

VISHAY INTERTECHNOLOGY INC  
Form 10-Q  
May 03, 2017  
UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended April 1, 2017

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

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

Commission File Number 1-7416

VISHAY INTERTECHNOLOGY, INC.  
(Exact name of registrant as specified in its charter)

Delaware 38-1686453  
(State or Other Jurisdiction of Incorporation) (I.R.S. Employer Identification Number)

63 Lancaster Avenue 610-644-1300  
Malvern, PA 19355-2143  
(Address of Principal Executive Offices) (Registrant's Area Code and Telephone Number)

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

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

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐ No ☒

As of May 1, 2017, the registrant had 134,047,489 shares of its common stock and 12,129,227 shares of its Class B common stock outstanding.

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VISHAY INTERTECHNOLOGY, INC.  
FORM 10-Q  
April 1, 2017  
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## PART I - FINANCIAL INFORMATION

Item 1. Financial StatementsVISHAY INTERTECHNOLOGY, INC.  
Consolidated Condensed Balance Sheets  
(In thousands)

	April 1, 2017 (Unaudited)	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	\$499,386	\$471,781
Short-term investments	638,884	626,627
Accounts receivable, net	310,208	274,027
Inventories:		
Finished goods	116,394	109,075
Work in process	170,469	162,311
Raw materials	113,653	109,859
Total inventories	400,516	381,245
Prepaid expenses and other current assets	104,911	110,792
Total current assets	1,953,905	1,864,472
Property and equipment, at cost:		
Land	90,151	89,753
Buildings and improvements	572,047	570,932
Machinery and equipment	2,312,403	2,283,222
Construction in progress	57,479	71,777
Allowance for depreciation	(2,196,653)	(2,166,813)
Property and equipment, net	835,427	848,871
Goodwill	141,587	141,407
Other intangible assets, net	80,577	84,463
Other assets	138,252	138,588
Total assets	\$3,149,748	\$3,077,801

Continues on following page.

## VISHAY INTERTECHNOLOGY, INC.

## Consolidated Condensed Balance Sheets (continued)

(In thousands)

	April 1, 2017 (Unaudited)	December 31, 2016
Liabilities and equity		
Current liabilities:		
Notes payable to banks	\$ 11	\$ 3
Trade accounts payable	170,821	174,107
Payroll and related expenses	121,048	114,576
Other accrued expenses	151,377	149,131
Income taxes	11,846	19,033
Total current liabilities	455,103	456,850
Long-term debt less current portion	378,652	357,023
Deferred income taxes	288,511	286,797
Other liabilities	62,275	59,725
Accrued pension and other postretirement costs	257,096	257,789
Total liabilities	1,441,637	1,418,184
Redeemable convertible debentures	88,362	88,659
Stockholders' equity:		
Vishay stockholders' equity		
Common stock	13,405	13,385
Class B convertible common stock	1,213	1,213
Capital in excess of par value	1,953,670	1,952,988
(Accumulated deficit) retained earnings	(279,457 )	(307,417 )
Accumulated other comprehensive income (loss)	(74,753 )	(94,652 )
Total Vishay stockholders' equity	1,614,078	1,565,517
Noncontrolling interests	5,671	5,441
Total equity	1,619,749	1,570,958
Total liabilities, temporary equity, and equity	\$ 3,149,748	\$ 3,077,801

See accompanying notes.

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

	Fiscal quarters ended	
	April 1, 2017	April 2, 2016
Net revenues	\$606,258	\$570,606
Costs of products sold	445,383	433,297
Gross profit	160,875	137,309
Selling, general, and administrative expenses	94,718	90,286
Restructuring and severance costs	1,469	6,475
Operating income (loss)	64,688	40,548
Other income (expense):		
Interest expense	(6,790 )	(6,466 )
Other	(396 )	779
Gain on early extinguishment of debt	-	3,611
Loss on disposal of equity affiliate	(7,060 )	-
Total other income (expense)	(14,246 )	(2,076 )
Income before taxes	50,442	38,472
Income tax expense	13,493	10,320
Net earnings	36,949	28,152
Less: net earnings attributable to noncontrolling interests	230	138
Net earnings attributable to Vishay stockholders	\$36,719	\$28,014
Basic earnings per share attributable to Vishay stockholders	\$0.25	\$0.19
Diluted earnings per share attributable to Vishay stockholders	\$0.24	\$0.19
Weighted average shares outstanding - basic	146,274	147,833
Weighted average shares outstanding - diluted	154,876	150,628
Cash dividends per share	\$0.0625	\$0.0625

See accompanying notes.



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

	Fiscal quarters ended	
	April 1, 2017	April 2, 2016
Net earnings	\$36,949	\$28,152
Other comprehensive income, net of tax		
Pension and other post-retirement actuarial items	2,335	1,868
Foreign currency translation adjustment	17,293	32,532
Unrealized gain on available-for-sale securities	271	627
Other comprehensive income	19,899	35,027
Comprehensive income	56,848	63,179
Less: comprehensive income attributable to noncontrolling interests	230	138
Comprehensive income attributable to Vishay stockholders	\$56,618	\$63,041

See accompanying notes.

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

	Fiscal quarters ended	
	April 1, 2017	April 2, 2016 (recast - see Note 1)
Operating activities		
Net earnings	\$36,949	\$28,152
Adjustments to reconcile net earnings to net cash provided by operating activities:		
Depreciation and amortization	40,212	40,017
(Gain) loss on disposal of property and equipment	60	(22 )
Accretion of interest on convertible debentures	1,211	1,120
Inventory write-offs for obsolescence	4,834	5,816
Loss on disposal of equity affiliate	7,060	-
Gain on early extinguishment of debt	-	(3,611 )
Other	6,333	(13,508 )
Net change in operating assets and liabilities, net of effects of businesses acquired	(52,985 )	(37,264 )
Net cash provided by operating activities	43,674	20,700
Investing activities		
Capital expenditures	(16,668 )	(19,756 )
Proceeds from sale of property and equipment	943	64
Purchase of short-term investments	(151,886)	(24,588 )
Maturity of short-term investments	147,530	117,676
Other investing activities	(5,971 )	2,975
Net cash provided by (used in) investing activities	(26,052 )	76,371
Financing activities		
Principal payments on long-term debt and capital leases	-	(22,595 )
Net proceeds (payments) on revolving credit lines	20,000	(12,000 )
Net changes in short-term borrowings	8	(719 )
Dividends paid to common stockholders	(8,378 )	(8,473 )
Dividends paid to Class B common stockholders	(758 )	(758 )
Cash withholding taxes paid when shares withheld for vested equity awards	(1,971 )	(442 )
Other financing activities	(1,255 )	-
Net cash provided by (used in) financing activities	7,646	(44,987 )
Effect of exchange rate changes on cash and cash equivalents	2,337	3,705
Net increase (decrease) in cash and cash equivalents	27,605	55,789
Cash and cash equivalents at beginning of period	471,781	475,507
Cash and cash equivalents at end of period	\$499,386	\$531,296

See accompanying notes.

## VISHAY INTERTECHNOLOGY, INC.

## Consolidated Condensed Statement of Equity

(Unaudited - In thousands, except share and per 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	Noncontrol- ling Interests	Total Equity
Balance at December 31, 2016	\$13,385	\$ 1,213	\$1,952,988	\$(307,417 )	\$(94,652 )	\$1,565,517	\$ 5,441	\$1,570,958
Cumulative effect of accounting change for adoption of ASU 2016-09 (see Note 1)	-	-	-	386	-	386	-	386
Net earnings	-	-	-	36,719	-	36,719	230	36,949
Other comprehensive income	-	-	-	-	19,899	19,899	-	19,899
Temporary equity reclassification	-	-	297	-	-	297	-	297
Issuance of stock and related tax withholdings for vested restricted stock units (200,688 shares)	20	-	(1,991 )	-	-	(1,971 )	-	(1,971 )
Dividends declared (\$ 0.0625 per share)	-	-	9	(9,145 )	-	(9,136 )	-	(9,136 )
Stock compensation expense	-	-	2,367	-	-	2,367	-	2,367
Balance at April 1, 2017	\$13,405	\$ 1,213	\$1,953,670	\$(279,457 )	\$(74,753 )	\$1,614,078	\$ 5,671	\$1,619,749

See accompanying notes.

NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 1 – Basis of Presentation

The accompanying unaudited consolidated condensed financial statements of Vishay Intertechnology, Inc. ("Vishay" or the "Company") have been prepared in accordance with the instructions to Form 10-Q and therefore do not include all information and footnotes necessary for presentation of financial position, results of operations, and cash flows required by accounting principles generally accepted in the United States ("GAAP") for complete financial statements. The information furnished reflects all normal recurring adjustments which are, in the opinion of management, necessary for a fair summary of the financial position, results of operations, and cash flows for the interim periods presented. The financial statements should be read in conjunction with the consolidated financial statements filed with the Company's Annual Report on Form 10-K for the year ended December 31, 2016. The results of operations for the fiscal quarter ended April 1, 2017 are not necessarily indicative of the results to be expected for the full year.

The Company reports interim financial information for 13-week periods beginning on a Sunday and ending on a Saturday, except for the first fiscal quarter, which always begins on January 1, and the fourth fiscal quarter, which always ends on December 31. The four fiscal quarters in 2017 end on April 1, 2017, July 1, 2017, September 30, 2017, and December 31, 2017, respectively. The four fiscal quarters in 2016 ended on April 2, 2016, July 2, 2016, October 1, 2016, and December 31, 2016, respectively.

Recently Adopted Accounting Guidance

In March 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. The ASU is the result of the FASB's simplification initiative intended to improve GAAP by reducing costs and complexity while maintaining or enhancing the usefulness of related financial statement information. The ASU simplifies several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. The Company adopted the ASU on January 1, 2017. The ASU allowed prospective adoption of certain aspects, while requiring retrospective adoption of other aspects of the guidance. The Company recognized a cumulative-effect adjustment for previously unrecognized excess tax benefits in January 1, 2017 retained earnings (accumulated deficit) of \$386. The Company reclassified \$442 of cash withholding taxes paid when shares were withheld for vested equity awards in the accompanying consolidated condensed statement of cash flows for the fiscal quarter ended April 2, 2016 to financing cash flows. The Company retrospectively reclassified excess tax benefits as operating cash flows on the consolidated condensed statement of cash flows. The Company will recognize forfeitures on its stock-based awards as they occur.

Recently Issued Accounting Guidance

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606). The ASU is the result of a convergence project between the FASB and the International Accounting Standards Board to clarify the principles for recognizing revenue and to develop a common revenue standard for GAAP and International Financial Reporting Standards. The ASU removes inconsistencies and weaknesses in revenue requirements; provides a more robust framework for addressing revenue issues; improves comparability of revenue recognition practices across entities, industries, jurisdictions, and capital markets; provides more useful information to users of financial statements through expanded disclosure requirements; and simplifies the preparation of financial statements by reducing the number of requirements to which an entity must refer. The ASU is effective for the Company for interim and annual periods beginning on or after January 1, 2018. The Company intends to retrospectively adopt the ASU effective January 1, 2018. Based on work performed to date, the adoption of the ASU is not expected to have a material impact on the Company's results of operations.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). The ASU is the result of a project between the FASB and the International Accounting Standards Board to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. Upon adoption of the ASU, the Company will recognize lease assets and liabilities for its operating leases which are not currently reported on its consolidated balance sheets. The ASU is effective for the Company for interim and annual periods beginning on or after January 1, 2019, with the ability to early adopt. The Company is currently evaluating the effect of the ASU on its lease contracts.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. The ASU replaces the incurred loss impairment methodology in current GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. The ASU is effective for the Company for interim and annual periods beginning on or after January 1, 2020, with the ability to early adopt for interim and annual periods beginning on or after January 1, 2019. The Company is currently evaluating the effect of the ASU on its financial assets measured at amortized cost.

