million each, one of which remains to be paid to his estate as of December 31, 2013. Dr. Zandman's passing in June 2011 had no effect on the timing of these payments.

For a further discussion of our long-term debt, pensions and other postretirement benefits, leases, uncertain tax positions, executive employment agreements, and purchase commitments, see Notes 5, 6, 11, and 13 to our consolidated financial statements.

We do not participate in, nor have we created, any off-balance sheet variable interest entities or other off-balance sheet financing, other than the operating leases described above.

#### Inflation

Normally, inflation does not have a significant impact on our operations as our products are not generally sold on long-term contracts. Consequently, we can adjust our selling prices, to the extent permitted by competition, to reflect cost increases caused by inflation.

See also "Commodity Price Risk" included in Item 7A, "Quantitative and Qualitative Disclosures About Market Risk" for additional related information.

#### Recent Accounting Pronouncements

As more fully described in Note 1 to our consolidated financial statements, new accounting guidance became effective for us in 2013. There is no effective accounting guidance pending adoption as of December 31, 2013 that is expected to have a material effect on our future financial position, results of operations, or liquidity.

The adoption of the new guidance in Note 1 to our consolidated financial statements is not expected to have a material effect on our financial position, results of operations, or liquidity.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk Disclosure

We are exposed to certain financial risks, including fluctuations in foreign currency exchange rates, interest rates, and commodity prices. We manage our exposure to these market risks through internally established policies and procedures and, when deemed appropriate, through the use of derivative financial instruments. Our policies do not allow speculation in derivative instruments for profit or execution of derivative instrument contracts for which there are no underlying exposures. We do not use financial instruments for trading purposes and we are not a party to any leveraged derivatives. We monitor our underlying market risk exposures on an ongoing basis and believe that we can modify or adapt our hedging strategies as needed.

Interest Rate Risk

We are exposed to changes in interest rates as a result of our borrowing activities and our cash balances. On a selective basis, we have in the past entered into interest rate swap or cap agreements to reduce the potential negative impact that increases in interest rates could have on our outstanding variable rate debt. As of December 31, 2013, 2012, and 2011 we did not have any outstanding interest rate swap or cap agreements.

We are exposed to changes in interest rates on our exchangeable notes due 2102. The exchangeable notes, of which \$38.6 million are outstanding, bear interest at LIBOR (reset quarterly).

The interest paid on our credit facility is based on a LIBOR spread. At December 31, 2013, we had \$114 million outstanding under the revolving credit facility. The present amounts outstanding under the revolving credit commitment bears interest at LIBOR plus 1.75%.

Our convertible senior debentures due 2040, due 2041, and due 2042 bear interest at a fixed rate, and accordingly are not subject to interest rate fluctuation risks.

At December 31, 2013, we have \$640.3 million of cash and cash equivalents and \$511.2 million of short-term investments, which earn interest at various variable rates.

Based on the debt and cash positions at December 31, 2013, we would expect a 50 basis point increase or decrease in interest rates to increase or decrease our annualized net earnings by approximately \$3.4 million.

See Note 6 to our consolidated financial statements for additional information about our long-term debt. Also see "Economic Outlook and Impact on Operations and Future Financial Results" included in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" for additional discussion of market risks.

## Foreign Exchange Risk

We are exposed to foreign currency exchange rate risks, particularly due to market values of transactions in currencies other than the functional currencies of certain subsidiaries. From time to time, we utilize forward contracts to hedge a portion of projected cash flows from these exposures. As of December 31, 2013, we did not have any outstanding foreign currency forward exchange contracts.

Our significant foreign subsidiaries are located in Germany, Israel, and Asia. We finance our operations in Europe and certain locations in Asia in local currencies. Our operations in Israel and most significant locations in Asia are largely financed in U.S. dollars, but these subsidiaries also have significant transactions in local currencies. Our exposure to foreign currency risk is mitigated to the extent that the costs incurred and the revenues earned in a particular currency offset one another. Our exposure to foreign currency risk is more pronounced in Israel, the Czech Republic, and China because the percentage of expenses denominated in Israeli shekels, Czech koruna, and Chinese renminbi to total expenses is much greater than the percentage of sales denominated in Israeli shekels, Czech koruna, and Chinese renminbi to total sales. Therefore, if the Israeli shekel, Czech koruna, and Chinese renminbi strengthen against all or most of our other major currencies, our operating profit is reduced. Where possible, we maintain local currency denominated cash balances in these countries approximately equal to the local currency liabilities to naturally hedge our exposures. We also have a higher percentage of Euro-denominated sales than expenses. Therefore, when the Euro strengthens against all or most of our other major currencies, our operating profit is increased. Accordingly, we monitor several important cross-rates.

We have performed sensitivity analyses as of December 31, 2013 and 2012, using a model that measures the change in the values arising from a hypothetical 10% adverse movement in foreign currency exchange rates relative to the U.S. dollar, with all other variables held constant. The foreign currency exchange rates we used were based on market rates in effect at December 31, 2013 and 2012. The sensitivity analyses indicated that a hypothetical 10% adverse movement in foreign currency exchange rates would impact our net earnings by approximately \$2.4 million and \$4.1 million at December 31, 2013 and December 31, 2012, respectively, although individual line items in our consolidated statement of operations would be materially affected. For example, a 10% weakening in all foreign currencies would increase the U.S. dollar equivalent of operating income generated in foreign currencies, which would be offset by foreign exchange losses of our foreign subsidiaries that have significant transactions in U.S. dollars or have the U.S. dollar as their functional currency.

A change in the mix of the currencies in which we transact our business could have a material effect on the estimated impact of the hypothetical 10% movement in the value of the U.S. dollar. Furthermore, the timing of cash receipts and disbursements could result in materially different actual results versus the hypothetical 10% movement in the value of the U.S. dollar, particularly if there are significant changes in exchange rates in a short period of time.

## Commodity Price Risk

Although most materials incorporated in our products are available from a number of sources, certain materials are available only from a relatively limited number of suppliers or are subject to significant price volatility. Our results of operations may be materially and adversely affected if we have difficulty obtaining these raw materials, the quality of available raw materials deteriorates, or there are significant price changes for these raw materials. The determination that any of the raw materials used in our products are conflict minerals originating from the Democratic Republic of the Congo and adjoining countries could increase the probability that we will encounter the challenges noted above, incur additional expenses to comply with government regulations, and face public scrutiny. For periods in which the prices of these raw materials are rising, we may be unable to pass on the increased cost to our customers which would result in decreased margins for the products in which they are used. For periods in which the prices are declining, we may be required to write down our inventory carrying cost of these raw materials, since we record our inventory at the lower of cost or market. Depending on the extent of the difference between market price and our carrying cost, this write-down could have a material adverse effect on our net earnings. We also may need to record losses for adverse purchase commitments for these materials in periods of declining prices.

Silicon wafers are the most important raw material for the manufacturing of our semiconductor products. Silicon wafers are manufactured from high-purity silicon, a metalloid. There have at times been industry-wide shortages of high-purity silicon resulting primarily from growing demand of the electronic component and solar power industries, and limited growth in high-purity silicon manufacturing capacities. Shifts in demand for high-purity silicon and in turn, silicon wafers, have resulted in significant fluctuation in prices of silicon wafers.

We are a major consumer of the world's annual production of tantalum, a metal used in the manufacturing of tantalum capacitors. There are few suppliers that process tantalum ore into capacitor grade tantalum powder. We acquire tantalum powder and wire from all of them under short-term commitments.

Palladium, a metal used to produce multi-layer ceramic capacitors, is currently found primarily in South Africa and Russia. Palladium is a commodity metal that is subject to price volatility. We periodically enter into short-term commitments to purchase palladium.

Certain metals used in the manufacture of our products, such as copper, are traded on active markets, and can be subject to significant price volatility. Our policy is to enter into short-term commitments to purchase defined portions of annual consumption of these metals if market prices decline below budget.

We estimate that a 10% increase or decrease in the costs of raw materials subject to commodity price risk would decrease or increase our net earnings by \$7.1 million, assuming that such changes in our costs have no impact on the selling prices of our products and that we have no pending commitments to purchase metals at fixed prices.

## Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The financial statements required by this Item are included herein, commencing on page F-1 of this report.

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

None.

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Item 9A. CONTROLS AND PROCEDURES

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

An evaluation was performed under the supervision and with the participation of our management, including the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), of the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) and Rule 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended. Based on that evaluation, our CEO and CFO concluded that our disclosure controls and procedures were effective as of the end of the period covered by this annual report to ensure that information required to be disclosed in reports that we file or submit under the Exchange Act is: (1) recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms; and (2) accumulated and communicated to our management, including our CEO and CFO, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our CEO and CFO, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2013 based on the 1992 framework set forth in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2013.

Ernst & Young LLP has issued an attestation report on the effectiveness of our internal control over financial reporting, as stated in their report which is included herein on page F-3.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during our last fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Certifications

The certifications of our CEO and CFO pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 are filed as Exhibits 31.1 and 31.2 to this Annual Report on Form 10-K. We have also filed with the New York Stock Exchange the most recent Annual Certification as required by Section 303A.12(a) of the New York Stock Exchange Listed Company Manual.

Item 9B. OTHER INFORMATION

None.

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Item 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

We have a code of ethics applicable to our Chief Executive Officer, Chief Financial Officer, Principal Accounting Officer or Controller, and financial managers. The text of this code has been posted on our website. To view the code, go to our website at [ir.vishay.com](http://ir.vishay.com) and click on Corporate Governance. You can obtain a printed copy of this code, free of charge, by contacting us at the following address:

Corporate Investor Relations  
Vishay Intertechnology, Inc.  
63 Lancaster Avenue  
Malvern, PA 19355-2143

It is our intention to satisfy the disclosure requirement under Item 5.05 of Form 8-K regarding any amendment to, or any waiver from, a provision of this code by posting such information on our website, at the aforementioned address and location.

Certain information required under this Item with respect to our Executive Officers is set forth in Part I hereof under the caption "Executive Officers of the Registrant."

Other information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2013, our most recent fiscal year end, and is incorporated herein by reference.

Item 11. EXECUTIVE COMPENSATION

Information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2013, our most recent fiscal year end, and is incorporated herein by reference

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

Information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2013, our most recent fiscal year end, and is incorporated herein by reference.

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

Information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2013, our most recent fiscal year end, and is incorporated herein by reference.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information required under this Item will be contained in our definitive proxy statement, which will be filed within 120 days of December 31, 2013, our most recent fiscal year end, and is incorporated herein by reference.

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Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) Documents Filed as Part of Form 10-K

1. Financial Statements

The Consolidated Financial Statements for the year ended December 31, 2013 are filed herewith. See Index to the Consolidated Financial Statements on page F-1 of this report.

2. Financial Statement Schedules

All financial statement schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission are not required under the related instructions or are inapplicable and therefore have been omitted.

