

VISHAY INTERTECHNOLOGY INC
Form 10-Q
October 26, 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 September 30, 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 October 23, 2017, the registrant had 131,874,587 shares of its common stock and 12,129,227 shares of its Class B common stock outstanding.

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VISHAY INTERTECHNOLOGY, INC.
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PART I - FINANCIAL INFORMATION

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

	September 30, 2017 (Unaudited)	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	\$575,385	\$471,781
Short-term investments	668,185	626,627
Accounts receivable, net	329,422	274,027
Inventories:		
Finished goods	131,367	109,075
Work in process	178,173	162,311
Raw materials	128,036	109,859
Total inventories	437,576	381,245
Prepaid expenses and other current assets	112,394	110,792
Total current assets	2,122,962	1,864,472
Property and equipment, at cost:		
Land	91,905	89,753
Buildings and improvements	595,628	570,932
Machinery and equipment	2,399,972	2,283,222
Construction in progress	63,766	71,777
Allowance for depreciation	(2,298,431)	(2,166,813)
Property and equipment, net	852,840	848,871
Goodwill	142,545	141,407
Other intangible assets, net	73,154	84,463
Other assets	142,753	138,588
Total assets	\$3,334,254	\$3,077,801

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VISHAY INTERTECHNOLOGY, INC.
 Consolidated Condensed Balance Sheets (continued)
 (In thousands)

	September 30, 2017 (Unaudited)	December 31, 2016
Liabilities and equity		
Current liabilities:		
Notes payable to banks	\$25	\$3
Trade accounts payable	181,988	174,107
Payroll and related expenses	138,616	114,576
Other accrued expenses	151,883	149,131
Income taxes	18,085	19,033
Total current liabilities	490,597	456,850
Long-term debt less current portion	356,938	357,023
Deferred income taxes	289,526	286,797
Other liabilities	67,712	59,725
Accrued pension and other postretirement costs	273,851	257,789
Total liabilities	1,478,624	1,418,184
Redeemable convertible debentures	252,889	88,659
Stockholders' equity:		
Vishay stockholders' equity		
Common stock	13,200	13,385
Class B convertible common stock	1,213	1,213
Capital in excess of par value	1,753,369	1,952,988
(Accumulated deficit) retained earnings	(177,075)	(307,417)
Accumulated other comprehensive income (loss)	10,158	(94,652)
Total Vishay stockholders' equity	1,600,865	1,565,517
Noncontrolling interests	1,876	5,441
Total equity	1,602,741	1,570,958
Total liabilities, temporary equity, and equity	\$3,334,254	\$3,077,801

See accompanying notes.

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

	Fiscal quarters ended	
	September	October
	30, 2017	1, 2016
Net revenues	\$677,883	\$591,955
Costs of products sold	488,610	438,054
Gross profit	189,273	153,901
Selling, general, and administrative expenses	93,701	93,916
Restructuring and severance costs	3,244	1,197
Impairment of intangible assets	-	1,559
Operating income	92,328	57,229
Other income (expense):		
Interest expense	(6,938)	(6,165)
Other	798	(380)
Total other income (expense)	(6,140)	(6,545)
Income before taxes	86,188	50,684
Income tax expense	21,605	14,088
Net earnings	64,583	36,596
Less: net earnings attributable to noncontrolling interests	179	156
Net earnings attributable to Vishay stockholders	\$64,404	\$36,440
Basic earnings per share attributable to Vishay stockholders	\$0.44	\$0.25
Diluted earnings per share attributable to Vishay stockholders	\$0.41	\$0.24
Weighted average shares outstanding - basic	145,728	146,924
Weighted average shares outstanding - diluted	156,701	149,894
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	
	September 30, 2017	October 1, 2016
Net earnings	\$64,583	\$36,596
Other comprehensive income, net of tax		
Pension and other post-retirement actuarial items	1,292	1,923
Foreign currency translation adjustment	28,149	8,585
Unrealized gain on available-for-sale securities	220	318
Other comprehensive income	29,661	10,826
Comprehensive income	94,244	47,422
Less: comprehensive income attributable to noncontrolling interests	179	156
Comprehensive income attributable to Vishay stockholders	\$94,065	\$47,266

See accompanying notes.