#### Reclassifications

In addition to the changes due to the retrospective adoption of certain aspects of new accounting guidance described above, certain prior period amounts have been reclassified to conform to the current financial statement presentation.

## NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 2 – Restructuring and Related Activities

The Company places a strong emphasis on controlling its costs and combats general price inflation by continuously improving its efficiency and operating performance. When the ongoing cost containment activities are not adequate, the Company takes actions to maintain its cost competitiveness.

The Company incurred significant restructuring costs in its past to reduce its cost structure. Historically, the Company's primary cost reduction technique was through the transfer of production from high-labor-cost countries to lower-labor-cost countries. Since 2013, the Company's cost reduction programs have primarily focused on reducing fixed costs, including selling, general, and administrative expenses.

In 2013, the Company announced various cost reduction programs. These programs were substantially implemented by the end of the first fiscal quarter of 2016, with some additional costs incurred in the remainder of 2016. Many of the severance costs were recognized ratably over the required stay periods. In November 2016, the Company announced an extension of one of these programs.

In 2015, the Company announced additional global cost reduction programs. These programs include a facility closure in the Netherlands. The cash costs of these programs, primarily severance, are expected to aggregate to approximately \$30,000. Complete implementation of these programs is expected to occur before the end of 2017.

The following table summarizes restructuring and related expenses which were recognized and reported on a separate line in the accompanying consolidated condensed statements of operations:

	Fiscal quarters ended	
	April 1, 2017	April 2, 2016
MOSFETs Enhanced Competitiveness Program	\$420	\$3,915
Global Cost Reduction Programs	1,049	2,560
Total	\$1,469	\$6,475

MOSFETs Enhanced Competitiveness Program

Over a period of approximately 2 years and in a series of discrete steps, the manufacture of wafers for a substantial share of products was transferred into a more cost-efficient fab. As a consequence, certain other manufacturing previously occurring in-house was transferred to third-party foundries. This transfer of production was substantially completed by the end of the first fiscal quarter of 2016.

Employees generally were required to remain with the Company during the production transfer period. Accordingly, the Company accrued these severance costs ratably over the respective employees' remaining service periods. The Company has incurred and may continue to incur other exit costs associated with the production transfer, including certain contract termination costs.

As a result of a review of the financial results and outlook for the Company's MOSFETs segment following the completion of production transfers, the Company has determined to implement further cost reductions for the MOSFETs segment.

In November 2016, the Company announced an extension of the MOSFETs Enhanced Competitiveness Program. The revised program includes various cost reduction initiatives, primarily the transfer of all remaining manufacturing operations at its Santa Clara, California facility to other Vishay facilities or third-party subcontractors. The production transfers will be completed in steps by the end of 2017. The Company expects to incur cash charges of approximately \$4,000 to \$8,000, primarily related to severance, to implement these steps. The total cash charges for the MOSFETs Enhanced Competitiveness Program are expected to be \$24,000 to \$27,000. The Company expects to maintain its R&D and management presence in the Silicon Valley area, even after the cessation of manufacturing operations there.

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## NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

The following table summarizes the activity to date related to this program:

Expense recorded in 2013	\$2,328
Cash paid	(267 )
Balance at December 31, 2013	\$2,061
Expense recorded in 2014	6,025
Cash paid	(856 )
Balance at December 31, 2014	\$7,230
Expense recorded in 2015	5,367
Cash paid	(426 )
Foreign currency translation	1
Balance at December 31, 2015	\$12,172
Expense recorded in 2016	9,744
Cash paid	(15,686)
Foreign currency translation	2
Balance at December 31, 2016	\$6,232
Expense recorded in 2017	420
Cash paid	(1,431 )
Foreign currency translations	-
Balance at April 1, 2017	\$5,221

Severance benefits are generally paid in a lump sum at cessation of employment. Other exit costs of \$64 are included in the expenses incurred in 2017 in the table above. The entire amount of the liability is considered current and is included in other accrued expenses in the accompanying consolidated condensed balance sheets.

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 varied by country and job classification, but generally included a cash loyalty bonus based on years of service. All employees eligible for the program have left the Company.

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 transition period. The Company recorded \$13,373, of expenses for this program, primarily in 2013 and 2014. Substantially all amounts related to this program have been paid as of April 1, 2017.



## NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Global Cost Reduction Programs

The global cost reduction programs announced in 2015 include a plan to reduce selling, general, and administrative costs company-wide, and targeted streamlining and consolidation of production for certain product lines within its Capacitors and Resistors & Inductors segments.

The following table summarizes the activity to date related to this program:

Expense recorded in 2015	\$13,753
Cash paid	(986 )
Foreign currency translation	(150 )
Balance at December 31, 2015	\$12,617
Expense recorded in 2016	9,918
Cash paid	(16,237)
Foreign currency translation	(34 )
Balance at December 31, 2016	\$6,264
Expense recorded in 2017	1,049
Cash paid	(3,557 )
Foreign currency translation	64
Balance at April 1, 2017	\$3,820

The following table summarizes the expense recognized by segment related to this program:

	Fiscal quarters ended	
	April 1, 2017	April 2, 2016
Diodes	\$-	\$448
Optoelectronic Components	-	178
Resistors & Inductors	851	1,018
Capacitors	161	334
Unallocated Selling, General, and Administrative Expenses	37	582
Total	\$1,049	\$2,560

Severance benefits are generally paid in a lump sum at cessation of employment. The current portion of the liability is \$3,076 and is included in other accrued expenses in the accompanying consolidated condensed balance sheets. The non-current portion of the liability is included in other liabilities in the accompanying consolidated condensed balance sheets.

NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 3 – Income Taxes

The provision for income taxes consists of provisions for federal, state, and foreign income taxes. The effective tax rates for the periods ended April 1, 2017 and April 2, 2016 reflect the Company's expected tax rate on reported income from continuing operations before income tax and tax adjustments. The Company operates in a global environment with significant operations in various jurisdictions outside the United States. Accordingly, the consolidated income tax rate is a composite rate reflecting the Company's earnings and the applicable tax rates in the various jurisdictions where the Company operates.

Income tax expense for the fiscal quarters ended April 1, 2017 and April 2, 2016 includes \$968 and \$769, respectively, for the periodic remeasurement of the deferred tax liability recorded for the cash repatriation program. The cash repatriation program is expected to occur over several years, and the deferred tax liability is based on the available sources of cash, applicable tax rates, and other factors and circumstances, as of each respective balance sheet date. Changes in the underlying facts and circumstances result in changes in the deferred tax liability balance, which are recorded as tax benefit or expense.

During the three fiscal months ended April 1, 2017, the liabilities for unrecognized tax benefits increased by \$1,074 on a net basis, due to increases for tax positions taken in the current period, interest, and foreign currency effects.

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## NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 4 – Long-Term Debt

Long-term debt consists of the following:

	April 1, 2017	December 31, 2016
Credit facility	\$163,000	\$143,000
Convertible senior debentures, due 2040	108,697	108,120
Convertible senior debentures, due 2041	55,752	55,442
Convertible senior debentures, due 2042	61,638	61,341
Deferred financing costs	(10,435 )	(10,880 )
	378,652	357,023
Less current portion	-	-
	\$378,652	\$357,023

## Convertible Senior Debentures

Vishay currently has three issuances of convertible senior debentures outstanding with generally congruent terms. The quarterly cash dividend program of the Company results in adjustments to the conversion rate and effective conversion price for each issuance of the Company's convertible senior debentures effective as of the ex-dividend date of each cash dividend.

The following table summarizes some key facts and terms regarding the three series of outstanding convertible senior debentures following the adjustment made to the conversion rate of the debentures on the ex-dividend date of the March 29, 2017 dividend payment:

	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 %
Conversion rate effective March 10, 2017 (per \$1 principal amount)	76.4157	55.7641	89.8466
Effective conversion price effective March 10, 2017 (per share)	\$13.09	\$17.93	\$11.13
130% of the conversion price (per share)	\$17.02	\$23.31	\$14.47
Call date	November 20, 2020	May 20, 2021	June 7, 2022

Prior to three months before the maturity date, the holders may only convert their debentures under the following circumstances: (1) during any fiscal quarter after the first full quarter subsequent to issuance, if the sale price of Vishay common stock reaches 130% of the conversion price for a specified period; (2) the trading price of the debentures falls below 98% of the product of the sale price of Vishay's common stock and the conversion rate for a specified period; (3) Vishay calls any or all of the debentures for redemption, at any time prior to the close of business on the third scheduled trading day immediately preceding the redemption date; or (4) upon the occurrence of specified corporate events.

The convertible debentures due 2042 became convertible subsequent to the December 31, 2016 evaluation of the conversion criteria and remain convertible subsequent to the April 1, 2017 evaluation, due to the sale price of Vishay's common stock exceeding 130% of the conversion price for the applicable periods in the fourth fiscal quarter of 2016 and first fiscal quarter of 2017. The debentures due 2042 will remain convertible until July 1, 2017, at which time the conversion criteria will be reevaluated. At the direction of its Board of Directors, the Company intends, upon future conversion of any of the convertible senior debentures, to repay the principal amounts of the convertible senior debentures in cash and settle any additional amounts in shares of Vishay common stock. The excess of the amount that the Company would pay to the holders of the debentures due 2042 upon conversion over the carrying value of the liability component of the debentures currently convertible has been reclassified as temporary equity on the consolidated condensed financial statements. The Company intends to finance the principal amount of any converted debentures using borrowings under its credit facility. Accordingly, the debt component of the convertible debentures due 2042 continues to be classified as a non-current liability on the consolidated condensed balance sheets.

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## NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

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.

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

	Principal amount of the debentures	Unamortized discount	Embedded derivative	Carrying value of liability component	Equity component (including temporary equity) - net carrying value
<u>April 1, 2017</u>					
Due 2040	\$ 275,000	(166,671 )	368	\$ 108,697	\$ 110,094
Due 2041	\$ 150,000	(94,535 )	287	\$ 55,752	\$ 62,246
Due 2042	\$ 150,000	(88,534 )	172	\$ 61,638	\$ 57,874
Total	\$ 575,000	\$ (349,740 )	\$ 827	\$ 226,087	\$ 230,214
<u>December 31, 2016</u>					
Due 2040	\$ 275,000	(167,273 )	393	\$ 108,120	\$ 110,094
Due 2041	\$ 150,000	(94,843 )	285	\$ 55,442	\$ 62,246
Due 2042	\$ 150,000	(88,835 )	176	\$ 61,341	\$ 57,874
Total	\$ 575,000	\$ (350,951 )	\$ 854	\$ 224,903	\$ 230,214

Interest is payable on the debentures semi-annually at the cash coupon rate; however, the remaining debt discount is being amortized as additional non-cash interest expense using an effective annual interest rate equal to the Company's estimated nonconvertible debt borrowing rate at the time of issuance. In addition to ordinary interest, contingent interest will accrue in certain circumstances relating to the trading price of the debentures and under certain other circumstances beginning ten years subsequent to issuance.