3. Exhibits

- 3.1 Corrected Amended and Restated Certificate of Incorporation of Vishay Intertechnology, Inc. dated June 5, 2012. Incorporated by reference to Exhibit 3.1 to our current report on Form 8-K filed June 5, 2012.
- 3.2 Amended and Restated Bylaws dated June 1, 2011. Incorporated by reference to Exhibit 3.2 to our current report on Form 8-K filed June 2, 2011.
- 4.1 Note Instrument, dated as of December 13, 2002. Incorporated by reference to Exhibit 4.3 to our current report on Form 8-K filed December 23, 2002.  
Indenture, dated as of November 9, 2010, by and between Vishay Intertechnology, Inc. and Wilmington Trust Company, as Trustee. Incorporated by reference to Exhibit 4.1 to our current report on Form 8-K filed November 9, 2010.
- 4.2 Indenture, dated as of May 13, 2011, by and between Vishay Intertechnology, Inc. and Wilmington Trust Company, as Trustee. Incorporated by reference to Exhibit 4.1 to our current report on Form 8-K filed May 13, 2011.
- 4.3 Indenture, dated as of May 31, 2012, by and between Vishay Intertechnology, Inc. and Union Bank, N.A., as Trustee. Incorporated by reference to Exhibit 4.1 to our current report on Form 8-K filed May 31, 2012.  
Vishay Intertechnology Section 162(m) Cash Bonus Plan as amended and restated on February 21, 2012.
- 10.1 Incorporated by reference to Annex A to our Proxy Statement, dated April 5, 2012, for our 2012 Annual Meeting of Stockholders, filed April 5, 2012.
- 10.2 Vishay Intertechnology Senior Executive Phantom Stock Plan. Incorporated by reference to Annex C to our Proxy Statement, dated April 7, 2004, for our 2004 Annual Meeting of Stockholders.
- 10.3 Vishay Intertechnology, Inc. 1998 Stock Option Program. Incorporated by reference to our Proxy Statement, dated April 16, 1998, for our 1998 Annual Meeting of Stockholders.  
Amendment to Section 4.1 of Vishay's 1998 Stock Option Program. Incorporated by reference to Proposal Three, included in our Proxy Statement, dated April 16, 2007, for our 2007 Annual Meeting of Stockholders.
- 10.4
- 10.5 Vishay Intertechnology, Inc. 2007 Stock Incentive Program. Incorporated by reference to Annex A to our Proxy Statement, dated April 5, 2013, for our 2013 Annual Meeting of Stockholders.  
Securities Investment and Registration Rights Agreement by and among Vishay Intertechnology, Inc. and the Original Holders (as defined), dated as of December 13, 2002. Incorporated by reference to Exhibit 4.4 to our current report on Form 8-K filed December 23, 2002.
- 10.6



- 10.7 Note Purchase Agreement between Vishay Intertechnology, Inc. and Subscribers (as defined), dated as of December 13, 2002. Incorporated by reference to Exhibit 4.2 to our current report on Form 8-K filed December 23, 2002.
- 10.8 Put and Call Agreement between Vishay Intertechnology, Inc. and the Initial Holders (as defined), dated as of December 13, 2002. Incorporated by reference to Exhibit 4.5 to our current report on Form 8-K filed December 23, 2002.
- 10.9 Press release, dated July 21, 2010, announcing the terms of the replacement notes to be issued to holders of Vishay's exchangeable floating-rate unsecured notes due 2102 and revised terms of its outstanding warrants as required due to the spin-off of Vishay Precision Group, Inc. on July 6, 2010. Incorporated by reference to Exhibit 99 to our current report on Form 8-K filed July 22, 2010.
- 10.10 Amended and Restated Employment Agreement between Vishay Intertechnology, Inc. and Dr. Felix Zandman. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K/A filed May 15, 2009.
- 10.11 Amendment to Employment Agreement, dated August 8, 2010, between Vishay Intertechnology, Inc. and Dr. Felix Zandman. Incorporated by reference to Exhibit 10.4 to our quarterly report on Form 10-Q for the fiscal quarter ended July 3, 2010.
- 10.12 Employment agreement, between Vishay Europe GmbH (an indirect wholly owned subsidiary of Vishay Intertechnology, Inc.) and Dr. Gerald Paul. Incorporated by reference to Exhibit 10.3 to our quarterly report on Form 10-Q for the fiscal quarter ended October 2, 2004.
- 10.13 Amendment to Employment Agreement, dated August 8, 2010, between Vishay Europe GmbH (an indirect wholly owned subsidiary of Vishay Intertechnology, Inc.) and Dr. Gerald Paul. Incorporated by reference to Exhibit 10.5 to our quarterly report on Form 10-Q for the fiscal quarter ended July 3, 2010.
- 10.14 Amendment to Employment Agreement, dated August 28, 2011, between Vishay Europe GmbH (an indirect wholly owned subsidiary of Vishay Intertechnology, Inc.) and Dr. Gerald Paul. Incorporated by reference to Exhibit 10.3 to our quarterly report on Form 10-Q for the fiscal quarter ended October 1, 2011.
- 10.15 Employment Agreement between Vishay Israel Ltd. (a wholly owned subsidiary of Vishay Intertechnology, Inc.) and Marc Zandman. Incorporated by reference to Exhibit 10.2 to our quarterly report on Form 10-Q for the fiscal quarter ended October 2, 2004.
- 10.16 Amendment to Employment Agreement, dated August 8, 2010, between Vishay Israel Ltd. (a wholly owned subsidiary of Vishay Intertechnology, Inc.) and Marc Zandman. Incorporated by reference to Exhibit 10.6 to our quarterly report on Form 10-Q for the fiscal quarter ended July 3, 2010.
- 10.17 Amendment to Employment Agreement, dated August 30, 2011, between Vishay Israel Ltd. (a wholly owned subsidiary of Vishay Intertechnology, Inc.) and Marc Zandman. Incorporated by reference to Exhibit 10.2 to our quarterly report on Form 10-Q for the fiscal quarter ended October 1, 2011.
- 10.18 Employment Agreement between Vishay Intertechnology, Inc. and Dr. Lior E. Yahalomi. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K/A filed December 10, 2008.
- 10.19 Amendment to Employment Agreement, dated August 8, 2010, between Vishay Intertechnology, Inc. and Dr. Lior E. Yahalomi. Incorporated by reference to Exhibit 10.7 to our quarterly report on Form 10-Q for the fiscal quarter ended July 3, 2010.
- 10.20 Amendment to Employment Agreement, dated December 15, 2010, between Vishay Intertechnology, Inc. and Dr. Lior E. Yahalomi. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed December 17, 2010.

Separation Agreement, dated August 17, 2011, between Vishay Intertechnology, Inc. and Dr. Lior E. Yahalomi.  
10.21 Incorporated by reference to Exhibit 10.5 to our quarterly report on Form 10-Q for the fiscal quarter ended October 1, 2011.

General Release and Agreement, dated September 7, 2011, between Vishay Intertechnology, Inc. and Dr. Lior  
10.22 E. Yahalomi. Incorporated by reference to Exhibit 10.6 to our quarterly report on Form 10-Q for the fiscal quarter ended October 1, 2011.

Compensation Matters Agreement, dated August 23, 2011, between Vishay Intertechnology, Inc. and Lori  
10.23 Lipcaman. Incorporated by reference to Exhibit 10.4 to our quarterly report on Form 10-Q for the fiscal quarter ended October 1, 2011.

Compensation Matters Agreement, dated November 11, 2011, between Vishay Intertechnology, Inc. and Dieter  
10.24 F. Wunderlich. Incorporated by reference to Exhibit 10.30 to our 2011 annual report on Form 10-K.

Terms and Conditions of Johan Vandoorn Employment Agreement, dated January 16, 2012. Incorporated by  
10.25 F reference to Exhibit 10.31 to our 2011 annual report on Form 10-K.

Employment Agreement between Vishay Americas, Inc. (a wholly owned subsidiary of Vishay  
10.26 Intertechnology, Inc.) and David Valletta dated November 21, 2011. Incorporated by reference to Exhibit 10.32 to our 2011 annual report on Form 10-K.

Consulting and Non-Competition Agreement between Vishay Intertechnology, Inc. and Richard N. Grubb.  
10.27 F Incorporated by reference to Exhibit 10.17 to our 2008 annual report on Form 10-K.

Technology License Agreement, dated as of April 1, 2007, by and between International Rectifier Corporation  
10.28 and Vishay Intertechnology, Inc. Incorporated by reference to Exhibit 99.1 to International Rectifier Corporation's current report on Form 8-K filed April 9, 2007.

Technology License Back Agreement, dated as of April 1, 2007, by and between Vishay Intertechnology, Inc.  
10.29 and International Rectifier Corporation. Incorporated by reference to Exhibit 99.2 to International Rectifier Corporation's current report on Form 8-K filed April 9, 2007.

Amended and Restated Transition Services Agreement, dated as of April 1, 2007, by and between International  
10.30 Rectifier Corporation and Vishay Intertechnology, Inc. Incorporated by reference to Exhibit 99.5 to International Rectifier Corporation's current report on Form 8-K filed April 9, 2007.

Transition Product Services Agreement, dated as of April 1, 2007, by and between International Rectifier  
10.31 Corporation, International Rectifier Southeast Asia Pte. Ltd., Vishay Intertechnology, Inc., and Vishay Asia Logistics Pte. Ltd. Incorporated by reference to Exhibit 99.6 to International Rectifier Corporation's current report on Form 8-K filed April 9, 2007.

Transition Buy Back Die Supply Agreement, dated as of April 1, 2007, by and between International Rectifier  
10.32 Corporation and Vishay Intertechnology, Inc. Incorporated by reference to Exhibit 99.7 to International Rectifier Corporation's current report on Form 8-K filed April 9, 2007.

Transition IGBT/Auto Die Supply Agreement, dated as of April 1, 2007, by and between International Rectifier  
10.33 Corporation and Vishay Intertechnology, Inc. Incorporated by reference to Exhibit 99.8 to International Rectifier Corporation's current report on Form 8-K filed April 9, 2007.

Indemnification Escrow Agreement, dated as of April 1, 2007, by and among Vishay Intertechnology, Inc.,  
10.34 International Rectifier Corporation and Union Bank of California, N.A., as escrow agent. Incorporated by reference to Exhibit 99.9 to International Rectifier Corporation's current report on Form 8-K filed April 9, 2007.