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

	Nine fiscal months ended	
	September 30, 2017	October 1, 2016
Net revenues	\$1,929,033	\$1,752,612
Costs of products sold	1,405,922	1,315,274
Gross profit	523,111	437,338
Selling, general, and administrative expenses	278,865	276,455
Restructuring and severance costs	5,194	12,139
Impairment of intangible assets	-	1,559
Operating income	239,052	147,185
Other income (expense):		
Interest expense	(20,804)	(18,901)
Other	1,151	2,655
Loss on disposal of equity affiliate	(7,060)	-
Gain on early extinguishment of debt	-	4,597
Total other income (expense)	(26,713)	(11,649)
Income before taxes	212,339	135,536
Income taxes	54,398	37,559
Net earnings	157,941	97,977
Less: net earnings attributable to noncontrolling interests	628	437
Net earnings attributable to Vishay stockholders	\$157,313	\$97,540
Basic earnings per share attributable to Vishay stockholders	\$1.08	\$0.66
Diluted earnings per share attributable to Vishay stockholders	\$1.01	\$0.65
Weighted average shares outstanding - basic	146,128	147,470
Weighted average shares outstanding - diluted	155,626	150,125
Cash dividends per share	\$0.1875	\$0.1875

See accompanying notes.

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

	Nine fiscal months ended	
	September 30, 2017	October 1, 2016
Net earnings	\$157,941	\$97,977
Other comprehensive income, net of tax		
Pension and other post-retirement actuarial items	4,843	5,448
Foreign currency translation adjustment	98,965	18,633
Unrealized gain on available-for-sale securities	1,002	1,664
Other comprehensive income	104,810	25,745
Comprehensive income	262,751	123,722
Less: comprehensive income attributable to noncontrolling interests	628	437
Comprehensive income attributable to Vishay stockholders	\$262,123	\$123,285

See accompanying notes.

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

	Nine fiscal months ended	
	September 30, 2017	October 1, 2016 (recast - see Note 1)
Operating activities		
Net earnings	\$ 157,941	\$ 97,977
Adjustments to reconcile net earnings to net cash provided by operating activities:		
Depreciation and amortization	121,319	119,143
(Gain) loss on disposal of property and equipment	(106)	(1,373)
Accretion of interest on convertible debentures	3,703	3,425
Inventory write-offs for obsolescence	12,157	17,085
Impairment of intangible assets	-	1,559
Loss on disposal of equity affiliate	7,060	-
Deferred income taxes	9,115	(1,750)
Gain on early extinguishment of debt	-	(4,597)
Other	6,531	(4,944)
Net change in operating assets and liabilities, net of effects of businesses acquired	(71,875)	(13,455)
Net cash provided by operating activities	245,845	213,070
Investing activities		
Capital expenditures	(84,790)	(81,346)
Proceeds from sale of property and equipment	1,484	1,241
Purchase of short-term investments	(598,937)	(472,938)
Maturity of short-term investments	610,573	491,867
Other investing activities	(6,663)	2,886
Net cash provided by (used in) investing activities	(78,333)	(58,290)
Financing activities		
Principal payments on long-term debt and capital leases	-	(34,044)
Net proceeds (payments) on revolving credit lines	(5,000)	(41,000)
Common stock repurchases	(37,564)	(16,981)
Net changes in short-term borrowings	22	(626)
Dividends paid to common stockholders	(25,054)	(25,329)
Dividends paid to Class B common stockholders	(2,274)	(2,274)
Proceeds from stock options exercised	1,260	-
Distributions to noncontrolling interests	(1,140)	(707)
Acquisition of noncontrolling interests	(4,100)	-
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	(77,076)	(121,403)
Effect of exchange rate changes on cash and cash equivalents	13,168	2,703
Net increase (decrease) in cash and cash equivalents	103,604	36,080

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Cash and cash equivalents at beginning of period	471,781	475,507
Cash and cash equivalents at end of period	\$575,385	\$511,587

See accompanying notes.

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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	Noncontrolling 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	-	-	-	157,313	-	157,313	628	157,941
Other comprehensive income	-	-	-	-	104,810	104,810	-	104,810
Distributions to noncontrolling interests	-	-	-	-	-	-	(1,140)	(1,140)
Acquisition of noncontrolling interests	-	-	(1,047)	-	-	(1,047)	(3,053)	(4,100)
Temporary equity reclassification	-	-	(164,230)	-	-	(164,230)	-	(164,230)
Common stock repurchase (2,127,183 shares)	(213)	-	(37,351)	-	-	(37,564)	-	(37,564)
Issuance of stock and related tax withholdings for vested restricted stock units (200,688 shares)	20	-	(1,991)	-	-	(1,971)	-	(1,971)
Dividends declared (\$ 0.1875 per share)	-	-	29	(27,357)	-	(27,328)	-	(27,328)
Stock compensation expense	-	-	3,719	-	-	3,719	-	3,719
Stock options exercised (77,334	8	-	1,252	-	-	1,260	-	1,260

shares)

Balance at

September 30,

2017 \$13,200 \$ 1,213 \$1,753,369 \$(177,075) \$ 10,158 \$1,600,865 \$ 1,876 \$1,602,741

See accompanying notes.