Interest expense related to the debentures is reflected on the consolidated condensed statements of operations for the fiscal quarters ended:

	Contractual coupon interest	Non-cash amortization of debt discount	Non-cash amortization of deferred financing costs	Non-cash change in value of derivative liability	Total interest expense related to the debentures
<u>April 1, 2017</u>					
Due 2040	\$ 1,547	602	22	(25 )	\$ 2,146
Due 2041	\$ 844	308	12	2	\$ 1,166
Due 2042	\$ 844	301	13	(4 )	\$ 1,154
Total	\$ 3,235	\$ 1,211	\$ 47	\$ (27 )	\$ 4,466

April 2, 2016

Due 2040	\$ 1,547	556	22	6	\$ 2,131
Due 2041	\$ 844	284	11	38	\$ 1,177
Due 2042	\$ 844	280	13	(17 )	\$ 1,120
Total	\$ 3,235	\$ 1,120	\$ 46	\$ 27	\$ 4,428

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NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 5 – Other Income (Expense)

In March 2017, the Company sold its 50% interest in an investment accounted for using the equity method, and recorded a loss of \$7,060. The recorded loss includes Vishay's proportionate share of the investee's accumulated other comprehensive loss of \$1,110, recognized upon discontinuation of the equity investment. The loss on disposal is not deductible for income tax purposes. There are certain contingencies pending resolution related to the investee, which may require adjustment to the amount of the recognized loss. The resolution of such additional contingencies is not expected to be material to the financial condition, results of operations, or cash flows of the Company.

## NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 6 – Accumulated Other Comprehensive Income (Loss)

The cumulative balance of each component of other comprehensive income (loss) and the income tax effects allocated to each component are as follows:

	Pension and other post-retirement actuarial items	Currency translation adjustment	Unrealized gain (loss) on available-for-sale securities	Total
Balance at January 1, 2017	\$ (64,496 )	\$ (31,266 )	1,110	\$(94,652)
Other comprehensive income before reclassifications	-	17,293	418	\$17,711
Tax effect	-	-	(147 )	\$(147 )
Other comprehensive income before reclassifications, net of tax	-	17,293	271	\$17,564
Amounts reclassified out of AOCI	3,299	-	-	\$3,299
Tax effect	(964 )	-	-	\$(964 )
Amounts reclassified out of AOCI, net of tax	2,335	-	-	\$2,335
Net other comprehensive income	\$ 2,335	\$ 17,293	\$ 271	\$19,899
Balance at April 1, 2017	\$ (62,161 )	\$ (13,973 )	\$ 1,381	\$(74,753)

Reclassifications of pension and other post-retirement actuarial items out of AOCI are included in the computation of net periodic benefit cost. (See Note 7 for further information).

Other comprehensive income (loss) includes Vishay's proportionate share of other comprehensive income (loss) of nonconsolidated subsidiaries accounted for under the equity method.



## NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 7 – Pensions and Other Postretirement Benefits

The Company maintains various retirement benefit plans.

## Defined Benefit Pension Plans

The following table shows the components of the net periodic pension cost for the first fiscal quarters of 2017 and 2016 for the Company's defined benefit pension plans:

	Fiscal quarter ended April 1, 2017		Fiscal quarter ended April 2, 2016	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Net service cost	\$-	\$ 903	\$-	\$ 774
Interest cost	410	1,167	3,000	1,353
Expected return on plan assets	-	(506 )	(2,825)	(534 )
Amortization of prior service cost	36	18	36	12
Amortization of losses	82	1,478	1,650	1,171
Curtailment and settlement losses	-	322	-	195
Net periodic benefit cost	\$528	\$ 3,382	\$1,861	\$ 2,971

Net periodic benefit cost in 2017 was significantly impacted by the termination and settlement of the Company's qualified U.S. pension plan in December 2016. The settlement resulted in the immediate recognition of previously unrecognized actuarial items related to the plan in 2016 that were recorded in accumulated other comprehensive income and were being amortized into net periodic pension cost.

The Company contributed \$4,409 to the Company's Taiwanese pension plans to improve the funded status of those plans in 2017.

## Other Postretirement Benefits

The following table shows the components of the net periodic benefit cost for the first fiscal quarters of 2017 and 2016 for the Company's other postretirement benefit plans:

	Fiscal quarter ended April 1, 2017		Fiscal quarter ended April 2, 2016	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Service cost	\$33	\$ 64	\$31	\$ 67
Interest cost	77	24	85	36
Amortization of prior service (credit)	(209)	-	(209)	-
Amortization of losses (gains)	(23 )	14	(8 )	17
Net periodic benefit cost	\$(122)	\$ 102	\$(101)	\$ 120



## NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 8 – Stock-Based Compensation

The Company has various stockholder-approved programs which allow for the grant of stock-based compensation to officers, employees, and non-employee directors of the Company.

The amount of compensation cost related to stock-based payment transactions is measured based on the grant-date fair value of the equity instruments issued. The fair value of each option award is estimated on the date of grant using the Black-Scholes option-pricing model. The Company determines compensation cost for restricted stock units ("RSUs"), phantom stock units, and restricted stock based on the grant-date fair value of the underlying common stock adjusted for expected dividends paid over the required vesting period for non-participating awards. Compensation cost is recognized over the period that an officer, employee, or non-employee director provides service in exchange for the award.

The following table summarizes stock-based compensation expense recognized:

	Fiscal quarters ended	
	April 1, 2017	April 2, 2016
Restricted stock units	\$ 2,204	\$ 1,084
Phantom stock units	163	117
Stock options	-	-
Total	\$ 2,367	\$ 1,201

The Company recognizes compensation cost for RSUs that are expected to vest and records cumulative adjustments in the period that the expectation changes.

The following table summarizes unrecognized compensation cost and the weighted average remaining amortization periods at April 1, 2017 (amortization periods in years):

	Unrecognized Compensation Cost	Weighted Average Remaining Amortization Periods
Restricted stock units	\$ 4,927	1.7
Phantom stock units	-	0.0
Stock options	-	0.0
Total	\$ 4,927	

The Company currently expects all performance-based RSUs to vest and all of the associated unrecognized compensation cost for performance-based RSUs presented in the table above to be recognized.

## NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

## 2007 Stock Incentive Plan

The Company's 2007 Stock Incentive Program (the "2007 Program"), as amended and restated, permits the grant of up to 6,500,000 shares of restricted stock, unrestricted stock, RSUs, stock options, and phantom stock units, to officers, employees, and non-employee directors of the Company. Such instruments are available for grant until May 20, 2024.

## Restricted Stock Units

RSU activity under the 2007 Program as of April 1, 2017 and changes during the three fiscal months then ended are presented below (number of RSUs in thousands):

	Number of RSUs	Weighted Average Grant-date Fair Value per Unit
Outstanding:		
January 1, 2017	1,004	\$ 12.74
Granted	304	15.52
Vested*	(322 )	13.54
Cancelled or forfeited	-	-
Outstanding at April 1, 2017	986	\$ 13.34

Expected to vest at April 1, 2017 986

\* The number of RSUs vested includes shares that the Company withheld on behalf of employees to satisfy the statutory tax withholding requirements.

The number of performance-based RSUs that are scheduled to vest increases ratably based on the achievement of defined performance criteria between the established target and maximum levels. RSUs with performance-based vesting criteria are expected to vest as follows (number of RSUs in thousands):

Vesting Date	Expected to Vest	Not Expected to Vest	Total
January 1, 2018	202	-	202
January 1, 2019	213	-	213
January 1, 2020	167	-	167

## Phantom Stock Units

The 2007 Program authorizes the grant of phantom stock units to the extent provided for in the Company's employment agreements with certain executives. Each phantom stock unit entitles the recipient to receive a share of common stock at the individual's termination of employment or any other future date specified in the applicable employment agreement. Phantom stock units participate in dividend distribution on the same basis as the Company's common stock and Class B common stock. Dividend equivalents are issued in the form of additional units of phantom stock. The phantom stock units are fully vested at all times.

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Phantom stock unit activity under the phantom stock plan as of April 1, 2017 and changes during the three fiscal months then ended are presented below (number of phantom stock units in thousands):

	Number	Grant-date
	of units	Fair Value per Unit
Outstanding:		
January 1, 2017	145	
Granted	10	\$ 16.25
Dividend equivalents issued	1	
Outstanding at April 1, 2017	156	

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NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Stock Options

In addition to stock options outstanding pursuant to the 2007 Program, during the periods presented, the Company had stock options outstanding under previous stockholder-approved stock option programs. These programs are more fully described in Note 12 to the Company's consolidated financial statements included in its Annual Report on Form 10-K for the year ended December 31, 2016. No additional options may be granted pursuant to these programs.

At December 31, 2016 and April 1, 2017, there were 77,000 options outstanding with a weighted average exercise price of \$16.29. At April 1, 2017, the weighted average remaining contractual life of all outstanding options was 0.14 years.

At April 1, 2017, there were no unvested options outstanding.

The pretax aggregate intrinsic value (the difference between the closing stock price on the last trading day of the first fiscal quarter of 2017 of \$16.45 per share and the exercise price, multiplied by the number of in-the-money options) that would have been received by the option holder had the option holder exercised his options on April 1, 2017 was \$12. This amount changes based on changes in the market value of the Company's common stock. During the three fiscal months ended April 1, 2017, no options were exercised.

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NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 9 – Segment Information

Vishay is a global manufacturer and supplier of electronic components. Vishay operates, and its chief operating decision maker makes strategic and operating decisions with regards to assessing performance and allocating resources based on, five reporting segments: MOSFETs, Diodes, Optoelectronic Components, Resistors & Inductors, and Capacitors. These segments represent groupings of product lines based on their functionality:

Metal oxide semiconductor field-effect transistors ("MOSFETs") function as solid-state switches to control power. Diodes route, regulate, and block radio frequency, analog, and power signals; protect systems from surges or electrostatic discharge damage; or provide electromagnetic interference filtering.

Optoelectronic components emit light, detect light, or do both.

Resistors and inductors both impede electric current. Resistors are basic components used in all forms of electronic circuitry to adjust and regulate levels of voltage and current. Inductors use an internal magnetic field to change alternating current phase and resist alternating current.

Capacitors store energy and discharge it when needed.

Vishay's reporting segments generate substantially all of their revenue from product sales to the industrial, automotive, telecommunications, computing, consumer products, power supplies, military and aerospace, and medical end markets. A small portion of revenues is from royalties.

The Company evaluates business segment performance on operating income, exclusive of certain items ("segment operating income"). Only dedicated, direct selling, general, and administrative expenses of the segments are included in the calculation of segment operating income. The Company's calculation of segment operating income excludes such selling, general, and administrative costs as global operations, sales and marketing, information systems, finance and administration groups, as well as restructuring and severance costs, goodwill and long-lived asset impairment charges, and other items. Management believes that evaluating segment performance excluding such items is meaningful because it provides insight with respect to intrinsic operating results of the Company. These items represent reconciling items between segment operating income and consolidated operating income. Business segment assets are the owned or allocated assets used by each business.

The Company also regularly evaluates gross profit by segment to assist in the analysis of consolidated gross profit. The Company considers segment operating income to be the more important metric because it more fully captures the business operations of the segments.

## NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

The following tables set forth business segment information:

	MOSFETs	Diodes	Optoelectronic Components	Resistors & Inductors	Capacitors	Total
<u>Fiscal quarter ended April 1, 2017:</u>						
Product Sales	\$ 105,529	\$ 144,895	\$ 65,682	\$ 200,377	\$ 89,769	\$ 606,252
Royalty Revenues	-	-	-	6	-	\$6
Total Revenue	\$ 105,529	\$ 144,895	\$ 65,682	\$ 200,383	\$ 89,769	\$ 606,258
Gross Profit	\$ 20,676	\$ 37,529	\$ 22,301	\$ 61,170	\$ 19,199	\$ 160,875
Segment Operating Income	\$ 11,761	\$ 32,739	\$ 16,915	\$ 53,897	\$ 14,172	\$ 129,484
<u>Fiscal quarter ended April 2, 2016:</u>						
Product Sales	\$ 100,933	\$ 135,384	\$ 62,775	\$ 183,416	\$ 88,020	\$ 570,528
Royalty Revenues	-	-	-	78	-	\$78
Total Revenue	\$ 100,933	\$ 135,384	\$ 62,775	\$ 183,494	\$ 88,020	\$ 570,606
Gross Profit	\$ 12,587	\$ 32,662	\$ 19,181	\$ 55,784	\$ 17,095	\$ 137,309
Segment Operating Income	\$ 2,618	\$ 26,643	\$ 13,654	\$ 46,883	\$ 11,303	\$ 101,101

	Fiscal quarters ended	
	April 1, 2017	April 2, 2016
Reconciliation:		
Segment Operating Income	\$ 129,484	\$ 101,101
Restructuring and Severance Costs	(1,469 )	(6,475 )
Unallocated Selling, General, and Administrative Expenses	(63,327 )	(54,078 )
Consolidated Operating Income	64,688	\$40,548
Unallocated Other Income (Expense)	(14,246 )	(2,076 )
Consolidated Income Before Taxes	\$50,442	38,472



## NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 10 – Earnings Per Share

The following table sets forth the computation of basic and diluted earnings per share attributable to Vishay stockholders (shares in thousands):

	Fiscal quarters ended	
	April 1, 2017	April 2, 2016
Numerator:		
Numerator for basic earnings per share:		
Net earnings attributable to Vishay stockholders	\$36,719	\$28,014
Interest savings assuming conversion of dilutive convertible and exchangeable notes, net of tax	-	38
Numerator for diluted earnings per share:		
Net earnings attributable to Vishay stockholders - diluted	\$36,719	\$28,052
Denominator:		
Denominator for basic earnings per share:		
Weighted average shares	146,120	147,691
Outstanding phantom stock units	154	142
Adjusted weighted average shares - basic	146,274	147,833
Effect of dilutive securities:		
Convertible and exchangeable debt instruments	8,349	2,626
Restricted stock units	253	169
Dilutive potential common shares	8,602	2,795
Denominator for diluted earnings per share:		
Adjusted weighted average shares - diluted	154,876	150,628
Basic earnings per share attributable to Vishay stockholders	\$0.25	\$0.19
Diluted earnings per share attributable to Vishay stockholders	\$0.24	\$0.19

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## NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Diluted earnings per share for the periods presented do not reflect the following weighted average potential common shares that would have an antidilutive effect or have unsatisfied performance conditions (in thousands):

	Fiscal quarters ended April	
	1, 2017	April 2, 2016
Convertible and exchangeable notes:		
Convertible Senior Debentures, due 2040	-	20,574
Convertible Senior Debentures, due 2041	8,340	8,189
Weighted average employee stock options	-	105
Weighted average other	581	610

In periods in which they are dilutive, if the potential common shares related to the exchangeable notes are included in the computation, the related interest savings, net of tax, assuming conversion/exchange is added to the net earnings used to compute earnings per share.

The Company's convertible debt instruments are only convertible for specified periods upon the occurrence of certain events. The convertible debentures due 2042 became convertible subsequent to the December 31, 2016 evaluation of the conversion criteria and remain convertible subsequent to the April 1, 2017 evaluation. In periods that the debentures are not convertible, the certain conditions which could trigger conversion of the remaining debentures have been deemed to be non-substantive, and accordingly, the Company assumes the conversion of these instruments in its diluted earnings per share computation during periods in which they are dilutive.

At the direction of its Board of Directors, the Company intends, upon conversion, to repay the principal amounts of the convertible senior debentures, due 2040, due 2041, and due 2042, in cash and settle any additional amounts in shares of Vishay common stock. Accordingly, the debentures are included in the diluted earnings per share computation using the "treasury stock method" (similar to options and warrants) rather than the "if converted method" otherwise required for convertible debt. Under the "treasury stock method," Vishay calculates the number of shares issuable under the terms of the debentures based on the average market price of Vishay common stock during the period, and that number is included in the total diluted shares figure for the period. If the average market price is less than \$13.09, no shares are included in the diluted earnings per share computation for the convertible senior debentures due 2040, if the average market price is less than \$17.93, no shares are included in the diluted earnings per share computation for the convertible senior debentures due 2041, and if the average market price is less than \$11.13, no shares are included in the diluted earnings per share computation for the convertible senior debentures due 2042.

## NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Note 11 – Fair Value Measurements

The fair value measurement accounting guidance establishes a valuation hierarchy of the inputs used to measure fair value. This hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The following is a brief description of those three levels:

Level 1: Observable inputs such as quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: Inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.

Level 3: Unobservable inputs that reflect the Company's own assumptions.

An asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement. There have been no changes in the classification of any financial instruments within the fair value hierarchy in the periods presented.

The following table provides the financial assets and liabilities carried at fair value measured on a recurring basis:

	Total Fair Value	Level 1	Level 2	Level 3
<u>April 1, 2017</u>				
Assets:				
Assets held in rabbi trusts	\$42,345	\$27,178	\$15,167	\$-
Available for sale securities	\$4,048	4,048	-	-
	\$46,393	\$31,226	\$15,167	\$-
Liabilities:				
Embedded derivative - convertible debentures due 2040	\$(368)	\$-	\$-	\$(368)
Embedded derivative - convertible debentures due 2041	\$(287)	-	-	(287)
Embedded derivative - convertible debentures due 2042	\$(172)	-	-	(172)
	\$(827)	\$-	\$-	\$(827)
<u>December 31, 2016</u>				
Assets:				
Assets held in rabbi trusts	\$41,917	\$27,297	14,620	\$-
Available for sale securities	\$3,969	3,969	-	-
	\$45,886	\$31,266	\$14,620	\$-
Liabilities:				
Embedded derivative - convertible debentures due 2040	\$(393)	\$-	\$-	\$(393)
Embedded derivative - convertible debentures due 2041	\$(285)	-	-	(285)
Embedded derivative - convertible debentures due 2042	\$(176)	-	-	(176)
	\$(854)	\$-	\$-	\$(854)

The Company maintains non-qualified trusts, referred to as "rabbi" trusts, to fund payments under deferred compensation and non-qualified pension plans. Rabbi trust assets consist primarily of marketable securities, classified as available-for-sale and company-owned life insurance assets. The marketable securities held in the rabbi trusts are valued using quoted market prices on the last business day of the period. The company-owned life insurance assets are

valued in consultation with the Company's insurance brokers using the value of underlying assets of the insurance contracts. The fair value measurement of the marketable securities held in the rabbi trust is considered a Level 1 measurement and the measurement of the company-owned life insurance assets is considered a Level 2 measurement within the fair value hierarchy.

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NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

The Company holds available for sale investments in debt securities that are intended to fund a portion of its pension and other postretirement benefit obligations outside of the United States. The investments are valued based on quoted market prices on the last business day of the year. The fair value measurement of the investments is considered a Level 1 measurement within the fair value hierarchy.

The convertible senior debentures, due 2040, due 2041, and due 2042, issued by the Company on November 9, 2010, May 13, 2011, and May 31, 2012, respectively, contain embedded derivative features that GAAP requires to be bifurcated and remeasured each reporting period. Each quarter, the change in the fair value of the embedded derivative features, if any, is recorded in the consolidated condensed statements of operations. The Company uses a derivative valuation model to derive the value of the embedded derivative features. Key inputs into this valuation model are the Company's current stock price, risk-free interest rates, the stock dividend yield, the stock volatility, and the debentures' credit spread over LIBOR. The first three aforementioned inputs are based on observable market data and are considered Level 2 inputs while the last two aforementioned inputs are unobservable and thus require management's judgment and are considered Level 3 inputs. The fair value measurement is considered a Level 3 measurement within the fair value hierarchy.

The Company enters into forward contracts with highly-rated financial institutions to mitigate the foreign currency risk associated with intercompany loans denominated in a currency other than the legal entity's functional currency. The notional amount of the forward contracts was \$105,400 and \$100,000 as of April 1, 2017 and December 31, 2016, respectively. The forward contracts are short-term in nature and are expected to be renewed at the Company's discretion until the intercompany loans are repaid. We have not designated the forward contracts as hedges for accounting purposes, and as such the change in the fair value of the contracts is recognized in the consolidated condensed statements of operations as a component of other income (expense). The Company estimates the fair value of the forward contracts based on applicable and commonly used pricing models using current market information and is considered a Level 2 measurement within the fair value hierarchy. The value of the forward contracts was immaterial as of April 1, 2017. The Company does not utilize derivatives or other financial instruments for trading or other speculative purposes.

The fair value of the long-term debt, excluding the derivative liabilities and deferred financing costs, at April 1, 2017 and December 31, 2016 is approximately \$899,000 and \$860,600, respectively, compared to its carrying value, excluding the derivative liabilities and deferred financing costs, of \$388,260 and \$367,049, respectively. The Company estimates the fair value of its long-term debt using a combination of quoted market prices for similar financing arrangements and expected future payments discounted at risk-adjusted rates, which are considered Level 2 inputs.

At April 1, 2017 and December 31, 2016, the Company's short-term investments were comprised of time deposits with financial institutions that have maturities that exceed 90 days from the date of acquisition; however they all mature within one year from the respective balance sheet dates. The Company's short-term investments are accounted for as held-to-maturity debt instruments, at amortized cost, which approximates their fair value. The investments are funded with excess cash not expected to be needed for operations prior to maturity; therefore, the Company believes it has the intent and ability to hold the short-term investments until maturity. At each reporting date, the Company performs an evaluation to determine if any unrealized losses are other-than-temporary. No other-than-temporary impairments have been recognized on these securities, and there are no unrecognized holding gains or losses for these securities during the periods presented. There have been no transfers to or from the held-to-maturity classification. All decreases in the account balance are due to returns of principal at the securities' maturity dates. Interest on the securities is recognized as interest income when earned.

At April 1, 2017 and December 31, 2016, the Company's cash and cash equivalents were comprised of demand deposits, time deposits with maturities of three months or less when purchased, and money market funds. The Company estimates the fair value of its cash, cash equivalents, and short-term investments using level 2 inputs. Based on the current interest rates for similar investments with comparable credit risk and time to maturity, the fair value of the Company's cash, cash equivalents, and held-to-maturity short-term investments approximate the carrying amounts reported in the consolidated condensed balance sheets.

The Company's financial instruments also include accounts receivable, short-term notes payable, and accounts payable. The carrying amounts for these financial instruments reported in the consolidated condensed balance sheets approximate their fair values.

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Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Overview

Vishay Intertechnology, Inc. ("Vishay," "we," "us," or "our") is a global manufacturer and supplier of discrete 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. In 2014, our Board of Directors instituted a quarterly dividend payment program and declared the first cash dividend in the history of Vishay. In December 2015, we amended our credit facility to increase our ability to repurchase shares of stock or pay cash dividends. On May 2, 2016, our Board of Directors approved a stock repurchase plan, authorizing us to repurchase, in the aggregate, up to \$100 million of our outstanding common stock. The stock repurchase plan expired on May 2, 2017. We repurchased 1,752,454 shares of stock for \$23.2 million pursuant to the plan. No shares were repurchased in the first fiscal quarter of 2017. We will continue to evaluate attractive stock repurchase opportunities.