- Confidential Settlement Agreement and Release, Amendment No. 1 to Transition Buy Back Die Supply Agreement, Amendment No. 2 to Technology License Agreement, Amendment No. 7 to Master Purchase Agreement, and Amendment No. 3 to Asset Purchase Agreement, dated June 25, 2009, by and between 10.35 Vishay Intertechnology, Inc. and International Rectifier Corporation. Incorporated by reference to Exhibit 10.1 to International Rectifier Corporation's current report on Form 8-K/A filed July 29, 2009.
- Master Separation and Distribution Agreement, dated June 22, 2010, by and among Vishay Intertechnology, 10.36 Inc. and Vishay Precision Group, Inc. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed June 23, 2010.
- Employee Matters Agreement, dated June 22, 2010, by and among Vishay Intertechnology, Inc. and Vishay 10.37 Precision Group, Inc. Incorporated by reference to Exhibit 10.2 to our current report on Form 8-K filed June 23, 2010.
- Tax Matters Agreement, dated July 6, 2010, between Vishay Precision Group, Inc. and Vishay 10.38 Intertechnology, Inc. Incorporated by reference to Exhibit 10.1 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- Trademark License Agreement, dated July 6, 2010, between Vishay Precision Group, Inc. and Vishay 10.39 Intertechnology, Inc. Incorporated by reference to Exhibit 10.2 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- Supply Agreement, dated July 6, 2010, between Vishay Advanced Technology, Ltd. And Vishay Dale 10.40\* Electronics, Inc. Incorporated by reference to Exhibit 10.4 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- Patent License Agreement, dated July 6, 2010, between Vishay Precision Group, Inc. and Vishay Dale 10.41\* Electronics, Inc. Incorporated by reference to Exhibit 10.6 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- Lease Agreement, dated July 4, 2010, between Vishay Advanced Technology, Ltd. And V.I.E.C. Ltd. 10.42 Incorporated by reference to Exhibit 10.7 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- Amendment No. 1 to Lease Agreement, dated March 1, 2012, between Vishay Advanced Technology, Ltd. 10.43 And V.I.E.C. Ltd. Incorporated by reference to Exhibit 10.2 to our quarterly report on Form 10-Q for the fiscal quarter ended March 31, 2012.
- Supply Agreement, dated July 6, 2010, between Vishay Dale Electronics, Inc. and Vishay Advanced 10.44\* Technology, Ltd. Incorporated by reference to Exhibit 10.8 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- Supply Agreement, dated July 6, 2010, between Vishay Measurements Group, Inc. and Vishay S.A. 10.45\* Incorporated by reference to Exhibit 10.9 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- Manufacturing Agreement, dated July 6, 2010, between Vishay S.A. and Vishay Precision Foil GmbH. 10.46\* Incorporated by reference to Exhibit 10.10 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.

- 10.47 Intellectual Property License Agreement, dated July 6, 2010, between Vishay S.A. and Vishay Precision Foil GmbH. Incorporated by reference to Exhibit 10.11 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- 10.48\* Supply Agreement, dated July 6, 2010, between Vishay Precision Foil GmbH and Vishay S.A. Incorporated by reference to Exhibit 10.12 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- 10.49\* Intellectual Property License Agreement, dated July 6, 2010, between Vishay S.A. and Vishay Measurements Group, Inc. Incorporated by reference to Exhibit 10.13 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- 10.50 Lease Agreement between Vishay Alpha Electronics Corporation and Vishay Japan Co., Ltd. Incorporated by reference to Exhibit 10.14 to Vishay Precision Group, Inc.'s current report on Form 8-K filed July 7, 2010.
- 10.51 Credit Agreement, dated as of December 1, 2010 among Vishay Intertechnology, Inc. and JPMorgan Chase Bank, N.A., as administrative agent and the lenders and other parties thereto. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed December 1, 2010
- 10.52 First Amendment and Waiver to Credit Agreement dated March 2, 2011, among Vishay Intertechnology, Inc. and JPMorgan Chase Bank, N.A., as administrative agent and the lenders and other parties thereto. Incorporated by reference to Exhibit 10.2 to our quarterly report on Form 10-Q for the fiscal quarter ended April 1, 2011.
- 10.53 Second Amendment dated September 8, 2011, among Vishay Intertechnology, Inc. and JPMorgan Chase Bank, N.A., as administrative agent and the lenders and other parties thereto. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed September 9, 2011.
- 10.54 Third Amendment and Incremental Facility Agreement dated April 3, 2012, among Vishay Intertechnology, Inc., the Incremental Revolving Lenders party hereto, and JPMorgan Chase Bank, N.A. in its capacities as administrative agent and issuing bank. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed April 3, 2012.
- 10.55 Credit Agreement, dated as of December 1, 2010, as amended and restated as of August 8, 2013 among Vishay Intertechnology, Inc. and JPMorgan Chase Bank, N.A., as administrative agent and the lenders and other parties thereto. Incorporated by reference to Exhibit 10.1 to our current report on Form 8-K filed August 8, 2013.
- 10.56† Vishay Intertechnology, Inc. Deferred Compensation Plan (as amended and restated, effective November 15, 2011). Incorporated by reference to Exhibit 4.1 to our Registration Statement on Form S-8 (No. 333-178895) filed January 5, 2012.
- 10.57†\*\* Vishay Intertechnology, Inc. Form of Executive Officer Restricted Stock Unit Agreement.
- 10.58†\*\* Vishay Intertechnology, Inc. Form of Executive Officer Amended Restricted Stock Unit Agreement.
- 10.59†\*\* Vishay Intertechnology, Inc. Form of Restricted Stock Unit Agreement.
- 10.60†\*\* Vishay Intertechnology, Inc. Form of Executive Officer Phantom Stock Unit Agreement.
- 21\*\* Subsidiaries of the Registrant.
- 23.1\*\* Consent of Independent Registered Public Accounting Firm.

- 31.1\*\* Certification pursuant to Rules 13a-15(e) or 15d-15(e) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 – Chief Executive Officer.
- 31.2\*\* Certification pursuant to Rules 13a-15(e) or 15d-15(e) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 – Chief Financial Officer.
- 32.1\*\* Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 – Chief Executive Officer.
- 32.2\*\* Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 – Chief Financial Officer.
- 101\*\* Interactive Data File (Annual Report on Form 10-K, for the year ended December 31, 2013, furnished in XBRL (eXtensible Business Reporting Language)).

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\* Confidential treatment has been requested by, and accorded to, VPG with respect to certain portions of this Exhibit. Omitted portions have been filed separately by VPG with the Securities and Exchange Commission.

\*\* Filed herewith.

† Denotes a management contract or compensatory plan, contract, or arrangement.

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SIGNATURES

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

VISHAY INTERTECHNOLOGY, INC.

By: /s/ Gerald Paul  
 Dr. Gerald Paul  
 President and Chief Executive Officer  
 February 19, 2014

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
Principal Executive Officer:		
<u>/s/ Gerald Paul</u> Dr. Gerald Paul	President, Chief Executive Officer, and Director	February 19, 2014
Principal Financial and Accounting Officer:		
<u>/s/ Lori Lipcaman</u> Lori Lipcaman	Executive Vice President and Chief Financial Officer	February 19, 2014
Board of Directors:		
<u>/s/ Marc Zandman</u> Marc Zandman	Executive Chairman of the Board of Directors	February 19, 2014
<u>/s/ Abraham Ludomirski</u> Dr. Abraham Ludomirski	Director	February 19, 2014
<u>/s/ Frank D. Maier</u> Frank D. Maier	Director	February 19, 2014
<u>/s/ Wayne M. Rogers</u> Wayne M. Rogers	Director	February 19, 2014
<u>/s/ Ronald M. Ruzic</u> Ronald M. Ruzic	Director	February 19, 2014
<u>/s/ Ziv Shoshani</u> Ziv Shoshani	Director	February 19, 2014
<u>/s/ Timothy V. Talbert</u> Timothy V. Talbert	Director	February 19, 2014

/s/ Thomas C. Wertheimer  
Thomas C. Wertheimer

Director

February 19, 2014

/s/ Ruta Zandman  
Ruta Zandman

Director

February 19, 2014

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Vishay Intertechnology, Inc.

Index to Consolidated Financial Statements

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Audited Consolidated Financial Statements

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Consolidated Statements of Comprehensive Income	F-7
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Report of Independent Registered Public Accounting Firm  
on the Consolidated Financial Statements

The Board of Directors and Stockholders of Vishay Intertechnology, Inc.:

We have audited the accompanying consolidated balance sheets of Vishay Intertechnology Inc. as of December 31, 2013 and 2012, and the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2013. These financial statements are the responsibility of Vishay Intertechnology Inc.'s management. Our responsibility is to express an opinion on these financial statements based on our 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 audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Vishay Intertechnology Inc. at December 31, 2013 and 2012, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2013, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Vishay Intertechnology Inc.'s internal control over financial reporting as of December 31, 2013, based on criteria established in Internal Control—Integrated Framework (1992 framework) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 19, 2014 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Philadelphia, Pennsylvania

February 19, 2014

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Report of Independent Registered Public Accounting Firm  
on Internal Control over Financial Reporting

The Board of Directors and Stockholders of Vishay Intertechnology, Inc.:

We have audited Vishay Intertechnology Inc.'s internal control over financial reporting as of December 31, 2013, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (1992 Framework) (the COSO criteria). Vishay Intertechnology Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in Item 9A, "Management's Report on Internal Control Over Financial Reporting." Our responsibility is to express an opinion on Vishay Intertechnology Inc.'s internal control over financial reporting based on our audit.

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

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

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

In our opinion, Vishay Intertechnology Inc. maintained in all material respects, effective internal control over financial reporting as of December 31, 2013, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Vishay Intertechnology Inc. as of December 31, 2013 and 2012, and the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2013 and our report dated February 19, 2014 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Philadelphia, Pennsylvania

February 19, 2014

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## VISHAY INTERTECHNOLOGY, INC.

## Consolidated Balance Sheets

(In thousands, except share amounts)

	December 31, 2013	December 31, 2012
Assets		
Current assets:		
Cash and cash equivalents	\$640,348	\$697,595
Short-term investments	511,231	294,943
Accounts receivable, net of allowances for doubtful accounts of \$2,613 and \$2,534, respectively	274,083	247,035
Inventories:		
Finished goods	109,617	109,571
Work in process	197,600	177,350
Raw materials	125,491	120,728
Total inventories	432,708	407,649
Deferred income taxes	21,716	24,385
Prepaid expenses and other current assets	100,594	119,656
Total current assets	1,980,680	1,791,263
Property and equipment, at cost:		
Land	93,685	92,348
Buildings and improvements	560,418	523,091
Machinery and equipment	2,340,778	2,163,182
Construction in progress	95,278	101,570
Allowance for depreciation	(2,163,540)	(1,965,639)
Property and equipment, net	926,619	914,552
Goodwill	43,132	34,866
Other intangible assets, net	129,951	133,717
Other assets	156,757	141,879
Total assets	\$3,237,139	\$3,016,277

Continues on following page.

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VISHAY INTERTECHNOLOGY, INC.  
 Consolidated Balance Sheets (continued)  
 (In thousands, except share amounts)

	December 31, 2013	December 31, 2012
Liabilities and stockholders' equity		
Current liabilities:		
Notes payable to banks	\$2	\$6
Trade accounts payable	163,894	147,936
Payroll and related expenses	120,997	108,353
Other accrued expenses	146,670	148,660
Income taxes	17,502	7,215
Total current liabilities	449,065	412,170
Long-term debt, less current portion	364,911	392,931
Deferred income taxes	157,640	129,379
Other liabilities	99,426	108,600
Accrued pension and other postretirement costs	287,901	344,961
Total liabilities	1,358,943	1,388,041
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, par value \$1.00 per share: authorized - 1,000,000 shares; none issued		
Common stock, par value \$0.10 per share: authorized - 300,000,000 shares; 135,202,081 and 131,143,534 shares outstanding	13,520	13,114
Class B convertible common stock, par value \$0.10 per share: authorized - 40,000,000 shares; 12,129,227 and 12,129,227 shares outstanding	1,213	1,213
Capital in excess of par value	2,054,087	1,999,901
(Accumulated deficit) retained earnings	(257,698 )	(380,678 )
Accumulated other comprehensive income (loss)	61,634	(10,222 )
Total Vishay stockholders' equity	1,872,756	1,623,328
Non controlling interests	5,440	4,908
Total equity	1,878,196	1,628,236
Total liabilities and equity	\$3,237,139	\$3,016,277

See accompanying notes.