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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 and nine fiscal months ended September 30, 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 nine fiscal months ended October 1, 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.

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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		Nine fiscal months ended	
	September		September	
	30, 2017	October 1, 2016	30, 2017	October 1, 2016
MOSFETs Enhanced Competitiveness Program	\$2,463	\$ 675	\$2,911	\$5,700
Global Cost Reduction Programs	781	986	2,283	6,903
Modules Production Transfer Program	-	(464)	-	(464)
Total	\$3,244	\$ 1,197	\$5,194	\$12,139

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, in November 2016, the Company 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 Company expects to incur cash charges of approximately \$7,000 to \$8,000, primarily related to severance, to implement these additional steps. The total cash charges for the MOSFETs Enhanced Competitiveness Program are expected to be \$26,000 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	2,911
Cash paid	(5,897)
Balance at September 30, 2017	\$3,246

Severance benefits are generally paid in a lump sum at cessation of employment. Other exit costs of \$380 are included in the expenses incurred in 2017 in the table above. The current portion of the liability is \$2,586 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.

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 September 30, 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	2,283
Cash paid	(5,779)
Foreign currency translation	319
Balance at September 30, 2017	\$ 3,087

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

	Fiscal quarters ended		Nine fiscal months ended	
	September 30, 2017	October 1, 2016	September 30, 2017	October 1, 2016
Diodes	\$(13)	\$ 210	\$-	\$ 788
Optoelectronic Components	-	-	242	953
Resistors & Inductors	468	641	1,403	3,163
Capacitors	88	36	334	459
Unallocated Selling, General, and Administrative Expenses	238	99	304	1,540
Total	\$ 781	\$ 986	\$ 2,283	\$ 6,903

Severance benefits are generally paid in a lump sum at cessation of employment. Other exit costs of \$550 are included in the expenses incurred in 2017 in the tables above. The current portion of the liability is \$2,478 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 September 30, 2017 and October 1, 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 quarter and nine fiscal months ended September 30, 2017 includes \$892 and \$3,100, respectively, for the periodic remeasurement of the deferred tax liability recorded for the cash repatriation program compared to \$1,402 and \$3,388 for the fiscal quarter and nine fiscal months ended October 1, 2016, respectively. 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 second fiscal quarter of 2017, the Company repatriated \$38,000 pursuant to this program.

During the nine fiscal months ended September 30, 2017, the liabilities for unrecognized tax benefits decreased by \$2,463 on a net basis, due to payments and settlements, partially offset by 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:

	September 30, 2017	December 31, 2016
Credit facility	\$ 138,000	\$ 143,000
Convertible senior debentures, due 2040	109,864	108,120
Convertible senior debentures, due 2041	56,372	55,442
Convertible senior debentures, due 2042	62,247	61,341
Deferred financing costs	(9,545)	(10,880)
	356,938	357,023
Less current portion	-	-
	\$ 356,938	\$ 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 September 28, 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 September 14, 2017 (per \$1 principal amount)	76.9650	56.1650	90.4924
Effective conversion price effective September 14, 2017 (per share)	\$ 12.99	\$ 17.80	\$ 11.05
130% of the conversion price (per share)	\$ 16.89	\$ 23.14	\$ 14.37
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, remained convertible subsequent to the April 1, 2017 and July 1, 2017 evaluations, and remain convertible subsequent to the September 30, 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, second, and third fiscal quarters of 2017. The convertible debentures due 2040 became convertible subsequent to the September 30, 2017 evaluation of the conversion criteria, due to the sale price of Vishay's common stock exceeding 130% of the conversion price for the applicable periods in the third fiscal quarter of 2017. The debentures due 2040 and due 2042 will remain convertible until December 31, 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 2040 and 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 2040 and 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>September 30, 2017</u>					
Due 2040	\$ 275,000	(165,432)	296	\$ 109,864	\$ 110,094
Due 2041	\$ 150,000	(93,900)	272	\$ 56,372	\$ 62,246
Due 2042	\$ 150,000	(87,916)	163	\$ 62,247	\$ 57,874
Total	\$ 575,000	\$ (347,248)	\$ 731	\$ 228,483	\$ 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>September 30, 2017</u>					
Due 2040	\$ 1,547	626	22	(53)	\$ 2,142
Due 2041	\$ 844	321	11	(21)	\$ 1,155
Due 2042	\$ 844	312	13	(21)	\$ 1,148
Total	\$ 3,235	\$ 1,259	\$ 46	\$ (95)	\$ 4,445