As part of the amendment and restatement of the revolving credit facility in December 2015, we completed an evaluation of our anticipated domestic cash needs over the next several years and our most efficient use of liquidity, with consideration of the amount of cash that can be repatriated to the U.S. efficiently with lesser withholding taxes in foreign jurisdictions. As a result of that evaluation, during the fourth quarter of 2015, we recognized income tax expense of \$164.0 million, including U.S. federal and state income taxes, incremental foreign income taxes, and withholding taxes payable to foreign jurisdictions, on \$300 million of foreign earnings which we expect to repatriate to the U.S. over the next several years. We repatriated \$46 million to the U.S. in 2016 pursuant to this plan. We expect to repatriate additional amounts in 2017.

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. For several years, we implemented aggressive cost reduction programs. 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 the first fiscal quarter of 2016, we substantially completed the implementation of targeted cost reduction programs that began in the fourth fiscal quarter of 2013. The cost reduction programs initiated in 2015 continue as planned. As a result of a review of the financial results and outlook for our MOSFETs segment following the completion of production transfers, we determined to implement further cost reductions for the MOSFETs segment. In November 2016, we announced an extension of the MOSFETs Enhanced Competitiveness Program. Our cost reduction programs are more fully described in Note 2 to the consolidated condensed financial statements included in Item 1, and in "Cost Management" below. See additional information

regarding our competitive strengths and key challenges as disclosed in Part 1 of our Annual Report on Form 10-K for the year ended December 31, 2016, filed with the Securities and Exchange Commission (the "SEC") on February 17, 2017.

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.") We experienced a relatively sharp upturn in demand in the first fiscal quarter of 2017. Net revenues increased versus the prior fiscal quarter and prior year fiscal quarter. The substantial increase in orders resulted in an increase in all key financial metrics compared to the prior fiscal quarter and first fiscal quarter of 2016.

Net revenues for the fiscal quarter ended April 1, 2017 were \$606.3 million, compared to \$570.8 million and \$570.6 million for the fiscal quarters ended December 31, 2016 and April 2, 2016, respectively. The net earnings attributable to Vishay stockholders for the fiscal quarter ended April 1, 2017 were \$36.7 million, or \$0.24 per diluted share, compared to a net loss attributable to Vishay stockholders of \$(48.7) million, or \$(0.33) per share for the fiscal quarter ended December 31, 2016 and net earnings attributable to Vishay stockholders of \$28.0 million, or \$0.19 per diluted share for the fiscal quarter ended April 2, 2016.

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We define adjusted net earnings as net earnings determined in accordance with GAAP adjusted for various items that management believes are not indicative of the intrinsic operating performance of our business. We define free cash as the cash flows generated from continuing operations less capital expenditures plus net proceeds from the sale of property and equipment. The reconciliations below include certain financial measures which are not recognized in accordance with GAAP, including adjusted net earnings, adjusted earnings per share, and free cash. These non-GAAP measures should not be viewed as alternatives to GAAP measures of performance or liquidity. Non-GAAP measures such as adjusted net earnings, adjusted earnings per share, and free cash 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 adjusted net earnings and adjusted earnings per share are meaningful because they provide insight with respect to our intrinsic operating results. 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.

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

	Fiscal quarters ended		
	April 1, 2017	December 31, 2016	April 2, 2016
GAAP net earnings (loss) attributable to Vishay stockholders	\$36,719	\$(48,748 )	\$28,014
<u>Reconciling items affecting operating income (loss):</u>			
Restructuring and severance costs	\$1,469	\$7,060	\$6,475
U.S. pension settlement charges	-	79,321	-
<u>Reconciling items affecting other income (expense):</u>			
Gain on early extinguishment of debt	\$-	\$-	\$(3,611 )
Gain related to Tianjin explosion	-	(8,809 )	-
Loss on disposal of equity affiliate	7,060	-	-
<u>Reconciling items affecting tax expense:</u>			
Effects of cash repatriation program	\$(968 )	\$(165 )	\$(769 )
Additional tax expense from AOCI - pension plan	-	34,853	-
Effects of changes in uncertain tax positions	-	(8,704 )	-
Tax effects of pre-tax items above	(441 )	(27,465 )	(887 )
Adjusted net earnings	\$43,839	\$27,343	\$29,222
Adjusted weighted average diluted shares outstanding	154,876	152,408	150,628
Adjusted earnings per diluted share *	\$0.28	\$0.18	\$0.19

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

Although the term "free cash" is not defined in GAAP, each of the elements used to calculate free cash for the year-to-date period is presented as a line item on the face of our consolidated condensed statement of cash flows prepared in accordance with GAAP and the quarterly amounts are derived from the year-to-date GAAP statements as of the beginning and end of the respective quarter.

Fiscal quarters ended

	April 1,	December 31,	April 2,
	2017	2016**	2016**
Net cash provided by continuing operating activities	\$43,674	\$ 83,439	\$20,700
Proceeds from sale of property and equipment	943	4,460	64
Less: Capital expenditures	(16,668)	(53,289 )	(19,756)
Free cash	\$27,949	\$ 34,610	\$ 1,008

\*\*Results have been recast due to the adoption of ASU 2016-09. See Note 1 to the consolidated condensed financial statements included in Item 1.

Our results for the fiscal quarters ended April 1, 2017, December 31, 2016, and April 2, 2016 represent the effects of a strong business environment and order activity, our cost reduction programs, and our organic growth initiatives. We experienced a relatively sharp upturn in demand in the first fiscal quarter of 2017, which further improved results. Our percentage of euro-based sales approximates our percentage of euro-based expenses so the negative foreign currency impact on revenues was substantially offset by the positive impact on expenses. Our pre-tax results were consistent with expectations based on our business model.

## 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 our or publicly available 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, gains 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. Using our and publicly available data, 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. All pricing is subject to governing market conditions and is independently set by us.

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 first fiscal quarter of 2016 through the first fiscal quarter of 2017 (dollars in thousands):

	1st Quarter 2016	2nd Quarter 2016	3rd Quarter 2016	4th Quarter 2016	1st Quarter 2017
Net revenues	\$570,606	\$590,051	\$591,955	\$570,819	\$606,258
Gross profit margin	24.1 %	24.8 %	26.0 %	23.2 %	26.5 %
Operating margin <sup>(1)</sup>	7.1 %	8.4 %	9.7 %	-8.0 %	10.7 %
End-of-period backlog	\$571,600	\$579,800	\$608,100	\$653,400	\$836,500
Book-to-bill ratio	1.08	1.02	1.04	1.11	1.29
Inventory turnover	4.00	4.20	4.20	4.40	4.50
Change in ASP vs. prior quarter	-1.2 %	-0.7 %	-0.9 %	-1.2 %	-1.3 %

(1) Operating margin for the first, second, third, and fourth fiscal quarters of 2016 and the first fiscal quarter of 2017 includes \$6.5 million, \$4.5 million, \$1.2 million, \$7.1 million, and \$1.5 million, respectively, of restructuring and severance expenses (see Note 2 to our consolidated condensed financial statements). Operating margin for the third fiscal quarter of 2016 includes \$1.6 million of indefinite-lived intangible assets impairment charges.

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

Revenues increased versus the prior fiscal quarter and first fiscal quarter of 2016. The relatively sharp upturn in demand substantially increased the backlog and book-to-bill ratio across all segments. Both real and anticipated supply shortages contributed to the increase in orders from distribution. Our average selling prices continue to decline, although at a slower pace, primarily due to our commodity semiconductor products.

Gross profit margin increased versus the prior fiscal quarter and the first fiscal quarter of 2016. The increases are primarily due to volume, the effects of our cost reduction programs, and manufacturing efficiencies. Decreasing average selling prices continue to burden the gross profit margin. Gross profit margins for the periods prior to the second fiscal quarter of 2016 were negatively impacted by additional depreciation associated with our MOSFETs cost reduction program.

The book-to-bill ratio in the first fiscal quarter of 2017 increased to 1.29 from 1.11 in the fourth fiscal quarter of 2016. The book-to-bill ratios in the first fiscal quarter of 2017 for distributors and original equipment manufacturers ("OEM") were 1.43 and 1.11, respectively, versus ratios of 1.16 and 1.04, respectively, during the fourth fiscal quarter of 2016.

For the second fiscal quarter of 2017, we anticipate revenues between \$610 million and \$650 million and gross margins of 26% to 28%.



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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 first fiscal quarter of 2016 through the first fiscal quarter of 2017 (dollars in thousands):

	1st Quarter 2016	2nd Quarter 2016	3rd Quarter 2016	4th Quarter 2016	1st Quarter 2017					
<u><b>MOSFETs</b></u>										
Net revenues	\$ 100,933	\$ 102,219	\$ 101,687	\$ 101,497	\$ 105,529					
Book-to-bill ratio	1.14	0.94	1.03	1.14	1.37					
Gross profit margin	12.5	%	11.6	%	16.2	%	17.0	%	19.6	%
Segment operating margin	2.6	%	2.5	%	7.4	%	9.4	%	11.1	%
<u><b>Diodes</b></u>										
Net revenues	\$ 135,384	\$ 142,118	\$ 141,127	\$ 135,291	\$ 144,895					
Book-to-bill ratio	1.05	1.02	1.06	1.22	1.44					
Gross profit margin	24.1	%	26.2	%	25.8	%	21.1	%	25.9	%
Segment operating margin	19.7	%	22.2	%	22.6	%	17.7	%	22.6	%
<u><b>Optoelectronic Components</b></u>										
Net revenues	\$ 62,775	\$ 68,059	\$ 72,801	\$ 68,491	\$ 65,682					
Book-to-bill ratio	1.09	1.15	0.98	0.99	1.16					
Gross profit margin	30.6	%	31.8	%	33.3	%	32.1	%	34.0	%
Segment operating margin	21.8	%	23.3	%	27.9	%	25.9	%	25.8	%
<u><b>Resistors &amp; Inductors</b></u>										
Net revenues	\$ 183,494	\$ 192,799	\$ 192,041	\$ 185,503	\$ 200,383					
Book-to-bill ratio	1.10	1.02	0.99	1.08	1.22					
Gross profit margin	30.4	%	29.7	%	30.6	%	27.5	%	30.5	%
Segment operating margin	25.6	%	25.2	%	27.0	%	23.7	%	26.9	%
<u><b>Capacitors</b></u>										
Net revenues	\$ 88,020	\$ 84,856	\$ 84,299	\$ 80,037	\$ 89,769					
Book-to-bill ratio	1.01	1.03	1.20	1.03	1.25					
Gross profit margin	19.4	%	21.3	%	21.3	%	17.1	%	21.4	%

Segment operating margin	12.8	%	14.9	%	15.7	%	11.5	%	15.8	%
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## Acquisition 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 on 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 suitable acquisition candidates at price levels and on terms and conditions we consider acceptable.



## Cost Management

We place a strong emphasis on controlling our costs, and use various measures and metrics to evaluate our cost structure.

We define variable costs as expenses that vary with respect to quantity produced. Fixed costs do not vary with respect to quantity produced over the relevant time period. Contributive margin is calculated as net revenue less variable costs. It may be expressed in dollars or as a percentage of net revenue. Management uses this measure to determine the amount of profit to be expected for any change in revenues. While these measures are typical cost accounting measures, none of these measures are recognized in accordance with GAAP. The classification of expenses as either variable or fixed is judgmental and other companies might classify such expenses differently. These measures, as calculated by Vishay, may not be comparable to similarly titled measures used by other companies.