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VISHAY INTERTECHNOLOGY, INC.  
Consolidated Statements of Operations  
(In thousands, except per share amounts)

	Years ended December 31,		
	2013	2012	2011
Net revenues	\$2,370,979	\$2,230,097	\$2,594,029
Costs of products sold	1,803,719	1,703,424	1,874,043
Gross profit	567,260	526,673	719,986
Selling, general, and administrative expenses	368,542	349,625	367,623
Restructuring and severance costs	2,814	-	-
Executive compensation charges (credit)	(1,778 )	-	5,762
Gain on sale of property	-	(12,153 )	-
Operating income	197,682	189,201	346,601
Other income (expense):			
Interest expense	(23,130 )	(22,604 )	(19,277 )
Other	1,853	3,440	3,792
	(21,277 )	(19,164 )	(15,485 )
Income before taxes	176,405	170,037	331,116
Income tax expense	52,636	46,506	91,119
Net earnings	123,769	123,531	239,997
Less: net earnings attributable to noncontrolling interests	789	793	1,176
Net earnings attributable to Vishay stockholders	\$122,980	\$122,738	\$238,821
Basic earnings per share attributable to Vishay stockholders:	\$0.85	\$0.82	\$1.49
Diluted earnings per share attributable to Vishay stockholders:	\$0.81	\$0.79	\$1.42
Weighted average shares outstanding - basic	144,856	149,020	160,094
Weighted average shares outstanding - diluted	151,417	155,844	168,514

See accompanying notes.

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VISHAY INTERTECHNOLOGY, INC.  
 Consolidated Statements of Comprehensive Income  
 (In thousands)

	Years ended December 31,		
	2013	2012	2011
Net earnings	\$123,769	\$123,531	\$239,997
Other comprehensive income (loss), net of tax			
Foreign currency translation adjustment	23,537	14,567	(26,441 )
Pension and other post-retirement actuarial items	49,038	(29,759 )	(29,207 )
Unrealized gain (loss) on available-for-sale securities	(719 )	1,192	(1,065 )
Other comprehensive income (loss)	71,856	(14,000 )	(56,713 )
Comprehensive income	195,625	109,531	183,284
Less: comprehensive income attributable to noncontrolling interests	789	793	1,176
Comprehensive income attributable to Vishay stockholders	\$194,836	\$108,738	\$182,108

See accompanying notes.

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VISHAY INTERTECHNOLOGY, INC.  
Consolidated Statements of Cash Flows  
(In thousands)

	Years ended December 31,		
	2013	2012	2011
Continuing operating activities			
Net earnings	\$ 123,769	\$ 123,531	\$ 239,997
Adjustments to reconcile net earnings (loss) to net cash provided by operating activities:			
Depreciation and amortization	170,132	168,555	179,706
(Gain) loss on disposal of property and equipment	26	(12,894 )	(930 )
Accretion of interest on convertible debentures	3,646	3,028	2,046
Inventory write-offs for obsolescence	19,108	20,865	21,118
Pensions and other postretirement benefits, net of contributions	(9,327 )	(12,146 )	(11,385 )
Deferred income taxes	1,734	(6,828 )	14,108
Other	(7,009 )	8,530	(16,120 )
Net change in operating assets and liabilities, net of effects of businesses acquired	(10,009 )	(5,152 )	(52,503 )
Net cash provided by continuing operating activities	292,070	287,489	376,037
Continuing investing activities			
Capital expenditures	(153,077)	(150,291)	(168,641)
Proceeds from sale of property and equipment	4,681	10,241	2,162
Purchase of businesses, net of cash acquired	(23,034 )	(85,493 )	(19,335 )
Purchase of short-term investments	(664,867)	(381,040)	(497,258)
Maturity of short-term investments	465,668	339,287	226,792
Sale of investments	-	-	2,167
Other investing activities	(176 )	(1,828 )	1,350
Net cash used in continuing investing activities	(370,805)	(269,124)	(452,763)
Continuing financing activities			
Proceeds from long-term borrowings	-	150,000	150,000
Issuance costs	(4,558 )	(4,827 )	(4,429 )
Principal payments on long-term debt and capital leases	(28 )	(27 )	(681 )
Net proceeds (payments) on revolving credit lines	25,000	(66,000 )	(85,000 )
Common stock repurchases	-	(150,000)	(150,000)
Net changes in short-term borrowings	(146 )	(115 )	(10 )
Distributions to noncontrolling interests	(257 )	(1,040 )	(1,440 )
Proceeds from stock options exercised	-	174	9,675
Excess tax benefit from stock options exercised	196	-	555
Other financing activities	(3,638 )	-	-
Net cash provided by (used in) continuing financing activities	16,569	(71,835 )	(81,330 )
Effect of exchange rate changes on cash and cash equivalents	4,919	1,977	9,806
Net decrease in cash and cash equivalents	(57,247 )	(51,493 )	(148,250)
Cash and cash equivalents at beginning of year	697,595	749,088	897,338



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Cash and cash equivalents at end of year	\$640,348	\$697,595	\$749,088
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See accompanying notes

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VISHAY INTERTECHNOLOGY, INC.  
Consolidated Statements of Stockholders' Equity  
(In thousands, except share amounts)

	Common Stock	Class B Convertible Common Stock	Capital in Excess of Par Value	Retained Earnings (Accumulated Deficit)	Accumulated Other Comprehensive Income (Loss)	Total Vishay Stockholders' Equity	Noncontrolling Interests	Total Equity
Balance at January 1, 2011	\$ 15,061	\$ 1,435	\$ 2,156,981	\$(742,237 )	\$ 60,491	\$ 1,491,731	\$ 5,419	\$ 1,497,150
Net earnings	-	-	-	238,821	-	238,821	1,176	239,997
Other comprehensive income (loss)	-	-	-	-	(56,713 )	(56,713 )	-	(56,713 )
Distributions to noncontrolling interests	-	-	-	-	-	-	(1,440 )	(1,440 )
Phantom and restricted stock issuances (193,602 shares)	20	-	(161 )	-	-	(141 )	-	(141 )
Issuance of convertible debentures due 2041	-	-	62,246	-	-	62,246	-	62,246
Stock repurchase (8,620,689 shares)	(862 )	-	(149,138 )	-	-	(150,000 )	-	(150,000 )
Stock compensation expense	-	-	6,832	-	-	6,832	-	6,832
Stock options exercised (650,621 shares)	65	-	9,610	-	-	9,675	-	9,675
Tax effects of stock plan	-	-	555	-	-	555	-	555
Conversions from Class B to common stock (900,290 shares)	90	(90 )	-	-	-	-	-	-
Balance at December 31, 2011	\$ 14,374	\$ 1,345	\$ 2,086,925	\$(503,416 )	\$ 3,778	\$ 1,603,006	\$ 5,155	\$ 1,608,161
Net earnings	-	-	-	122,738	-	122,738	793	123,531
Other comprehensive income (loss)	-	-	-	-	(14,000 )	(14,000 )	-	(14,000 )

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Distributions to noncontrolling interests	-	-	-	-	-	-	(1,040 )	(1,040 )
Phantom and restricted stock issuances (11,323 shares)	1	-	(9 )	-	-	(8 )	-	(8 )
Issuance of convertible debentures due 2042	-	-	57,874	-	-	57,874	-	57,874
Stock repurchase (13,948,687 shares)	(1,395 )	-	(148,605 )	-	-	(150,000 )	-	(150,000 )
Stock compensation expense	-	-	3,544	-	-	3,544	-	3,544
Stock options exercised (22,095 shares)	2	-	172	-	-	174	-	174
Conversions from Class B to common stock (1,323,322 shares)	132	(132 )	-	-	-	-	-	-
Balance at December 31, 2012	\$13,114	\$1,213	\$1,999,901	\$(380,678 )	\$(10,222 )	\$1,623,328	\$4,908	\$1,628,236
Net earnings	-	-	-	122,980	-	122,980	789	123,769
Other comprehensive income	-	-	-	-	71,856	71,856	-	71,856
Distributions to noncontrolling interests	-	-	-	-	-	-	(257 )	(257 )
Restricted stock issuances (393,818 shares)	40	-	(2,680 )	-	-	(2,640 )	-	(2,640 )
Stock compensation expense	-	-	636	-	-	636	-	636
Tax effects of stock plan	-	-	196	-	-	196	-	196
Issuance of common stock for exchangeable unsecured notes (3,664,729 shares)	366	-	56,034	-	-	56,400	-	56,400
Balance at December 31,	\$13,520	\$1,213	\$2,054,087	\$(257,698 )	\$61,634	\$1,872,756	\$5,440	\$1,878,196

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See accompanying notes.

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## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Vishay Intertechnology, Inc. ("Vishay" or the "Company") is a global manufacturer and supplier of semiconductors and passive components, including power MOSFETs, power integrated circuits, transistors, diodes, optoelectronic components, resistors, capacitors, and inductors. Semiconductors and electronic components manufactured by the Company are used in virtually all types of electronic products, including those in the industrial, computing, automotive, consumer electronics products, telecommunications, power supplies, military/aerospace, and medical industries.

### Note 1 – Summary of Significant Accounting Policies

#### Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States ("GAAP") requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ significantly from those estimates.

#### Principles of Consolidation

The consolidated financial statements include the accounts of Vishay and all of its subsidiaries in which a controlling financial interest is maintained. For those consolidated subsidiaries in which the Company's ownership is less than 100 percent, the outside stockholders' interests are shown as noncontrolling interest in the accompanying consolidated balance sheets. Investments in affiliates over which the Company has significant influence but not a controlling interest are carried on the equity basis. Investments in affiliates over which the Company does not have significant influence are accounted for by the cost method. All intercompany transactions, accounts, and profits are eliminated.

#### Subsequent Events

In connection with the preparation of the consolidated financial statements and in accordance with GAAP, the Company evaluated subsequent events after the balance sheet date of December 31, 2013 through the date these financial statements were issued through the filing of this annual report on Form 10-K with the U.S. Securities and Exchange Commission.