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October 1, 2016

Due 2040	\$ 1,547	579	22	(115)	\$ 2,033
Due 2041	\$ 844	296	11	(102)	\$ 1,049
Due 2042	\$ 844	291	13	(71)	\$ 1,077
Total	\$ 3,235	\$ 1,166	\$ 46	\$ (288)	\$ 4,159

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NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Interest expense related to the debentures is reflected on the consolidated condensed statements of operations for the nine fiscal months 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>September 30, 2017</u>					
Due 2040	\$ 4,641	1,841	66	(97)	\$ 6,451
Due 2041	\$ 2,532	943	35	(13)	\$ 3,497
Due 2042	\$ 2,532	919	40	(13)	\$ 3,478
Total	\$ 9,705	\$ 3,703	\$ 141	\$ (123)	\$ 13,426
<u>October 1, 2016</u>					
Due 2040	\$ 4,641	1,702	66	(150)	\$ 6,259
Due 2041	\$ 2,532	869	35	(136)	\$ 3,300
Due 2042	\$ 2,532	854	40	(102)	\$ 3,324
Total	\$ 9,705	\$ 3,425	\$ 141	\$ (388)	\$ 12,883

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.

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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	-	98,965	1,542	\$100,507
Tax effect	-	-	(540)	\$(540)
Other comprehensive income before reclassifications, net of tax	-	98,965	1,002	\$99,967
Amounts reclassified out of AOCI	6,918	-	-	\$6,918
Tax effect	(2,075)	-	-	\$(2,075)
Amounts reclassified out of AOCI, net of tax	4,843	-	-	\$4,843
Net other comprehensive income	\$ 4,843	\$ 98,965	\$ 1,002	\$104,810
Balance at September 30, 2017	\$ (59,653)	\$ 67,699	\$ 2,112	\$10,158

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 third fiscal quarters of 2017 and 2016 for the Company's defined benefit pension plans:

	Fiscal quarter ended September 30, 2017		Fiscal quarter ended October 1, 2016	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Net service cost	\$-	\$ 948	\$-	\$ 790
Interest cost	411	1,247	2,945	1,361
Expected return on plan assets	-	(519)	(2,825)	(529)
Amortization of prior service cost	36	19	36	12
Amortization of losses	82	1,595	1,650	1,196
Curtailed and settlement losses	-	331	-	205
Net periodic benefit cost	\$529	\$ 3,621	\$1,806	\$ 3,035

The following table shows the components of the net periodic pension cost for the nine fiscal months ended September 30, 2017 and October 1, 2016 for the Company's defined benefit pension plans:

	Nine fiscal months ended September 30, 2017		Nine fiscal months ended October 1, 2016	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Net service cost	\$-	\$ 2,776	\$-	\$ 2,355
Interest cost	1,232	3,613	8,834	4,097
Expected return on plan assets	-	(1,543)	(8,476)	(1,605)
Amortization of prior service cost	108	55	108	37
Amortization of losses	247	4,596	4,951	3,568
Curtailed and settlement losses	-	983	-	601
Net periodic benefit cost	\$1,587	\$ 10,480	\$5,417	\$ 9,053

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. A final reconciliation of participant data subject to the settlement annuity contract was completed during the second fiscal quarter of 2017. The final annuity pricing adjustment and related items did not have a material impact on the Company's financial results.

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

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NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Other Postretirement Benefits

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

	Fiscal quarter ended September 30, 2017		Fiscal quarter ended October 1, 2016	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Service cost	\$33	\$ 71	\$31	\$ 67
Interest cost	77	26	85	36
Amortization of prior service (credit)	(209)	-	(209)	-
Amortization of losses (gains)	(24)	16	(8)	17
Net periodic benefit cost	\$(123)	\$ 113	\$(101)	\$ 120

The following table shows the components of the net periodic pension cost for the nine fiscal months ended September 30, 2017 and October 1, 2016 for the Company's other postretirement benefit plans:

	Nine fiscal months ended September 30, 2017		Nine fiscal months ended October 1, 2016	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Service cost	\$99	\$ 202	\$94	\$ 202
Interest cost	232	76	255	108
Amortization of prior service (credit)	(627)	-	(627)	-
Amortization of losses (gains)	(70)	45	(23)	51
Net periodic benefit cost	\$(366)	\$ 323	\$(301)	\$ 361

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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		Nine fiscal months ended	
	September 30, 2017	October 1, 2016	September 30, 2017	October 1, 2016
Restricted stock units	\$676	\$1,085	\$3,556	3,254
Phantom stock units	-	-	163	117
Stock options	-	-	-	-
Total	\$676	\$1,085	\$3,719	3,371

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 September 30, 2017 (amortization periods in years):

	Unrecognized Compensation Cost	Weighted Average Remaining Amortization Periods
Restricted stock units	\$ 3,575	1.2
Phantom stock units	-	0.0
Stock options	-	0.0
Total	\$ 3,575	

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 September 30, 2017 and changes during the nine 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 September 30, 2017	986	\$ 13.34

Expected to vest at September 30, 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 September 30, 2017 and changes during the nine 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	2	
Outstanding at September 30, 2017	157	

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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, there were approximately 77,000 options outstanding with a weighted average exercise price of \$16.29. During the nine fiscal months ended September 30, 2017, the remaining approximately 77,000 options were exercised. The total intrinsic value of options exercised during the nine fiscal months ended September 30, 2017 was \$20.