We closely monitor variable costs and seek to achieve the contributive margin in our business model. Over a period of many years, we have generally maintained a contributive margin of between 45% - 47% of revenues. The erosion of average selling prices, particularly of our semiconductor products, that is typical of our industry and inflation negatively impact contributive margin and drive us to continually seek ways to reduce our variable costs. Our variable cost reduction efforts include increasing the efficiency in our production facilities by expending capital for automation, reducing materials costs, materials substitution, 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 recorded as costs of products sold or selling, general, and administrative expenses and maintaining our break-even point (adjusted for acquisitions). We seek to limit increases in selling, general, and administrative expenses to the rate of inflation, excluding foreign currency exchange effects and substantially independent of sales volume changes. At constant fixed costs, we would expect each \$1 million increase in revenues to increase our operating income by approximately \$450,000 to \$470,000. Sudden changes in the business conditions, however, may not allow us to quickly adapt our manufacturing capacity and cost structure.

Occasionally, our ongoing cost containment activities are not adequate and we must take actions to maintain our cost competitiveness. We incurred significant restructuring expenses in our past to reduce our cost structure. Historically, our primary cost reduction technique was through the transfer of production to the extent possible from high-labor-cost countries to lower-labor-cost countries. We believe that our manufacturing footprint is suitable to serve our customers and end markets, while maintaining lower manufacturing costs. Since 2013, our cost reduction programs have primarily focused on reducing fixed costs, including selling, general, and administrative expenses.

In the fourth fiscal quarter of 2013, we announced various cost reduction programs as part of our continuous efforts to improve efficiency and operating performance.

The programs initiated in 2013 primarily focused 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 implemented two other smaller cost reduction programs concerning the manufacturing of products within our Diodes segment. The voluntary separation / early retirement and Diodes segment programs were substantially completed in 2014.

We completed the initially planned production transfer as part of the MOSFETs Enhanced Competitiveness Program in the first fiscal quarter of 2016. The production transfer occurred over a period of approximately two years. The manufacture of wafers for certain critical products has been transferred into a more cost-efficient fab. As a consequence, certain other wafer manufacturing previously occurring in-house has been transferred to third-party foundries. We have incurred and may continue to incur other exit costs associated with the production transfer, including certain contract termination costs.



The initially-planned production transfer achieved the expected improvement in contributive margin percentage and fixed cost reduction; however, as a result of a decrease in net revenues since the plan was first initiated, gross margin for the MOSFETs segment remains below 20%.

As a result of a review of the financial results and outlook for the MOSFETs segment following the completion of production transfers, we determined to implement further cost reductions for the MOSFETs segment.

In November 2016, we announced an extension of the MOSFETs Enhanced Competitiveness Program. The extended program includes various cost reduction initiatives, primarily the transfer of all remaining manufacturing operations at our Santa Clara, California facility to other Vishay facilities or third-party subcontractors.

The production transfers will be completed in steps by the end of 2017. We expect to incur cash charges of approximately \$4 million to \$8 million, primarily related to severance, to implement these steps. We expect to realize annualized savings of approximately \$8 million to \$9 million as a result of these initiatives. We expect to maintain our R&D and management presence in the Silicon Valley area, even after the cessation of manufacturing operations there.

The total cash charges for the MOSFETs Enhanced Competitiveness Program are expected to be \$24 million to \$27 million.

We recorded \$0.4 million of restructuring and severance expenses in the first fiscal quarter of 2017 for the expenses that were recognizable under GAAP during the period and \$23.9 million of restructuring and severance expenses since the MOSFETs Enhanced Competitiveness Program was implemented.

Programs were also initiated in 2015. The programs initiated in 2015 include a plan to reduce selling, general, and administrative costs company-wide, and targeted streamlining and consolidation of production for certain product lines within our Capacitors and Resistors & Inductors segments. The programs in total are expected to lower costs by approximately \$35 million annually (at current volumes) when fully implemented, at expected cash costs of approximately \$30 million. The implementation of these programs will not impact planned R&D activities, or our growth initiatives in Asian markets. We recorded \$1.0 million of restructuring and severance expenses in the first fiscal quarter of 2017 for expenses that were recognizable under GAAP during the period and \$24.7 million of restructuring and severance expenses since these programs were initiated. The remaining expenses associated with these programs will be recorded as they become recognizable under GAAP.

The programs announced in 2015 are expected to reduce selling, general, and administrative costs by approximately \$17 million annually. These selling, general, and administrative cost reductions were substantially implemented by the end of 2016. We first solicited volunteers to accept a voluntary separation / early retirement offer. The voluntary separation benefits vary by country and job classification, but generally offer a cash loyalty bonus. Additional involuntary terminations were necessary to achieve the cost reduction targets. We began to realize cost savings as a result of these programs in 2016.

The targeted plans to streamline and consolidate production of certain product lines are expected to decrease costs of products sold by approximately \$18 million annually (at current volumes). These plans include the Zwolle, Netherlands aluminum capacitors facility closure announced on June 30, 2015.

Except for the Zwolle and Santa Clara facilities described above, no other facility closures are currently expected pursuant to these programs.

Except for the distinct and targeted programs noted above, we do not anticipate any other material restructuring activities in 2017. 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 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 any of the businesses acquired since 2011, 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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## 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. We occasionally use forward exchange contracts to economically hedge a portion of these exposures.

GAAP requires that we identify the "functional currency" of each of our 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 condensed 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 incurred in the local currency are translated at the average exchange rate for the year. While the translation of revenues and expenses incurred in the local currency into U.S. dollars does not directly impact the statements 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 stronger during the first fiscal quarter of 2017 compared to the prior quarter and prior year period, with the translation of foreign currency revenues and expenses into U.S. dollars decreasing reported revenues and expenses versus the prior quarter and prior year period.

### 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 first fiscal quarter of 2017 have been unfavorably impacted (compared to the prior quarter and prior year period) by local currency transactions of subsidiaries which use the U.S. dollar as their functional currency.

We enter into forward contracts with highly-rated financial institutions to mitigate the foreign currency risk associated with intercompany loans denominated in a currency other than the legal entity's functional currency. The notional amount of the forward contracts was \$105.4 million as of April 1, 2017. The forward contracts are short-term in nature and are expected to be renewed at our discretion until the intercompany loans are repaid. The forward contracts are carried at fair value in our consolidated condensed balance sheets. We have not designated the forward contracts as hedges for accounting purposes, and as such the change in the fair value of the contracts is recognized in our consolidated condensed statements of operations as a component of other income (expense). We do not utilize derivatives or other financial instruments for trading or other speculative purposes.



## Results of Operations

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

	Fiscal quarters ended			
	April 1, 2017	December 31, 2016	April 2, 2016	
Cost of products sold	73.5 %	76.8 %	75.9 %	
Gross profit	26.5 %	23.2 %	24.1 %	
Selling, general & administrative expenses	15.6 %	16.0 %	15.8 %	
Operating income (loss)	10.7 %	-8.0 %	7.1 %	
Income (loss) before taxes and noncontrolling interest	8.3 %	-7.2 %	6.7 %	
Net earnings (loss) attributable to Vishay stockholders	6.1 %	-8.5 %	4.9 %	
Effective tax rate	26.7 %	-17.6 %	26.8 %	

## Net Revenues

Net revenues were as follows (dollars in thousands):

	Fiscal quarters ended		
	April 1, 2017	December 31, 2016	April 2, 2016
Net revenues	\$606,258	\$570,819	\$570,606

The change in net revenues versus the comparable prior periods was as follows (dollars in thousands):

	Fiscal quarter ended April 1, 2017		
	Change in net revenues	% change	
December 31, 2016	\$35,439	6.2 %	
April 2, 2016	\$35,652	6.2 %	

Changes in net revenues were attributable to the following:

	vs. Prior Quarter		vs. Prior Year Quarter	
Change attributable to:				
Increase in volume	8.4 %		11.3 %	
Decrease in average selling prices	-1.3 %		-3.1 %	
Foreign currency effects	-0.6 %		-1.1 %	
Other	-0.3 %		-0.9 %	
Net change	6.2 %		6.2 %	

We experienced a substantial, broad-based increase in demand for our products in the first fiscal quarter of 2017, which resulted in increased net revenues compared to the prior fiscal quarter and first fiscal quarter of 2016. Our revenue results continue to be negatively impacted by decreasing average selling prices and foreign currency effects.

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 revenues under our distributor incentive programs of \$21.5 million, \$21.5 million, and \$21.9 million for the three fiscal months ended April 1, 2017, December 31, 2016, and April 2, 2016, respectively, or 3.4%, 3.6%, and 3.7% of gross revenues, respectively. Actual credits issued under the programs during the three fiscal months ended April 1, 2017, December 31, 2016, and April 2, 2016 were \$23.4 million, \$18.5 million, and \$26.5 million, respectively. Increases and decreases in these incentives are largely attributable to the then-current business climate.

#### Gross Profit Margins

Gross profit margins for the fiscal quarter ended April 1, 2017 were 26.5%, versus 23.2% and 24.1%, for the comparable prior quarter and prior year period, respectively. The increase is due primarily to increased sales volume. We were able to offset the negative impacts of inflation and average selling price decline by cost reductions and innovation, and maintain our contributive margin.



## Segments

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

### MOSFETs

Net revenues and gross profit margin of the MOSFETs segment were as follows (dollars in thousands):

	Fiscal quarters ended					
	April 1, 2017	December 31, 2016	April 2, 2016			
Net revenues	\$105,529	\$101,497	\$100,933			
Gross profit margin	19.6 %	17.0 %	12.5 %			

The change in net revenues versus the comparable prior periods was as follows (dollars in thousands):

	Fiscal quarter ended April 1, 2017		
	Change in net revenues	% change	
December 31, 2016	\$4,032	4.0 %	
April 2, 2016	\$4,596	4.6 %	

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

	vs. Prior Quarter	%	vs. Prior Year Quarter	%
Change attributable to:				
Increase in volume	6.0	%	11.9	%
Decrease in average selling prices	-1.5	%	-5.5	%
Foreign currency effects	-0.3	%	-0.5	%
Other	-0.2	%	-1.3	%
Net change	4.0	%	4.6	%

In the first fiscal quarter of 2017, the MOSFETs segment experienced moderate growth in net revenues versus the prior quarter and prior year quarter. The growth was primarily achieved in Asia as well as with European distributors. The growth was partially offset by a significant decrease in the Americas region.

The gross profit margin in the first fiscal quarter of 2017 increased slightly versus the prior quarter and significantly versus the prior year quarter. The increases are primarily attributable to the revenue growth and the implemented cost reduction program (see below), which exceeded the impact from lower average selling prices and cost inflation. The positive impact of the cost reduction program was greater in comparison to the prior year quarter than the prior quarter.

Typical pricing pressure for our established MOSFETs products continues. We have experienced a slight decline in average selling prices versus the prior quarter and a significant decline versus the prior year quarter.

In 2013, we announced a cost reduction program to enhance the competitiveness of our MOSFETs segment. The planned production transfers were substantially implemented by the end of the first fiscal quarter of 2016 and began to provide improvement in the third fiscal quarter of 2016.

As a result of a review of the financial results and outlook for the MOSFETs segment following the completion of production transfers, we have determined to implement further cost reductions. In November 2016, we announced an extension of the MOSFETs Enhanced Competitiveness Program. The revised program includes various cost reduction initiatives, primarily the transfer of all remaining manufacturing operations at our Santa Clara, California facility to other Vishay facilities or third-party subcontractors. We expect to maintain our R&D and management presence in the Silicon Valley area, even after the cessation of manufacturing operations there.