#### Revenue Recognition

The Company recognizes revenue on product sales during the period when the sales process is complete. This generally occurs when products are shipped to the customer in accordance with terms of an agreement of sale, title and risk of loss have been transferred, collectibility is reasonably assured, and pricing is fixed or determinable. For a small percentage of sales where title and risk of loss passes at point of delivery, the Company recognizes revenue upon delivery to the customer, assuming all other criteria for revenue recognition are met. The Company historically has had agreements with distributors that provided limited rights of product return. The Company has modified these arrangements to allow distributors a limited credit for unsaleable products, which it terms a "scrap allowance." Consistent with industry practice, the Company also has a "stock, ship and debit" program whereby it considers requests by distributors for credits on previously purchased products that remain in distributors' inventory, to enable the distributors to offer more competitive pricing. In addition, the Company has contractual arrangements whereby it provides distributors with protection against price reductions initiated by the Company after product is sold by the Company to the distributor and prior to resale by the distributor.

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 1 – Summary of Significant Accounting (continued)

The Company records a reduction of revenue during each period, and records a related accrued expense for the period, based upon its estimate of product returns, scrap allowances, "stock, ship and debit" credits, and price protection credits that will be attributable to sales recorded through the end of the period. The Company makes these estimates based upon sales levels to its distributors during the period, inventory levels at the distributors, current and projected market conditions, and historical experience under the programs. While the Company utilizes a number of different methodologies to estimate the accruals, all of the methodologies take into account sales levels to distributors during the relevant period, inventory levels at the distributors, current and projected market trends and conditions, recent and historical activity under the relevant programs, changes in program policies, and open requests for credits. These procedures require the exercise of significant judgments. The Company believes that it has a reasonable basis to estimate future credits under the programs.

Royalty revenues, included in net revenues on the consolidated statements of operations, were \$6,362, \$7,131, and \$6,633 for the years ended December 31, 2013, 2012, and 2011, respectively. The Company records royalty revenue in accordance with agreed upon terms when performance obligations are satisfied, the amount is fixed or determinable, and collectibility is reasonably assured. Vishay earns royalties at the point of sale of products which incorporate licensed intellectual property. Accordingly, the amount of royalties recognized is determined based on periodic reporting to Vishay by its licensees, and based on judgments and estimates by Vishay management, which management considers reasonable.

Shipping and Handling Costs

Shipping and handling costs are included in costs of products sold.

Research and Development Expenses

Research and development costs are expensed as incurred. The amount charged to expense for research and development (exclusive of purchased in-process research and development) aggregated \$62,090, \$57,164, and \$55,809, for the years ended December 31, 2013, 2012, and 2011, respectively. The Company spends additional amounts for the development of machinery and equipment for new processes and for cost reduction measures.

Grants

Government grants received by certain subsidiaries, primarily in Israel, are recognized as income in accordance with the purpose of the specific contract and in the period in which the related expense is incurred. Grants recognized as a reduction of costs of products sold were \$406, \$351, and \$483 for the years ended December 31, 2013, 2012, and 2011, respectively. Deferred grant income included in other liabilities on the consolidated balance sheets was \$1,882 and \$1,548 at December 31, 2013 and 2012, respectively. The grants are subject to certain conditions, including maintaining specified levels of employment for periods up to ten years. Noncompliance with such conditions could result in the repayment of grants. However, management expects that the Company will comply with all terms and conditions of the grants.

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 1 – Summary of Significant Accounting (continued)

Income Taxes

The provision for income taxes is determined using the asset and liability approach of accounting for income taxes. Under this approach, deferred taxes represent the future tax consequences expected to occur when the reported amounts of assets and liabilities are recovered or paid. The provision for income taxes represents income taxes paid or payable for the current year plus the change in deferred taxes during the year. Deferred taxes result from differences between the financial and tax bases of the Company's assets and liabilities and are adjusted for changes in tax rates and tax laws when changes are enacted. Valuation allowances have been established for deferred tax assets which the Company believes do not meet GAAP criteria of "more likely than not" to be realized. This criterion requires a level of judgment regarding future taxable income, which may be revised due to changes in market conditions, tax laws, or other factors. If the Company's assumptions and estimates change in the future, valuation allowances established may be increased, resulting in increased tax expense. Conversely, if the Company is ultimately able to utilize all or a portion of the deferred tax assets for which a valuation allowance has been established, then the related portion of the valuation allowance can be released, resulting in decreased tax expense.

At the present time, substantially all earnings generated by foreign subsidiaries are expected to be reinvested outside of the United States indefinitely. Accordingly, no provision has been made for U.S. federal and state income taxes on these foreign earnings. Upon distribution of those earnings in the form of dividends or otherwise, the Company would be subject to U.S. income taxes (subject to an adjustment for foreign tax credits), state income taxes, incremental foreign income taxes, and withholding taxes payable to the various foreign countries.

The Company and its subsidiaries are subject to income taxes in the U.S. and numerous foreign jurisdictions. Significant judgment is required in evaluating the Company's tax positions and determining its provision for income taxes. During the ordinary course of business, there are many transactions and calculations for which the ultimate tax determination is uncertain. The Company establishes reserves for tax-related uncertainties based on estimates of whether, and the extent to which, additional taxes will be due. These reserves are established when the Company believes that certain positions might be challenged despite the Company's belief that its tax return positions are fully supportable. The Company adjusts these reserves in light of changing facts and circumstances and the provision for income taxes includes the impact of reserve provisions and changes to reserves that are considered appropriate.

These accruals for tax-related uncertainties are based on management's best estimate of potential tax exposures. When particular matters arise, a number of years may elapse before such matters are audited by tax authorities and finally resolved. Favorable resolution of such matters could be recognized as a reduction to the Company's effective tax rate in the year of resolution. Unfavorable resolution of any particular issue could increase the effective tax rate and may require the use of cash in the year of resolution. The amount included in current liabilities on the accompanying consolidated balance sheets reflect only amounts expected to be settled in cash within one year.

Cash, Cash Equivalents, and Short-Term Investments

Cash and cash equivalents includes demand deposits and highly liquid investments with maturities of three months or less when purchased. Highly liquid investments with original maturities greater than three months, but less than one year are classified as short-term investments. At December 31, 2013 and 2012, the Company's short-term investments were comprised of time deposits with financial institutions whose original maturity exceeds three months, but less than one year.

Allowance for Doubtful Accounts

The Company maintains an allowance for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. The allowance is determined through an analysis of the aging of accounts receivable and assessments of risk that are based on historical trends and an evaluation of the impact of current and projected economic conditions. The Company evaluates the past-due status of its trade receivables based on contractual terms of sale. If the financial condition of the Company's customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. Bad debt expense (income realized upon subsequent collection) was \$62, \$(24), and \$(93) for the years ended December 31, 2013, 2012, and 2011, respectively.

#### Inventories

Inventories are stated at the lower of cost, determined by the first-in, first-out method, or market. Inventories are adjusted for estimated obsolescence and written down to net realizable value based upon estimates of future demand, technology developments, and market conditions.

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 1 – Summary of Significant Accounting (continued)

Property and Equipment

Property and equipment is carried at cost and is depreciated principally by the straight-line method based upon the estimated useful lives of the assets. Machinery and equipment are being depreciated over useful lives of seven to ten years. Buildings and building improvements are being depreciated over useful lives of twenty to forty years. Construction in progress is not depreciated until the assets are placed in service. The estimated cost to complete construction in progress at December 31, 2013 was approximately \$35,541. Depreciation of capital lease assets is included in total depreciation expense. Depreciation expense was \$155,064, \$153,801, and \$165,022 for the years ended December 31, 2013, 2012, and 2011, respectively. Gains and losses on the disposal of assets which do not qualify for presentation as discontinued operations are included in the determination of operating margin (within selling, general, and administrative expenses). Individually material gains and losses on disposal are separately disclosed in the notes to the consolidated financial statements.

Goodwill and Other Intangible Assets

Goodwill and indefinite-lived intangible assets are not amortized but rather are tested for impairment at least annually. The required annual impairment tests of goodwill and indefinite-lived intangible assets are completed as of the first day of the fourth fiscal quarter of each year. These tests are performed more frequently whenever events or changes in circumstances indicate that the assets might be impaired. Certain of the Company's tradenames have been assigned indefinite useful lives.

Definite-lived intangible assets are amortized over their estimated useful lives. Patents and acquired technology are being amortized over useful lives of seven to twenty-five years. Capitalized software is amortized over periods of three to ten years, primarily included in costs of products sold on the consolidated statements of operations. Customer relationships are amortized over useful lives of five to twenty years. Noncompete agreements are amortized over periods of four to ten years. The Company continually evaluates the reasonableness of the useful lives of these assets.

GAAP prescribes a two-step quantitative method for determining goodwill impairment. The Company has the option of performing a qualitative assessment before performing the two-step quantitative impairment test. If it is determined, on the basis of qualitative factors, that the fair value of the reporting unit is not more likely than not less than the carrying amount, the two-step quantitative impairment test is not required. If it is determined that the fair value of the reporting unit is more likely than not less than the carrying amount, the two-step quantitative impairment test is required. In the first step, the Company determines the fair value of the reporting unit and compares that fair value to the net book value of the reporting unit. The fair value of the reporting unit is determined using various valuation techniques, including a comparable companies market multiple approach and a discounted cash flow analysis (an income approach).

If the net book value of the reporting unit were to exceed the fair value, the Company would then perform the second step of the quantitative impairment test, which requires allocation of the reporting unit's fair value to all of its assets and liabilities in a manner similar to a purchase price allocation, with any residual fair value being allocated to goodwill. An impairment charge will be recognized only when the implied fair value of a reporting unit's goodwill is less than its carrying amount.

The Company has the option of performing a qualitative assessment of the indefinite-lived intangible assets before performing a quantitative impairment test. The fair value of the tradenames is measured as the discounted cash flow savings realized from owning such tradenames and not having to pay a royalty for their use.

There was no impairment identified through the annual impairment tests completed in 2013, 2012, or 2011.

Upon determining that an intangible asset classified as indefinite-lived is impaired, the Company reassesses the useful life of the impaired assets and begins to amortize the remaining carrying value over that useful life if it is determined that the asset no longer has an indefinite useful life.

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 1 – Summary of Significant Accounting (continued)

Impairment of Long-Lived Assets

The carrying value of long-lived assets held-and-used, other than goodwill and indefinite-lived intangible assets, is evaluated when events or changes in circumstances indicate the carrying value may not be recoverable or the useful life has changed. The carrying value of a long-lived asset group is considered impaired when the total projected undiscounted cash flows from such asset group are separately identifiable and are less than the carrying value. In that event, a loss is recognized based on the amount by which the carrying value exceeds the fair market value of the long-lived asset group. Fair market value is determined primarily using present value techniques based on projected cash flows from the asset group. Losses on long-lived assets held-for-sale, other than goodwill and indefinite-lived intangible assets, are determined in a similar manner, except that fair market values are reduced for anticipated disposal costs.

Available-for-Sale Securities

Other assets reported on the consolidated balance sheets include investments in marketable securities which are classified as available-for-sale. These assets include assets that are held in trust related to the Company's non-qualified pension and deferred compensation plans (see Note 11) and assets that are intended to fund a portion of the Company's other postretirement benefit obligations outside of the U.S. These assets are reported at fair value, based on quoted market prices as of the end of the reporting period. Unrealized gains and losses are reported, net of their related tax consequences, as a component of accumulated other comprehensive income in stockholders' equity until sold. At the time of sale the assets that are held in trust related to the Company's non-qualified pension and deferred compensation plans, any gains (losses) calculated by the specific identification method are recognized as a reduction (increase) to benefits expense, within selling, general, and administrative expenses.