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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 September 30, 2017:</u>						
Product Sales	\$ 126,522	\$ 160,711	\$ 76,740	\$ 217,593	\$ 96,309	\$ 677,875
Royalty Revenues	-	-	-	8	-	\$ 8
Total Revenue	\$ 126,522	\$ 160,711	\$ 76,740	\$ 217,601	\$ 96,309	\$ 677,883
Gross Profit	\$ 32,307	\$ 42,942	\$ 28,901	\$ 65,541	\$ 19,582	\$ 189,273
Segment Operating Income	\$ 23,391	\$ 37,991	\$ 25,012	\$ 58,267	\$ 14,688	\$ 159,349
<u>Fiscal quarter ended October 1, 2016:</u>						
Product Sales	\$ 101,687	\$ 141,127	\$ 72,801	\$ 191,989	\$ 84,299	\$ 591,903
Royalty Revenues	-	-	-	52	-	\$ 52
Total Revenue	\$ 101,687	\$ 141,127	\$ 72,801	\$ 192,041	\$ 84,299	\$ 591,955
Gross Profit	\$ 16,443	\$ 36,444	\$ 24,250	\$ 58,768	\$ 17,996	\$ 153,901
Segment Operating Income	\$ 7,493	\$ 31,832	\$ 20,340	\$ 51,861	\$ 13,210	\$ 124,736
<u>Nine fiscal months ended September 30, 2017:</u>						
Product Sales	\$ 346,086	\$ 461,323	\$ 216,260	\$ 627,116	\$ 278,198	\$ 1,928,983
Royalty Revenues	-	-	50	-	\$ 50	
Total Revenue	\$ 346,086	\$ 461,323	\$ 216,260	\$ 627,166	\$ 278,198	\$ 1,929,033
Gross Profit	\$ 78,298	\$ 121,601	\$ 76,668	\$ 188,801	\$ 57,743	\$ 523,111
Segment Operating Income	\$ 51,789	\$ 106,906	\$ 63,401	\$ 166,852	\$ 42,988	\$ 431,936
<u>Nine fiscal months ended October 1, 2016:</u>						
Product Sales	\$ 304,839	\$ 418,629	\$ 203,635	\$ 568,122	\$ 257,175	\$ 1,752,400
Royalty Revenues	-	-	212	-	\$ 212	
Total Revenue	\$ 304,839	\$ 418,629	\$ 203,635	\$ 568,334	\$ 257,175	\$ 1,752,612
Gross Profit	\$ 40,914	\$ 106,364	\$ 65,049	\$ 171,808	\$ 53,203	\$ 437,338
Segment Operating Income	\$ 12,671	\$ 90,025	\$ 49,838	\$ 147,315	\$ 37,145	\$ 336,994

	Fiscal quarters ended		Nine fiscal months ended	
	September 30, 2017	October 1, 2016	September 30, 2017	October 1, 2016

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Reconciliation:

Segment Operating Income	\$159,349	\$124,736	\$431,936	\$336,994
Restructuring and Severance Costs	(3,244)	(1,197)	(5,194)	(12,139)
Impairment of Intangible Assets	-	(1,559)	-	(1,559)
Unallocated Selling, General, and Administrative Expenses	(63,777)	(64,751)	(187,690)	(176,111)
Consolidated Operating Income	\$92,328	\$57,229	\$239,052	\$147,185
Unallocated Other Income (Expense)	(6,140)	(6,545)	(26,713)	(11,649)
Consolidated Income (Loss) Before Taxes	\$86,188	\$50,684	\$212,339	\$135,536

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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 (loss) per share attributable to Vishay stockholders (shares in thousands):