The production transfers will be completed in steps by the end of 2017. We expect to incur cash charges of approximately \$4 to \$8 million, primarily related to severance, to implement these steps, and expect to realize annualized cost savings of approximately \$8 to \$9 million as a result of these new initiatives. See "Cost Management" above and Note 2 to our consolidated condensed financial statements.

We continue to make capital and R&D investments in this business.

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Diodes

Net revenues and gross profit margins of the Diodes segment were as follows (dollars in thousands):

	Fiscal quarters ended					
	April 1, 2017		December 31, 2016		April 2, 2016	
Net revenues	\$144,895		\$135,291		\$135,384	
Gross profit margin	25.9	%	21.1	%	24.1	%

The change in net revenues versus the comparable prior periods was as follows (dollars in thousands):

	Fiscal quarter ended April 1, 2017		
	Change in net	%	
	revenues change		
December 31, 2016	\$9,604	7.1	%
April 2, 2016	\$9,511	7.0	%

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

	vs. Prior Quarter		vs. Prior Year Quarter	
Change attributable to:				
Increase in volume	9.1	%	12.4	%
Decrease in average selling prices	-1.3	%	-3.6	%
Foreign currency effects	-0.5	%	-0.8	%
Other	-0.2	%	-1.0	%
Net change	7.1	%	7.0	%

The Diodes segment achieved significant growth in net revenues in the first fiscal quarter of 2017 versus the prior quarter and prior year quarter. The net revenue increases were mainly in Asia as well as with European distributors. The volume increases were partially offset by declining average selling prices and negative euro foreign currency effects.

The gross profit margin increased moderately versus the prior quarter and slightly versus the prior year quarter primarily due to the higher sales volume and the cost reduction activities, which were only partially offset by declining average selling prices. The increase versus the prior quarter was higher primarily due to the negative impact of an inventory reduction in the prior quarter.

Typical pricing pressure for our established Diodes products continues. We have experienced a slight decline versus the prior fiscal quarter and a moderate price decline versus the prior year quarter.

Optoelectronic Components

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

	Fiscal quarters ended					
	April 1, 2017		December 31, 2016		April 2, 2016	
Net revenues	\$65,682		\$68,491		\$62,775	
Gross profit margin	34.0	%	32.1	%	30.6	%

The change in net revenues versus the comparable prior periods was as follows (dollars in thousands):

	Fiscal quarter ended April 1, 2017		
	Change in net revenues	% change	
December 31, 2016	\$(2,809)	-4.1	%
April 2, 2016	\$2,907	4.6	%

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

	vs. Prior Quarter		vs. Prior Year	
Change attributable to:				
Change in volume	-1.5	%	8.6	%
Decrease in average selling prices	-2.2	%	-2.3	%
Foreign currency effects	-0.4	%	-1.1	%
Other	0.0	%	-0.6	%
Net change	-4.1	%	4.6	%

In the first fiscal quarter of 2017, the Optoelectronic Components segment experienced a moderate decrease in net revenues versus the prior quarter and a moderate increase in revenues versus the prior year quarter. The decrease versus the prior quarter is primarily due to reduced business with Asian end customers and European distributors. The increase versus the prior year quarter was primarily due to increased sales to Asian distributors and in the Americas region.

The gross profit margin increased slightly versus the prior quarter and moderately versus the prior year quarter. An inventory increase due to expected higher net revenues in the next fiscal quarter increased gross profit margin versus the prior quarter despite the decrease in net revenues and lower average selling prices. The increase versus the prior year quarter is primarily due to the increase in sales volume and sales mix, which was partially offset by lower average selling prices and inflation.

The pricing pressure for our established Optoelectronic Components products continues. We experienced a slight decline in average selling prices versus the prior quarter and prior year quarter.

Resistors & Inductors

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

	Fiscal quarters ended					
	April 1, 2017		December 31, 2016		April 2, 2016	
Net revenues	\$200,383		\$185,503		\$183,494	
Gross profit margin	30.5	%	27.5	%	30.4	%

The change in net revenues versus the comparable prior periods was as follows (dollars in thousands):

	Fiscal quarter ended April 1, 2017		
	Change in net revenues	% change	
December 31, 2016	\$14,880	8.0	%
April 2, 2016	\$16,889	9.2	%

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

	vs. Prior Quarter		vs. Prior Year Quarter	
Change attributable to:				
Increase in volume	10.3	%	14.2	%
Decrease in average selling prices	-1.3	%	-2.6	%
Foreign currency effects	-0.7	%	-1.5	%
Other	-0.3	%	-0.9	%
Net change	8.0	%	9.2	%

Net revenues of the Resistors & Inductors segment increased significantly in the first fiscal quarter of 2017 versus the prior quarter and prior year quarter. All regions contributed to the increase in net revenues, with Asia experiencing the biggest increase. Distribution and the industrial and automotive end markets contributed the most to the revenue increase.

The gross profit margin improved moderately over the prior quarter and slightly versus the prior year quarter. Cost reduction projects and volume efficiencies are the main contributors to the improvement versus the prior quarter. A larger average selling price decrease and inflationary effects reduced the gross profit margin increase versus the prior year quarter.

Average selling prices decreased slightly versus the prior quarter and prior year quarter, consistent with our historical experience.

In 2015, we announced global cost reduction programs which include targeted plans to streamline and consolidate certain product lines, including within our Resistors & Inductors segment. See "Cost Management" above and Note 2 to our consolidated condensed financial statements.



Capacitors

Net revenues and gross profit margins of the Capacitors segment were as follows (dollars in thousands):

	Fiscal quarters ended					
	April 1, 2017		December 31, 2016		April 2, 2016	
Net revenues	\$89,769		\$80,037		\$88,020	
Gross profit margin	21.4	%	17.1	%	19.4	%

The change in net revenues versus the comparable prior periods was as follows (dollars in thousands):

	Fiscal quarter ended April 1, 2017			
	Change in net		% change	
	revenues			
December 31, 2016	\$9,732	12.2	%	
April 2, 2016	\$1,749	2.0	%	

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

	vs. Prior Quarter		vs. Prior Year Quarter	
Change attributable to:				
Increase in volume	14.1	%	4.8	%
Decrease in average selling prices	-0.8	%	-1.1	%
Foreign currency effects	-0.9	%	-1.6	%
Other	-0.2	%	-0.1	%
Net change	12.2	%	2.0	%

Net revenues of the Capacitors segment for the first fiscal quarter of 2017 have increased significantly versus the prior quarter and slightly versus the prior year quarter. The Asia region contributed most to the growth in net revenues. Distribution experienced the highest sales growth versus both the prior quarter and the prior year quarter. The industrial end market was also a main contributor to the sales growth versus the prior quarter.

The gross profit margin in the first fiscal quarter of 2017 increased moderately versus the prior quarter and slightly versus the prior year quarter. Efficiencies and cost reduction programs have more than compensated the average selling price decline and inflationary effects.

Average selling prices decreased slightly versus the prior quarter and prior year quarter, consistent with our historical experience.

In 2015, we announced global cost reduction programs which include targeted plans to streamline and consolidate certain product lines, including within our Capacitors segment. See "Cost Management" above and Note 2 to our consolidated condensed financial statements.

## Selling, General, and Administrative Expenses

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

	Fiscal quarters ended		
	April 1, 2017	December 31, 2016	April 2, 2016
Total SG&A expenses	\$94,718	\$91,532	\$90,286
as a percentage of revenues	15.6 %	16.0 %	15.8 %

SG&A expenses for the first fiscal quarter were in-line with our expectations. The overall increase in SG&A expenses is primarily attributable to general salary and cost inflation, partially offset by the benefits of our restructuring programs (see "Cost Management" above). The decrease in SG&A expenses as a percentage of revenues is attributable to higher revenues.

Certain items included in SG&A expenses impact the comparability of these amounts, as summarized below (in thousands):

	Fiscal quarters ended		
	April 1, 2017	December 31, 2016	April 2, 2016
Amortization of intangible assets	\$3,968	\$ 4,008	\$3,610

In September 2016, we began to amortize our Siliconix tradenames, which were previously considered indefinite-lived, over their estimated remaining useful life of 10 years.

In 2013 and 2015, we announced restructuring programs targeting SG&A expenses. See "Cost Management" above.

## Other Income (Expense)

Interest expense for the fiscal quarter ended April 1, 2017 increased by \$0.1 million and \$0.3 million versus the fiscal quarters ended December 31, 2016 and April 2, 2016, respectively.

The following tables analyze the components of the line "Other" on the consolidated condensed statements of operations (in thousands):

	Fiscal quarters ended		
	April 1, 2017	December 31, 2016	Change
Foreign exchange gain (loss)	\$(1,661)	\$ 889	\$(2,550)
Interest income	1,263	1,064	199
Other	2	108	(106 )
	\$(396 )	\$ 2,061	\$(2,457)

	Fiscal quarters ended		
	April 1, 2017	April 2,	Change



	2016		
Foreign exchange gain (loss)	\$(1,661)	\$(327 )	\$(1,334)
Interest income	1,263	1,133	130
Other	2	(27 )	29
	\$(396 )	\$779	\$(1,175)

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## Income Taxes

For the fiscal quarter ended April 1, 2017, our effective tax rate was 26.7%, as compared to -17.6% and 26.8% for the fiscal quarters ended December 31, 2016 and April 2, 2016, respectively. The effective tax rate is generally less than the U.S. statutory rate primarily because of earnings in foreign jurisdictions.

Income tax expense for the fiscal quarter ended April 1, 2017 includes \$1.0 million for the periodic remeasurement of the deferred tax liability recorded for the cash repatriation program announced. The cash repatriation program is expected to occur over several years, and the deferred tax liability is based on the available sources of cash, applicable tax rates, and other factors and circumstances, as of each respective balance sheet date. Changes in the underlying facts and circumstances result in changes in the deferred tax liability balance, which are recorded as tax benefit or expense.

We operate in a global environment with significant operations in various jurisdictions outside the United States. Accordingly, our consolidated income tax rate is a composite rate reflecting our earnings and the applicable tax rates in the various jurisdictions where we operate. Part of our strategy is to achieve cost savings by operating in 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 our effective tax rate are largely attributable to changes in the mix of pretax income among our various taxing jurisdictions.

During the three fiscal months ended April 1, 2017, the liabilities for unrecognized tax benefits increased by \$1.1 million on a net basis, due to increases for tax positions taken in the current period, interest, and foreign currency effects.

## 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 15 years, and cash flows from operations in excess of \$100 million in each of the past 22 years.

Management uses a non-GAAP measure, "free cash," to evaluate our ability to fund acquisitions, repay debt, and otherwise enhance stockholder value through stock repurchases or dividends. See "Overview" above for "free cash" definition and reconciliation to GAAP. Vishay has generated positive "free cash" in each of the past 20 years, and "free cash" in excess of \$80 million in each of the past 15 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 during the fiscal quarter ended April 1, 2017. We expect to generate free cash in 2017 in line with our history. 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 approximately 24% of our outstanding stock prior to implementing these initiatives.

On May 2, 2016, our Board of Directors approved a stock repurchase plan, authorizing us to repurchase, in the aggregate, up to \$100 million of our outstanding common stock. The stock repurchase plan expired on May 2, 2017. We repurchased 1,752,454 shares of stock for \$23.2 million pursuant to the plan.

In 2016, we acquired, in two privately negotiated transactions, all of the outstanding exchangeable notes due 2102. The total purchase price for the two transactions was \$34.0 million. The exchangeable unsecured notes were issued in 2002 in connection with an acquisition, and were subject to a put and call agreement dated December 13, 2002. The repurchased notes had been exchangeable for approximately 2.5 million shares of our common stock.