Financial Instruments

The Company uses financial instruments in the normal course of its business, including from time to time, derivative financial instruments. Additionally, from time to time, the Company enters into contracts that are not considered derivative financial instruments in their entirety, but that include embedded derivative features. The convertible senior debentures due 2040, due 2041, and due 2042 contain embedded derivatives that are recorded at fair value on a recurring basis. At December 31, 2013 and 2012, outstanding derivative instruments were not material.

The Company reports derivative instruments on the consolidated balance sheet at their fair values. The accounting for changes in fair value depends upon the purpose of the derivative instrument and whether it is designated and qualifies for hedge accounting. For instruments designated as hedges, the effective portion of gains or losses is reported in other comprehensive income (loss) and the ineffective portion, if any, is reported in current period net earnings (loss). Changes in the fair values of derivative instruments that are not designated as hedges, including embedded derivatives, are recorded in current period net earnings (loss).

The Company has in the past used interest rate swap agreements to modify variable rate obligations to fixed rate obligations, thereby reducing exposure to market rate fluctuations. The Company has also in the past used financial instruments such as forward exchange contracts to hedge a portion, but not all, of its firm commitments denominated in foreign currencies. The purpose of the Company's foreign currency management is to minimize the effect of exchange rate changes on actual cash flows from foreign currency denominated transactions.

Other financial instruments include cash and cash equivalents, short-term investments, accounts receivable, and notes payable. The carrying amounts of these financial instruments reported in the consolidated balance sheets approximate their fair values due to the short-term nature of these assets and liabilities.

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 1 – Summary of Significant Accounting (continued)

Foreign Currency Translation

The Company has significant operations outside of the United States. The Company finances its operations in Europe and certain locations in Asia in local currencies, and accordingly, these subsidiaries utilize the local currency as their functional currency. The Company's operations in Israel and most significant locations in Asia are largely financed in U.S. dollars, and accordingly, these subsidiaries utilize the U.S. dollar as their functional currency.

For those subsidiaries where the local currency is the functional currency, assets and liabilities in the consolidated balance sheets have been translated at the rate of exchange as of the balance sheet date. Translation adjustments do not impact the consolidated results of operations and are reported as a separate component of stockholders' equity. Revenues and expenses are translated at the average exchange rate for the year. While the translation of revenues and expenses into U.S. dollars does not directly impact the statement of operations, the translation effectively increases or decreases the U.S. dollar equivalent of revenues generated and expenses incurred in those foreign currencies.

For those foreign subsidiaries where the U.S. dollar is the functional currency, all foreign currency financial statement amounts are remeasured into U.S. dollars. Exchange gains and losses arising from remeasurement of foreign currency-denominated monetary assets and liabilities are included in the consolidated results of operations.

Stock-Based Compensation

Compensation costs related to stock-based payment transactions are recognized in the consolidated financial statements. The amount of compensation cost is measured based on the grant-date fair value of the equity (or liability) instruments issued. Compensation cost is recognized over the period that an officer, employee, or non-employee director provides service in exchange for the award. For options and restricted stock units subject to graded vesting, the Company recognizes expense over the service period for each separately vesting portion of the award as if the award was, in-substance, multiple awards. The Company recognizes compensation cost for restricted stock units ("RSUs") that are expected to vest and records cumulative adjustments in the period that the expectation changes.

Commitments and Contingencies

Liabilities for loss contingencies, including environmental remediation costs, arising from claims, assessments, litigation, fines, penalties, and other sources are recorded when it is probable that a liability has been incurred and the amount of the assessment and/or remediation can be reasonably estimated. The costs for a specific environmental remediation site are discounted if the aggregate amount of the obligation and the amount and timing of the cash payments for that site are fixed or reliably determinable based upon information derived from the remediation plan for that site. Accrued liabilities for environmental matters recorded at December 31, 2013 and 2012 do not include claims against third parties.

Restructuring and Severance Costs

Restructuring and severance costs reflect charges resulting from cost reduction programs implemented by the Company. Restructuring and severance costs include exit costs, severance benefits pursuant to an on-going arrangement, voluntary termination compensation under a defined program, and any related pension curtailment and settlement charges.

The Company recognizes expense for one-time benefits only after management has committed to a plan, the plan is sufficiently detailed to provide the number, classification, and location of employees to be terminated as well as the expected completion date, the plan has been sufficiently communicated to employees such that they are able to determine the type and amount of benefits they will receive if terminated, and it is unlikely that the plan will be significantly changed or withdrawn. If an employee is not required to render service beyond a minimum retention period, the Company recognizes expense once the aforementioned criteria have been met. If an employee is required to render service beyond a minimum retention period, the Company recognizes expense over the period that the employee is required to render future service.

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 1 – Summary of Significant Accounting (continued)

The Company recognizes expense for on-going benefit arrangements when the liability is reasonably estimable and considered probable.

The Company recognizes expense for voluntary separation / early retirement when the employee delivers an irrevocable voluntary termination notice pursuant to a defined company program.

The Company recognizes other exit costs as incurred.

Self-Insurance Programs

The Company uses a combination of insurance and self-insurance mechanisms to provide for the potential liabilities for workers' compensation, general liability, property damage, director and officers' liability, and vehicle liability.

As part of its self-insurance program for certain risks, the Company created a wholly-owned captive insurance entity in 2007. At December 31, 2013, the captive insurance entity provides only property and general liability insurance, although it is licensed to also provide casualty and directors' and officers' insurance. The captive insurance entity had no amounts accrued for outstanding claims at December 31, 2013 and 2012.

Certain cash and investments held by the captive insurance entity are restricted primarily for the purpose of potential insurance claims. Restricted cash of \$7,927 and \$7,752 is included in other noncurrent assets at December 31, 2013 and 2012, respectively, representing required statutory reserves of the captive insurance entity.

Convertible Debentures

The Company separately accounts for the liability and equity components of convertible debt instruments that may be settled in cash in a manner that reflects the Company's nonconvertible debt borrowing rate. The liability component at issuance is recognized at fair value, based on the fair value of a similar instrument that does not have a conversion feature. A discount is recorded if debentures are issued at a coupon rate which is below the rate of a similar instrument that did not have a conversion feature at issuance. The equity component is based on the excess of the principal amount of the debentures over the fair value of the liability component, after adjusting for an allocation of debt issuance costs and the deferred tax impact, and is recorded as capital in excess of par. Debt discounts are amortized as additional non-cash interest expense over the expected life of the debt.

Recently Adopted Accounting Guidance

In February 2013, the FASB issued Accounting Standards Update ("ASU") No. 2013-02, Comprehensive Income (Topic 220), Reporting of Amounts Reclassified Out of Accumulated Other Comprehensive Income. The ASU adds new disclosure requirements for items reclassified out of accumulated other comprehensive income. The ASU does not amend any existing requirements for reporting net income or other comprehensive income in the financial statements. The ASU is effective for the Company for interim and annual periods beginning after January 1, 2013. Vishay adopted the ASU on January 1, 2013. The adoption of the ASU had no effect on the Company's financial position, results of operations, or liquidity.

Reclassifications

Certain prior year amounts have been reclassified to conform to the current financial statement presentation.





NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 2 - Acquisition and Divestiture Activities

As part of its growth strategy, the Company seeks to expand through targeted acquisitions of other manufacturers of electronic components that have established positions in major markets, reputations for product quality and reliability, and product lines with which the Company has substantial marketing and technical expertise.

Year ended December 31, 2013

MCB Industrie S.A.

On June 13, 2013, Vishay acquired MCB Industrie S.A. ("MCB Industrie") in France, a well-established manufacturer of specialty resistors and sensors, for \$23,034, net of cash acquired. The products and technology portfolio acquired is expected to enable Vishay to expand its presence in the European industrial market. For financial reporting purposes, the results of operations for this business have been included in the Resistors & Inductors segment from June 13, 2013. The inclusion of this business did not have a material impact on the Company's consolidated results for the year ended December 31, 2013. Based on an estimate of their fair values, the Company allocated \$5,433 of the purchase price to definite-lived intangible assets. After allocating the purchase price to the assets acquired and liabilities assumed based on an estimation of their fair values at the date of acquisition, the Company recorded goodwill of \$7,985 related to this acquisition. The goodwill associated with this transaction is not deductible for income tax purposes.

Had this acquisition occurred as of the beginning of the periods presented in these consolidated financial statements, the pro forma statements of operations would not be materially different than the consolidated statements of operations presented.

Year ended December 31, 2012

HiRel Systems LLC

On January 13, 2012, Vishay acquired HiRel Systems LLC, a leading supplier of high reliability transformers, inductors, coils, and power conversion products, for \$85,493, net of cash acquired. The products and technology portfolio acquired further enhanced the Company's inductors portfolio, particularly in the field of custom magnetics for medical, military, aerospace and aviation, and applications in the industrial and commercial field such as renewable energy and test and measurement equipment. For financial reporting purposes, the results of operations for this business have been included in the Resistors & Inductors segment from January 13, 2012. Based on an estimate of their fair values, the Company allocated \$43,950 of the purchase price to definite-lived intangible assets. After allocating the purchase price to the assets acquired and liabilities assumed based on an estimation of their fair values at the date of acquisition, the Company recorded goodwill of \$25,815 related to this acquisition. The goodwill associated with this transaction is deductible for income tax purposes.

Had this acquisition occurred as of the beginning of the periods presented in these consolidated financial statements, the pro forma statements of operations would not be materially different than the consolidated statements of operations presented.

Year ended December 31, 2011

Huntington Electric, Inc.

On September 28, 2011, Vishay acquired the resistor businesses of Huntington Electric, Inc., for approximately \$19,335, net of cash acquired. For financial reporting purposes, the results of operations for these businesses have been included in the Resistors & Inductors segment from September 28, 2011. After allocating the purchase price to the assets acquired and liabilities assumed based on their fair values at the date of acquisition, the Company recorded goodwill of \$9,051 related to this acquisition. The goodwill associated with this transaction is deductible for income tax purposes.

Had this acquisition occurred as of the beginning of the periods presented in these consolidated financial statements, the pro forma statements of operations would not be materially different than the consolidated statements of operations presented.

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## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 3 – Goodwill and Other Intangible Assets

Goodwill represents the excess of the cost of a business acquired over the fair value of the related net assets at the date of acquisition. Goodwill is not amortized but rather tested for impairment at least annually. The required annual impairment test of goodwill is completed as of the first day of the fourth fiscal quarter of each year. These impairment tests must be performed more frequently whenever events or changes in circumstances indicate that the asset might be impaired. The Company's business segments (see Note 15) represent its reporting units for goodwill impairment testing purposes.