	Fiscal quarters ended		Nine fiscal months ended	
	September 30, 2017	October 1, 2016	September 30, 2017	October 1, 2016
Numerator:				
Numerator for basic earnings per share:				
Net earnings attributable to Vishay stockholders	\$64,404	\$36,440	\$157,313	\$97,540
Interest savings assuming conversion of dilutive exchangeable notes, net of tax	-	-	-	38
Numerator for diluted earnings per share:				
Net earnings attributable to Vishay stockholders - diluted	\$64,404	\$36,440	\$157,313	\$97,578
Denominator:				
Denominator for basic earnings per share:				
Weighted average shares	145,572	146,781	145,973	147,327
Outstanding phantom stock units	156	143	155	143
Adjusted weighted average shares	145,728	146,924	146,128	147,470
Effect of dilutive securities:				
Convertible and exchangeable debt instruments	10,480	2,541	9,160	2,387
Restricted stock units	493	423	338	266
Other	-	6	-	2
Dilutive potential common shares	10,973	2,970	9,498	2,655
Denominator for diluted earnings per share:				
Adjusted weighted average shares - diluted	156,701	149,894	155,626	150,125
Basic earnings per share attributable to Vishay stockholders	\$0.44	\$0.25	\$1.08	\$0.66
Diluted earnings per share attributable to Vishay stockholders	\$0.41	\$0.24	\$1.01	\$0.65

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NOTES TO THE CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

(dollars in thousands, except per share amounts)

Diluted earnings (loss) 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		Nine fiscal months ended	
	September 30, 2017	October 1, 2016	September 30, 2017	October 1, 2016
Convertible notes:				
Convertible Senior Debentures, due 2040	-	-	-	13,750
Convertible Senior Debentures, due 2041	8,401	8,268	8,371	8,229
Weighted average employee stock options	-	77	-	96
Weighted average other	379	415	514	545

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, remained convertible subsequent to the April 1, 2017 and July 1, 2017 evaluations, and remain convertible subsequent to the September 30, 2017 evaluation. The convertible debentures due 2040 became convertible subsequent to the September 30, 2017 evaluation of the conversion criteria. 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 \$12.99, 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 \$17.80, 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 \$11.05, 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>September 30, 2017</u>				
Assets:				
Assets held in rabbi trusts	\$44,262	\$28,240	\$16,022	\$-
Available for sale securities	\$4,511	4,511	-	-
	\$48,773	\$32,751	\$16,022	\$-
Liabilities:				
Embedded derivative - convertible debentures due 2040	\$(296)	\$-	\$-	\$(296)
Embedded derivative - convertible debentures due 2041	\$(272)	-	-	(272)
Embedded derivative - convertible debentures due 2042	\$(163)	-	-	(163)
	\$(731)	\$-	\$-	\$(731)
<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 \$300,000 and \$100,000 as of September 30, 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 September 30, 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 September 30, 2017 and December 31, 2016 is approximately \$963,100 and \$860,600, respectively, compared to its carrying value, excluding the derivative liabilities and deferred financing costs, of \$365,752 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 September 30, 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 September 30, 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 August 2, 2017, our Board of Directors approved a stock repurchase plan, authorizing us to repurchase, in the aggregate, up to \$150 million of our outstanding common stock. The stock repurchase plan will expire on June 1, 2018. The stock repurchase plan does not obligate us to acquire any particular amount of common stock, and it may be terminated or suspended at any time at the Company's direction in accordance with the plan. The Company repurchased 2,127,183 shares of stock for \$37.6 million since the inception of this plan. Additionally, we repurchased 1,752,454 shares of stock for \$23.2 million pursuant to our stock repurchase plan that began in May 2016 and expired on May 2, 2017.

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 \$38 million and \$46 million to the U.S. pursuant to this plan in 2017 and 2016, respectively.

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 continued high level of demand in virtually all end-markets in the third fiscal quarter of 2017. Net revenues increased versus the prior fiscal quarter and prior year periods. The continued strong order levels resulted in an increase in several key financial metrics compared to the prior fiscal quarter and prior year periods.

Net revenues for the fiscal quarter ended September 30, 2017 were \$677.9 million, compared to \$644.9 million and \$592.0 million for the fiscal quarters ended July 1, 2017 and October 1, 2016, respectively. The net earnings attributable to Vishay stockholders for the fiscal quarter ended September 30, 2017 were \$64.4 million, or \$0.41 per diluted share, compared to \$56.2 million, or \$0.36 per share for the fiscal quarter ended July 1, 2017 and \$36.4 million, or \$0.24 per diluted share for the fiscal quarter ended October 1, 2016.

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Net revenues for the nine fiscal months ended September 30, 2017 were \$1,929.0 million, compared to \$1,752.6 million for the nine fiscal months ended October 1, 2016. The net earnings attributable to Vishay stockholders for the nine fiscal months ended September 30, 2017 were \$157.3 million, or \$1.01 per diluted share, compared to \$97.5 million, or \$0.65 per diluted share for the nine fiscal months ended October 1, 2016.