We also entered into a new, larger, revolving credit facility in 2010, which was amended and restated on August 8, 2013, and further amended and restated on December 10, 2015. The amended and restated credit facility provides an aggregate commitment of \$640 million of revolving loans available until December 10, 2020, and we have the ability to request up to \$50 million of incremental revolving commitments, subject to the satisfaction of certain conditions. The previous credit agreement was scheduled to mature on August 8, 2018. At April 1, 2017 and December 31, 2016, \$163 million and \$143 million, respectively, were outstanding under our credit facility.

The amended and restated credit facility allows an unlimited amount of defined "Restricted Payments," which include cash dividends to stockholders and share repurchases, provided our pro forma leverage ratio is less than 2.25 to 1. If our leverage ratio is greater than 2.25 to 1, the credit facility allows such payments up to \$75 million per annum (subject to a cap of \$225 million for the term of the facility). The amended and restated credit facility provides us with significantly more flexibility to execute these transactions, and our ability to utilize some of our foreign-source income for these types of transactions provides even further financial flexibility.

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 also pay a fee, also based on our leverage ratio, on undrawn amounts. The undrawn commitment fee, based on our current leverage ratio, is 0.35% per annum. Such undrawn commitment 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. Prior to the December 10, 2015 amendment and restatement, the credit agreement required Vishay to pay facility fees on the entire commitment amount.

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, and making asset sales, and making other restricted payments (assuming our leverage ratio is greater than 2.25 to 1), 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 December 10, 2015.

We were in compliance with all financial covenants under the credit facility at April 1, 2017. Our interest expense coverage ratio and leverage ratio were 12.88 to 1 and 1.95 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 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.

The balance of our revolving credit facility was \$143 million at December 31, 2016. We borrowed \$129 million and repaid \$109 million on our credit facility during the three fiscal months ended April 1, 2017. The average outstanding balance on our credit facility calculated at fiscal month-ends was \$217.7 million and the highest amount outstanding on our credit facility at a month end was \$249 million during the three fiscal months ended April 1, 2017.

Prior to three months before the maturity date, our convertible senior debentures are convertible by the holders under certain circumstances. The convertible debentures due 2042 became convertible subsequent to the December 31, 2016 evaluation of the conversion criteria and remain convertible subsequent to the April 1, 2017 evaluation, due to the sale price of our common stock exceeding 130% of the conversion price for the applicable periods in the fourth fiscal quarter of 2016 and first fiscal quarter of 2017. Such debentures will remain convertible until July 1, 2017, at which time the conversion criteria will be reevaluated. At the direction of our Board of Directors, we intend, upon conversion, to repay the principal amount of the convertible debentures in cash and settle any additional amounts in shares of our common stock. We intend to finance the principal amount of any converted debentures using borrowings under our credit facility. Accordingly, the debt component of the convertible debentures due 2042 continues to be classified as a noncurrent liability on the consolidated condensed balance sheets. No conversions have occurred to date. The convertible debentures due 2040 and due 2041 are not currently convertible.

Management expects to periodically pay down the balance of our revolving credit facility 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. Additional acquisition activity, share repurchases, or conversion of our convertible debentures 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 December 2020.

As of April 1, 2017, substantially all of our cash and cash equivalents and short-term investments were held in countries outside of the United States. Certain payments, such as cash dividends to stockholders, share repurchases, and interest payments on our debt instruments need to be paid by the U.S. parent company, Vishay Intertechnology, Inc. Our U.S. subsidiaries also have operating cash needs.

Our substantially undrawn credit facility provides us with significant liquidity in the United States.

As part of the amendment and restatement of the revolving credit facility in December 2015, we completed an evaluation of our anticipated domestic cash needs over the next several years and our most efficient use of liquidity, with consideration of the amount of cash that can be repatriated to the U.S. efficiently with lesser withholding taxes in

foreign jurisdictions. As a result of that evaluation, during the fourth quarter of 2015, we recognized income tax expense, including U.S. federal and state income taxes, incremental foreign income taxes, and withholding taxes payable to foreign jurisdictions, on \$300 million of foreign earnings which we expect to repatriate to the U.S. over the next several years. We repatriated \$46.0 million pursuant to this program in 2016. We expect to repatriate additional amounts in 2017. We continuously monitor legislative developments in the U.S. and other jurisdictions where we operate, and can adapt our repatriation strategy to the extent necessary or prudent, based on changes in law, tax rates, or other regulations.

Except as described above, earnings generated by foreign subsidiaries are expected to be reinvested outside of the United States indefinitely. If additional 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 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 jurisdictions.

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 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 4 basis points higher than interest rates on our cash accounts. The interest rates on our short-term investments were negatively impacted by the low interest rate environment in Europe. 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 April 1, 2017 and December 31, 2016 (in thousands):

	April 1, 2017	December 31, 2016
Credit facility	\$ 163,000	\$ 143,000
Convertible senior debentures, due 2040*	108,697	108,120
Convertible senior debentures, due 2041*	55,752	55,442
Convertible senior debentures, due 2042*	61,638	61,341
Deferred financing costs	(10,435 )	(10,880 )
Total debt	378,652	357,023
Cash and cash equivalents	499,386	471,781
Short-term investments	638,884	626,627
Net cash and short-term investments (debt)	\$ 759,618	\$ 741,385

\*Represents the carrying amount of the convertible debentures, which is comprised of the principal amount of the debentures, net of the unamortized discount and the associated embedded derivative liability.

"Net cash and short-term investments (debt)" does not have a uniform definition and is not recognized in accordance with GAAP. This measure should not be viewed as an alternative to GAAP measures of performance or liquidity. However, management believes that an analysis of "net cash and short-term investments (debt)" assists investors in understanding aspects of our cash and debt management. The measure, as calculated by us, may not be comparable to similarly titled measures used by other companies.

Our financial condition as of April 1, 2017 continued to be strong, with a current ratio (current assets to current liabilities) of 4.3 to 1, as compared to 4.1 to 1 as of December 31, 2016. The increase in the ratio is primarily due to increases in accounts receivable, inventory, short-term investments, and cash and cash equivalents. Our ratio of total debt to Vishay stockholders' equity was 0.23 to 1 at April 1, 2017, unchanged from December 31, 2016. The increase in long-term debt was offset by increases in retained earnings (accumulated deficit) and accumulated other comprehensive income (loss).

Cash flows provided by operating activities were \$43.7 million for the three fiscal months ended April 1, 2017, as compared to cash flows provided by operations of \$20.7 million for the three fiscal months ended April 2, 2016. The improvement in operating cash flows reflect an increase in net earnings and favorable other operating activities. Cash flows provided by operating activities for the three fiscal months ended April 1, 2017 and April 2, 2016 were negatively impacted by \$4.4 million and \$17.0 million, respectively, of cash contributions to our Taiwanese pension plans.

Cash paid for property and equipment for the three fiscal months ended April 1, 2017 was \$16.7 million, as compared to \$19.8 million for the three fiscal months ended April 2, 2016. We expect capital spending of approximately \$165 million in 2017. The increase is due to advancing expansion projects to satisfy demand in certain product lines.

Cash paid for dividends to our common and Class B common stockholders totalled \$9.1 million and \$9.2 million for the three fiscal months ended April 1, 2017 and April 2, 2016, respectively. We expect dividend payments in 2017 to total approximately \$36.5 million. However, any future dividend declaration and payment remains subject to authorization by our Board of Directors.





## Contractual Commitments and Off-Balance Sheet Arrangements

Our Annual Report on Form 10-K for the year ended December 31, 2016 filed on February 17, 2017, includes a table of contractual commitments. There were no material changes to these commitments since the filing of our Annual Report on Form 10-K.

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 in our Annual Report on Form 10-K for the year ended December 31, 2016.

## Dividends

In 2014, our Board of Directors approved the initiation of a quarterly cash dividend program. Cash dividends of \$0.06 per share of common stock and Class B common stock were paid in each quarter of 2014 and 2015. On February 16, 2016, our Board of Directors increased the quarterly cash dividend to \$0.0625 per share of common stock and Class B common stock. We expect to continue to pay quarterly dividends, although each dividend is subject to approval by our Board of Directors.

The following table summarizes the quarterly cash dividends declared (in thousands):

<u>Fiscal Period</u>	<u>Amount</u>	<u>Month of Payment</u>
Three fiscal months ended April 1, 2017	\$9,136	March

## Safe Harbor Statement

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. Words such as "believe," "estimate," "will be," "will," "would," "expect," "anticipate," "plan," "project," "intend," "could," "should," or other similar words or expressions often identify forward-looking statements.

Such statements are based on current expectations only, and are subject to certain risks, uncertainties, and assumptions, many of which are beyond our control. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results, performance, or achievements may vary materially from those anticipated, estimated, or projected. Among the factors that could cause actual results to materially differ include: general business and economic conditions; difficulties in identifying suitable acquisition candidates, consummating a transaction on terms which we consider acceptable, and integration and performance of acquired businesses; difficulties in new product development; changes in competition and technology in the markets that we serve and the mix of our products required to address these changes; an inability to attract and retain highly qualified personnel, particularly in respect of our acquired businesses; uncertainty related to the effects of changes in foreign currency exchange rates; delays or difficulties in implementing our cost management strategies; and other factors affecting our operations, markets, products, services, and prices that are set forth in our filings with the SEC, including our annual reports on Form 10-K and our quarterly reports on Form 10-Q. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise.

Our 2016 Annual Report on Form 10-K listed various important factors that could cause actual results to differ materially from projected and historic results. We note these factors for investors as permitted by the Private Securities Litigation Reform Act of 1995. Readers can find them in Part I, Item 1A, of that filing under the heading "Risk Factors." You should understand that it is not possible to predict or identify all such factors. Consequently, you should not consider any such list to be a complete set of all potential risks or uncertainties.



Item 3. Quantitative and Qualitative Disclosures About Market Risk

Part II, Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," of our Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC on February 17, 2017, describes our exposure to market risks. There have been no material changes to our market risks since December 31, 2016.

Item 4. 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 (the "Exchange Act"). 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 quarterly report to ensure that information required to be disclosed in reports that we file or submit under the Exchange Act are: (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.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

## PART II - OTHER INFORMATION

### Item 1. Legal Proceedings

Item 3 of Part I of our Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC on February 17, 2017, describe certain of our legal proceedings. There have been no material developments to the legal proceedings previously disclosed.

### Item 1A. Risk Factors

There have been no material changes to the risk factors we previously disclosed under Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC on February 17, 2017.

### Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Not applicable.

### Item 3. Defaults Upon Senior Securities

Not applicable.

### Item 4. Mine Safety Disclosures

Not applicable.

### Item 5. Other Information

Not applicable.

### Item 6. Exhibits

- Certification pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as adopted
- 31.1 pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 - Dr. Gerald Paul, Chief Executive Officer.
- Certification pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as adopted
- 31.2 pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 - Lori Lipcaman, Chief Financial Officer.
- Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act
- 32.1 of 2002 – Dr. Gerald Paul, Chief Executive Officer.
- Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act
- 32.2 of 2002 – Lori Lipcaman, Chief Financial Officer.
- Interactive Data File (Quarterly Report on Form 10-Q, for the quarterly period ended April 1, 2017, furnished in
- 101 XBRL (eXtensible Business Reporting Language)).

SIGNATURES

Pursuant to the requirements 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.

/s/ Lori Lipcaman  
Lori Lipcaman  
Executive Vice President  
and Chief Financial  
Officer  
(as a duly authorized  
officer and principal  
financial and  
accounting officer)

Date: May 3, 2017