Vishay recorded goodwill impairment charges in the year ended December 31, 2008. Subsequent to the goodwill impairment charges recorded in 2008, there was no remaining goodwill recorded on the consolidated balance sheet until the acquisition of the resistor businesses of Huntington Electric on September 28, 2011.

The changes in the carrying amount of goodwill by segment for the years ended December 31, 2013 and 2012 were as follows:

	Resistors & Inductors	Total
Balance at January 1, 2012	\$ 9,051	\$ 9,051
HiRel Systems acquisition	25,815	25,815
Balance at December 31, 2012	\$ 34,866	\$ 34,866
MCB Industrie acquisition	7,985	7,985
Exchange rate effects	281	281
Balance at December 31, 2013	\$ 43,132	\$ 43,132

Other intangible assets are as follows:

	December 31,	
	2013	2012
Intangible Assets Subject to Amortization (Definite-lived):		
Patents and acquired technology	\$ 92,842	\$ 83,383
Capitalized software	55,893	56,162
Customer relationships	99,558	97,451
Tradenames	35,845	34,534
Non-competition agreements	1,948	1,700
	286,086	273,230
Accumulated amortization:		
Patents and acquired technology	(66,337 )	(61,269 )
Capitalized software	(50,006 )	(50,161 )
Customer relationships	(40,727 )	(33,416 )
Tradenames	(18,560 )	(14,579 )
Non-competition agreements	(864 )	(447 )
	(176,494)	(159,872)

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Net Intangible Assets Subject to Amortization	109,592	113,358
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Intangible Assets Not Subject to Amortization  
(Indefinite-lived):

Tradenames	20,359	20,359
	\$129,951	\$133,717

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 3 – Goodwill and Other Intangible Assets (continued)

Amortization expense (excluding capitalized software) was \$15,068, \$14,754, and \$14,684, for the years ended December 31, 2013, 2012, and 2011, respectively.

Estimated annual amortization expense of intangible assets on the balance sheet at December 31, 2013 for each of the next five years is as follows:

2014 \$17,268

2015 17,207

2016 15,552

2017 11,702

2018 8,277

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## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 4 – Restructuring and Related Activities

The Company places a strong emphasis on controlling its costs.

Historically, the Company's primary cost reduction technique was through the transfer of production to the extent possible from high-labor-cost countries, such as the United States and Western Europe, to lower-labor-cost countries, such as the Czech Republic, Hungary, Israel, India, Malaysia, Mexico, the People's Republic of China, and the Philippines. Between 2001 and 2009, the Company recorded, in the consolidated statements of operations, restructuring and severance costs and related asset write-downs in order to reduce its cost structure going forward.

The Company also incurred significant costs to restructure and integrate acquired businesses, which was included in the cost of the acquisitions under then-applicable GAAP.

The Company did not initiate any new restructuring projects in the years ended December 31, 2012, 2011, or 2010.

On October 28, 2013, the Company announced various cost reduction programs as part of its continuous efforts to improve efficiency and operating performance. The cash costs of these programs, primarily severance, are expected to be approximately \$32,000. Complete implementation of all of the programs is expected to occur before the end of the first fiscal quarter of 2016. Many of the severance costs will be recognized ratably over the required stay periods.

The following table summarizes restructuring and related expenses which were recognized during the year ended December 31, 2013 and reported on a separate line in the accompanying consolidated statement of operations:

MOSFETs Enhanced Competitiveness Program	\$2,328
Voluntary Separation / Retirement Program	486
Total	2,814

MOSFETs Enhanced Competitiveness Program

Over a period of approximately 2 years and in a period of discrete steps, the manufacture of wafers for a substantial share of products will be transferred into a more cost-efficient fab. As a consequence, certain other manufacturing currently occurring in-house will be transferred to third-party foundries (see Note 13).

The total severance costs associated with these initiatives are expected to be approximately \$16,000. Employees generally must remain with the Company during the production transfer period. Accordingly, the Company will accrue these severance costs ratably over the respective employees' remaining service periods.

Voluntary Separation / Retirement Program

The voluntary separation / early retirement program was offered to employees worldwide who were eligible because they met job classification, age, and years-of-service criteria as of October 31, 2013. The program benefits vary by country and job classification, but generally include a cash loyalty bonus based on years of service. All responses are due, subject to applicable rescission rights, on or before March 28, 2014.

The Company expects most costs associated with this program to be recorded in the first fiscal quarter of 2014. As of December 31, 2013, the Company received a limited number of irrevocable voluntary termination notices and

recorded the related separation costs.

These employees generally were not aligned with any particular segment. The effective separation / retirement date for most employees who accepted the offer was June 30, 2014 or earlier, with a few exceptions to allow for a short transition period.

#### Gain on Sale of Vacated Property

On April 3, 2012, Vishay sold a property in Belgium vacated as a result of its restructuring activities in prior years for approximately \$14,200. At closing, Vishay recognized a gain on the sale of the property of \$12,153 within its statements of operations and proceeds from the sale of property and equipment of \$3,406 within its statement of cash flows. The remaining proceeds are reported as proceeds from the sale of property and equipment within the statements of cash flows as the cash is received. At December 31, 2013, the remaining amount receivable by the Company is \$3,586.

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## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 5 – Income Taxes

Income (loss) from continuing operations before taxes and noncontrolling interests consists of the following components:

	Years ended December 31,		
	2013	2012	2011
Domestic	\$(26,065 )	\$(15,995 )	\$2,143
Foreign	202,470	186,032	328,973
	\$176,405	\$170,037	\$331,116

Significant components of income taxes are as follows:

	Years ended December 31,		
	2013	2012	2011
Current:			
Federal	\$(603 )	\$8,409	\$10,968
State and local	280	574	(801 )
Foreign	51,225	44,351	66,844
	50,902	53,334	77,011
Deferred:			
Federal	2,215	(8,557 )	6,188
State and local	92	(240 )	(2,286 )
Foreign	(573 )	1,969	10,206
	1,734	(6,828 )	14,108
Total income tax expense	\$52,636	\$46,506	\$91,119

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## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 5 – Income Taxes (continued)

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts for income tax purposes. Significant components of the Company's deferred tax assets and liabilities are as follows:

	December 31,	
	2013	2012
Deferred tax assets:		
Pension and other retiree obligations	\$34,343	\$58,577
Inventories	8,759	13,881
Net operating loss carryforwards	182,691	158,638
Tax credit carryforwards	20,780	16,180
Other accruals and reserves	31,469	34,194
Total gross deferred tax assets	278,042	281,470
Less valuation allowance	(183,289)	(166,266)
	94,753	115,204
Deferred tax liabilities:		
Tax over book depreciation	(10,652 )	(13,975 )
Earnings not permanently reinvested	-	(1,652 )
Convertible debentures	(162,371)	(149,113)
Other - net	(5,932 )	(2,711 )
Total gross deferred tax liabilities	(178,955)	(167,451)
Net deferred tax assets (liabilities)	\$(84,202 )	\$(52,247 )

The Company makes significant judgments regarding the realizability of its deferred tax assets (principally net operating losses). The carrying value of deferred tax assets is based on the Company's assessment that it is more likely than not that the Company will realize these assets after consideration of all available positive and negative evidence.

A reconciliation of income tax expense at the U.S. federal statutory income tax rate to actual income tax provision is as follows:

	Years ended December 31,		
	2013	2012	2011
Tax at statutory rate	\$61,742	\$59,513	\$115,891
State income taxes, net of U.S. federal tax benefit	242	217	(2,005 )
Effect of foreign operations	(18,696)	(19,083)	(52,609 )
Unrecognized tax benefits	2,862	6,626	4,869
Change in valuation allowance on non-U.S. deferred tax assets	(285 )	(4,036 )	(5,554 )
Tax benefit of operating loss carryforwards	(1,259 )	(671 )	(1,588 )
Foreign income taxable in the U.S.	11,961	7,476	22,822
Tax on foreign dividends paid to the U.S.	-	-	15,453
U.S. foreign tax credits	-	(4,257 )	(12,322 )

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Effect of statutory rate changes on deferred tax assets	(2,867 )	-	9,040
Other	(1,064 )	721	(2,878 )
Total income tax expense	\$52,636	\$46,506	\$91,119

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## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 5 – Income Taxes (continued)

Income tax expense for the years ended December 31, 2013, 2012, and 2011 include certain discrete tax items for changes in uncertain tax positions, valuation allowances, tax rates, and other related items. These items total \$(4,197) (tax benefit), \$(4,036) (tax benefit), and \$3,486 in 2013, 2012, and 2011, respectively.

For the year ended December 31, 2013, the discrete items include a \$2,867 benefit recorded in the third fiscal quarter due to a new tax law enacted in Israel in July 2013 which effectively increases the corporate income tax rate on certain types of income earned after January 1, 2014, and, therefore, increases the deferred tax assets, and a \$1,330 benefit recorded in the first fiscal quarter due to the retroactive enactment of the American Taxpayer Relief Act of 2012, signed into law on January 2, 2013.

For the year ended December 31, 2012, the discrete item is the reduction of a valuation allowance on a deferred tax asset in Israel due to a merger of several of the Company's wholly-owned subsidiaries in Israel in the fourth fiscal quarter which will allow for the realization of these tax benefits that likely otherwise would have been forgone.

For the year ended December 31, 2011, the discrete items included a \$10,024 expense for the effect of a tax rate change on deferred taxes in Israel recorded in the first fiscal quarter, reduced by \$984 for a 2010 tax return filing in the fourth fiscal quarter, and partially offset by benefits related to reductions of valuation allowances in various jurisdictions of \$5,554 recorded in the fourth fiscal quarter. The reductions of valuation allowances were principally in Belgium due to expected future income from a pending real estate sale.

At December 31, 2013, the Company had the following significant net operating loss carryforwards for tax purposes:

		Expires
Austria	\$13,699	No expiration
Belgium	196,898	No expiration
Brazil	16,736	No expiration
Germany	49,880	No expiration
Israel	79,406	No expiration
Netherlands	24,136	2014 - 2022
United States	41,575	2016 - 2033
California	54,317	2018 - 2033
Pennsylvania	637,923	2033

Approximately \$72,926 of the carryforwards in Belgium resulted from the Company's acquisition of BCcomponents in 2002. Valuation allowances of \$24,788 and \$23,946, as of December 31, 2013 and 2012, respectively, have been

recorded through goodwill for these acquired net operating losses. Prior to the adoption of updated guidance in ASC Topic 805 on January 1, 2009, if tax benefits were recognized through the utilization of these acquired net operating losses, the benefits of such loss utilization were recorded as a reduction to goodwill. After the adoption of the updated guidance on January 1, 2009, the benefits of such losses are recorded as a reduction of tax expense. In 2013, 2012, and 2011, the tax benefit recognized through a reduction of acquisition-date valuation allowances recorded as a reduction of tax expense was \$0, \$0, and \$4,299, respectively. The reduction in valuation allowances included pre-acquisition allowances for losses in Austria and Netherlands.