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			Nine fiscal months ended	
	September 30, 2017	July 1, 2017	October 1, 2016	September 30, 2017	October 1, 2016
GAAP net earnings attributable to Vishay stockholders	\$64,404	\$56,190	\$36,440	\$157,313	\$97,540
<u>Reconciling items affecting operating income:</u>					
Restructuring and severance costs	\$3,244	\$481	\$1,197	\$5,194	\$12,139
Impairment of intangible assets	-	-	1,559	-	1,559
<u>Reconciling items affecting other income (expense):</u>					
Loss on disposal of equity affiliate	\$-	\$-	\$-	\$7,060	\$-
Gain on early extinguishment of debt	-	-	-	-	(4,597)
<u>Reconciling items affecting tax expense:</u>					
Effects of cash repatriation program	\$(892)	\$(1,240)	\$(1,402)	\$(3,100)	\$(3,388)
Effects of changes in uncertain tax positions	(804)	-	-	(804)	-
Tax effects of pre-tax items above	(674)	(156)	(441)	(1,271)	(2,436)
Adjusted net earnings	\$65,278	\$55,275	\$37,353	\$164,392	\$100,817
Adjusted weighted average diluted shares outstanding	156,701	155,300	149,894	155,626	150,125
Adjusted earnings per diluted share *	\$0.42	\$0.36	\$0.25	\$1.06	\$0.67

* 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

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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			Nine fiscal months ended	
	September 30, 2017	July 1, 2017	October 1, 2016	September 30, 2017	October 1, 2016**
Net cash provided by continuing operating activities	\$ 117,579	\$ 84,592	\$ 117,657	\$ 245,845	\$ 213,070
Proceeds from sale of property and equipment	196	345	1,048	1,484	1,241
Less: Capital expenditures	(35,723)	(32,399)	(30,273)	(84,790)	(81,346)
Free cash	\$ 82,052	\$ 52,538	\$ 88,432	\$ 162,539	132,965

**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 September 30, 2017, July 1, 2017, and October 1, 2016 and nine fiscal months ending September 30, 2017 and October 1, 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 half of 2017 that continued in the third fiscal quarter of 2017 and further improved results. Our percentage of euro-based sales approximates our percentage of euro-based expenses so the foreign currency impact on revenues was substantially offset by the 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 third fiscal quarter of 2016 through the third fiscal quarter of 2017 (dollars in thousands):

	3rd Quarter 2016	4th Quarter 2016	1st Quarter 2017	2nd Quarter 2017	3rd Quarter 2017
Net revenues	\$591,955	\$570,819	\$606,258	\$644,892	\$677,883
Gross profit margin	26.0 %	23.2 %	26.5 %	26.8 %	27.9 %
Operating margin ⁽¹⁾	9.7 %	-8.0 %	10.7 %	12.7 %	13.6 %
End-of-period backlog	\$608,100	\$653,400	\$836,500	\$1,034,000	\$1,122,200
Book-to-bill ratio	1.04	1.11	1.29	1.27	1.11
Inventory turnover	4.20	4.40	4.50	4.60	4.50
Change in ASP vs. prior quarter	-0.9 %	-1.2 %	-1.3 %	-0.7 %	-0.1 %

(1) Operating margin for the third and fourth fiscal quarters of 2016 and the first, second, and third fiscal quarters of 2017 includes \$1.2 million, \$7.1 million, \$1.5 million, \$0.5 million, and \$3.2 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 third fiscal quarter of 2016. The continued strong demand further increased the backlog while the book-to-bill ratio remains high. Distributors, particularly in Europe and Asia, continue to drive the high order rate. We are increasing manufacturing capacities and output of our key product lines, but the high order rates have increased product delivery leadtimes and even caused some shortages of supply, especially in our semiconductor product lines. Many of our product lines are operating at or near capacity. Sequentially, average selling prices were virtually stable, reflective of the strong business environment.

Gross profit margin increased versus the prior fiscal quarter and the third fiscal quarter of 2016. The increases are primarily due to volume, the effects of our cost reduction programs, and manufacturing efficiencies, partially offset by decreases in average selling prices versus the third fiscal quarter of 2016.

The book-to-bill ratio in the third fiscal quarter of 2017 remained strong at 1.11 versus 1.27 in the second fiscal quarter of 2017. The book-to-bill ratios in the third fiscal quarter of 2017 for distributors and original equipment manufacturers ("OEM") were 1.15 and 1.06, respectively, versus ratios of 1.43 and 1.06, respectively, during the second fiscal quarter of 2017.

For the fourth fiscal quarter of 2017, we anticipate revenues between \$645 million and \$685 million and gross margins of 26% to 28% at the exchange rates of the third fiscal quarter.