At December 31, 2013, the Company had the following significant tax credit carryforwards available:

		Expires
U.S. Foreign Tax Credit	\$ 11,026	2020 - 2022
California Research Credit	9,062	No expiration

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 5 – Income Taxes (continued)

At December 31, 2013, no provision has been made for U.S. federal and state income taxes on approximately \$2,752,155 of foreign earnings, which the Company continues to expect to be reinvested outside of the United States indefinitely. Upon distribution of those earnings in the form of dividends or otherwise, the Company would be subject to U.S. income taxes (subject to an adjustment for foreign tax credits), state income taxes, incremental foreign income taxes, and withholding taxes payable to the various foreign countries. Determination of the amount of unrecognized deferred U.S. income tax liability is not practicable because of the complexities associated with its hypothetical calculation.

As of December 31, 2008, the Company recorded additional tax expense for an expected repatriation of \$112,500 because such earnings were not deemed to be indefinitely reinvested outside of the United States. During the third fiscal quarter of 2012, the Company repatriated \$72,100 of cash to the U.S., which substantially completed the \$112,500 cash repatriation program the Company initiated in 2008. This repatriated cash was used to reduce the amount outstanding under the Company's revolving credit facility. At the present time, the Company expects that the remaining cash and profits generated by foreign subsidiaries will continue to be reinvested indefinitely.

Net income taxes paid were \$44,757, \$46,611, and \$126,918 for the years ended December 31, 2013, 2012, and 2011, respectively.

See Note 19 for a discussion of the tax-related uncertainties for the pre-spin-off period of Vishay Precision Group, Inc. ("VPG"), which was spun off on July 6, 2010.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 5 – Income Taxes (continued)

The following table summarizes changes in the liabilities associated with unrecognized tax benefits:

	Years ended December 31,		
	2013	2012	2011
Balance at beginning of year	\$51,771	\$48,152	\$52,066
Addition based on tax positions related to the current year	-	665	2,459
Addition based on tax positions related to prior years	4,015	3,498	7,232
Currency translation adjustments	310	(215 )	(749 )
Reduction based on tax positions related to prior years	(2,054 )	-	(3,293 )
Reduction for settlements	(7,316 )	(329 )	(9,528 )
Reduction for lapses of statute of limitation	(849 )	-	(35 )
Balance at end of year	\$45,877	\$51,771	\$48,152

All of the unrecognized tax benefits of \$45,877 and \$51,771, as of December 31, 2013 and 2012, respectively, would reduce the effective tax rate if recognized.

The Company recognizes interest and penalties related to unrecognized tax benefits in income tax expense. At December 31, 2013 and 2012, the Company had accrued interest and penalties related to the unrecognized tax benefits of \$7,766 and \$8,513, respectively. During the years ended December 31, 2013, 2012, and 2011, the Company recognized \$2,218, \$2,833, and \$3,795, respectively, in interest and penalties.

The Company and its subsidiaries file U.S. federal income tax returns, as well as tax returns in multiple state and foreign jurisdictions. The U.S. Internal Revenue Service is currently conducting an examination of Vishay's U.S. federal tax returns for the years 2010 and 2011. Because of net operating losses which were fully utilized on the 2010 tax return, the Company's U.S. federal tax returns for 2003 through 2009 remain subject to examination. Most principal subsidiaries in Israel are currently under examination for tax years 2008 through 2010. The tax returns of other significant non-U.S. subsidiaries which are currently under examination include India (2004 through 2011), China (2009), and the Republic of Taiwan (2007 through 2012). In 2013, the Company settled an examination of the 2005 through 2008 tax years for its subsidiaries in Germany. The Company and its subsidiaries also file income tax returns in other taxing jurisdictions in the U.S. and around the world, many of which are still open to examinations.

The timing of the resolution of income tax examinations is highly uncertain, as are the amounts and timing of tax payments that result from such examinations. These events could cause large fluctuations in the balance sheet classification of current and non-current unrecognized tax benefits. The Company believes that in the next 12 months it is reasonably possible that certain income tax examinations will conclude or the statutes of limitation on certain income tax periods open to examination will expire, or both. Given the uncertainties described above, the Company can only determine an estimate of potential decreases in unrecognized tax benefits ranging from \$30,900 to \$35,000.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 6 – Long-Term Debt

Long-term debt consists of the following:

	December 31, 2013	December 31, 2012
Credit facility	\$ 114,000	\$ 89,000
Exchangeable unsecured notes, due 2102	38,642	95,042
Convertible senior debentures, due 2040	101,846	100,166
Convertible senior debentures, due 2041	52,264	51,399
Convertible senior debentures, due 2042	58,159	57,324
	364,911	392,931
Less current portion	-	-
	\$ 364,911	\$ 392,931

## Credit Facility

The Company maintains a credit facility with a consortium of banks led by JPMorgan Chase Bank, N.A., as administrative agent (the "Credit Facility"). On August 8, 2013, the Company entered into an Amended and Restated Credit Agreement, which provides an aggregate commitment of \$640,000 of revolving loans available until August 8, 2018. The original credit agreement became effective December 1, 2010 and was scheduled to expire on December 1, 2015. The Credit Facility, as amended and restated, also provides for the ability of Vishay to request up to \$50,000 of incremental revolving commitments, subject to the satisfaction of certain conditions.

Borrowings under the Credit Facility bear interest at the London Interbank Offered Rate ("LIBOR") plus an interest margin. The applicable interest margin is based on the Company's leverage ratio. Based on the Company's current leverage ratio, borrowings bear interest at LIBOR plus 1.75%. The interest rate on the Company's borrowings will increase to LIBOR plus 2.00% if the Company's leverage ratio equals or exceeds 2.50 to 1 and will decrease to LIBOR plus 1.50% if the Company's leverage ratio decreases below 1.50 to 1. Vishay is also required to pay facility fees on the entire commitment amount based on the Company's leverage ratio. Based on the Company's current leverage ratio, the facility fee is 0.35% per annum. Such facility fee will increase to 0.50% per annum if the Company's leverage ratio equals or exceeds 2.50 to 1 and will decrease to 0.30% per annum if the leverage ratio decreases below 1.50 to 1.

The August 8, 2013 Amended and Restated Credit Agreement also removes certain restrictions related to the incurrence and repayment of certain intercompany indebtedness, mergers, liquidations, and transfers of ownership of wholly owned subsidiaries that were present in the original credit agreement. These changes will enable the Company to streamline its complex subsidiary structure and provide greater operating flexibility.

The borrowings under the Credit Facility are secured by a lien on substantially all assets, including accounts receivable, inventory, machinery and equipment, and general intangibles (but excluding real estate, intellectual property registered or licensed for use in, or arising under the laws of, any country other than the United States, assets located outside of the United States and deposit and securities accounts), of Vishay and certain significant subsidiaries located in the United States, and pledges of stock in certain significant domestic and foreign subsidiaries; and are guaranteed by certain significant subsidiaries. Certain of the Company's subsidiaries are permitted to borrow under the Credit Facility, subject to the satisfaction of specified conditions. Any borrowings by these subsidiaries under the Credit Facility are guaranteed by Vishay and certain subsidiaries. The Credit Facility also limits or restricts the

Company and its subsidiaries, from, among other things, incurring indebtedness, incurring liens on its respective assets, making investments and acquisitions, making asset sales, and making other restricted payments, and requires the Company to comply with other covenants, including the maintenance of specific financial ratios.

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## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 6 – Long-Term Debt (continued)

The Credit Facility permits the Company to repurchase shares of its common stock or pay cash dividends up to a permitted capacity, conditioned upon Vishay maintaining (i) a pro forma leverage ratio of 2.75 to 1.00, (ii) a pro forma interest expense coverage ratio of 2.00 to 1.00, and (iii) \$300,000 of available liquidity, as defined in the Credit Facility. The permitted capacity to repurchase shares of the Company's outstanding common stock or pay cash dividends under the Credit Facility increases each quarter by an amount equal to 20% of net income. At December 31, 2013, the Credit Facility allows the Company to repurchase its common stock or pay cash dividends up to \$204,596 (See Note 7). The amount and timing of any future stock repurchases or cash dividends remains subject to authorization of the Company's Board of Directors.

The Credit Facility also contains customary events of default, including, but not limited to, failure to pay principal or interest, failure to pay or default under other material debt, material misrepresentation or breach of warranty, violation of certain covenants, a change of control, the commencement of bankruptcy proceedings, the insolvency of Vishay or certain of its significant subsidiaries, and the rendering of a judgment in excess of \$25,000 against Vishay or certain of its significant subsidiaries. Upon the occurrence of an event of default under the Credit Facility, the Company's obligations under the credit facility may be accelerated and the lending commitments under the credit facility terminated.

At December 31, 2013 and 2012, there was \$518,345 and \$431,295, respectively, available under the Credit Facility. Letters of credit totaling \$7,655 and \$7,705 were outstanding at December 31, 2013 and 2012, respectively.

## Convertible Senior Debentures

Vishay currently has three issuances of convertible senior debentures outstanding with generally congruent terms. The following table summarizes some key facts and terms regarding the three series of outstanding convertible senior debentures:

	Due 2040	Due 2041	Due 2042
Issuance date	November 9, 2010	May 13, 2011	May 31, 2012
Maturity date	November 15, 2040	May 15, 2041	June 1, 2042
Principal amount	\$ 275,000	\$ 150,000	\$ 150,000
Cash coupon rate (per annum)	2.25 %	2.25 %	2.25 %
Nonconvertible debt borrowing rate at issuance (per annum)	8.00 %	8.375 %	7.50 %
Initial conversion rate (per \$1 principal amount)	72.0331	52.5659	84.6937
Effective conversion price (per share)	\$ 13.88	\$ 19.02	\$ 11.81
130% of the conversion price (per share)	\$ 18.04	\$ 24.73	\$ 15.35
Call date	November 20, 2020	May 20, 2021	June 7, 2022

The payment of cash dividends results in an adjustment to the conversion rate and effective conversion price for each issuance of the convertible senior debentures (See Note 7).

GAAP requires an issuer to separately account for the liability and equity components of the instrument in a manner that reflects the issuer's nonconvertible debt borrowing rate when interest costs are recognized in subsequent periods. The resulting discount on the debt is amortized as non-cash interest expense in future periods.

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## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 6 – Long-Term Debt (continued)

The carrying values of the liability and equity components of the convertible debentures are reflected in the Company's consolidated balance sheets as follows:

	Principal amount of the debentures	Unamortized discount	Embedded derivative	Carrying value of liability component	Equity component - net carrying value
December 31, 2013					
Due 2040	\$ 275,000	(173,645 )	491	\$ 101,846	\$ 110,094
Due 2041	\$ 150,000	(98,085 )	349	\$ 52,264	\$ 62,246
Due 2042	\$ 150,000	(92,038 )	197	\$ 58,159	\$ 57,874
Total	\$ 575,000	\$ (363,768 )	\$ 1,037	\$ 212,269	\$ 230,214
December 31, 2012					
Due 2040	\$ 275,000	(175,456 )	622	\$ 100,166	\$ 110,094
Due 2041	\$ 150,000	(99,000 )	399	\$ 51,399	\$ 62,246
Due 2042	\$ 150,000	(92,958 )	282	\$ 57,324	