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

	3rd Quarter 2016	4th Quarter 2016	1st Quarter 2017	2nd Quarter 2017	3rd Quarter 2017
<u>MOSFETs</u>					
Net revenues	\$101,687	\$101,497	\$105,529	\$114,035	\$126,522
Book-to-bill ratio	1.03	1.14	1.37	1.37	1.19
Gross profit margin	16.2 %	17.0 %	19.6 %	22.2 %	25.5 %
Segment operating margin	7.4 %	9.4 %	11.1 %	14.6 %	18.5 %
<u>Diodes</u>					
Net revenues	\$141,127	\$135,291	\$144,895	\$155,717	\$160,711
Book-to-bill ratio	1.06	1.22	1.44	1.41	1.18
Gross profit margin	25.8 %	21.1 %	25.9 %	26.4 %	26.7 %
Segment operating margin	22.6 %	17.7 %	22.6 %	23.2 %	23.6 %
<u>Optoelectronic Components</u>					
Net revenues	\$72,801	\$68,491	\$65,682	\$73,838	\$76,740
Book-to-bill ratio	0.98	0.99	1.16	1.11	0.94
Gross profit margin	33.3 %	32.1 %	34.0 %	34.5 %	37.7 %
Segment operating margin	27.9 %	25.9 %	25.8 %	29.1 %	32.6 %
<u>Resistors & Inductors</u>					
Net revenues	\$192,041	\$185,503	\$200,383	\$209,182	\$217,601
Book-to-bill ratio	0.99	1.08	1.22	1.23	1.15
Gross profit margin	30.6 %	27.5 %	30.5 %	29.7 %	30.1 %
Segment operating margin	27.0 %	23.7 %	26.9 %	26.1 %	26.8 %
<u>Capacitors</u>					
Net revenues	\$84,299	\$80,037	\$89,769	\$92,120	\$96,309
Book-to-bill ratio	1.20	1.03	1.25	1.14	0.97

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Gross profit margin	21.3	%	17.1	%	21.4	%	20.6	%	20.3	%
Segment operating margin	15.7	%	11.5	%	15.8	%	15.3	%	15.3	%

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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.

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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 remained below 20%.

As a result of a review of the financial results and outlook for the MOSFETs segment following the completion of production transfers, in November 2016, 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.

We expect to incur cash charges of approximately \$7 million to \$8 million, primarily related to severance, to implement these additional steps. We expect to realize annualized savings of approximately \$8 million to \$9 million as a result of these additional initiatives. These savings have been largely achieved by the end of the third fiscal quarter of 2017, with some minor impacts still to be realized. 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 \$26 million to \$27 million.

We recorded \$2.9 million of restructuring and severance expenses in the first nine fiscal months of 2017 for the expenses that were recognizable under GAAP during the period and \$26.4 million of restructuring and severance expenses since the MOSFETs Enhanced Competitiveness Program was implemented.

As a result of our cost reduction activities in our MOSFETs segment, we have established a solid and competitive cost basis for future growth. Segment gross margin has improved to acceptable levels in the second and third fiscal quarters of 2017 (which also reflects higher revenues).

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 \$0.8 million of restructuring and severance expenses in the third fiscal quarter of 2017 for expenses that were recognizable under GAAP during the period and \$26.0 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 Zwole, 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 weaker during the third fiscal quarter of 2017 compared to the prior quarter and prior year quarter, with the translation of foreign currency revenues and expenses into U.S. dollars increasing reported revenues and expenses versus the prior quarter and prior year quarter.

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 third fiscal quarter of 2017 have been unfavorably impacted (compared to the prior quarter) by local currency transactions of subsidiaries which use the U.S. dollar as their functional currency and favorably impacted (compared to the prior year quarter) 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 \$300.0 million as of September 30, 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			Nine fiscal months ended	
	September 30, 2017	July 1, 2017	October 1, 2016	September 30, 2017	October 1, 2016
Cost of products sold	72.1 %	73.2 %	74.0 %	72.9 %	75.0 %
Gross profit	27.9 %	26.8 %	26.0 %	27.1 %	25.0 %
Selling, general & administrative expenses	13.8 %	14.0 %	15.9 %	14.5 %	15.8 %
Operating income	13.6 %	12.7 %	9.7 %	12.4 %	8.4 %
Income before taxes and noncontrolling interest	12.7 %	11.7 %	8.6 %	11.0 %	7.7 %
Net earnings attributable to Vishay stockholders	9.5 %	8.7 %	6.2 %	8.2 %	5.6 %
Effective tax rate	25.1 %	25.5 %	27.8 %	25.6 %	27.7 %

Net Revenues

Net revenues were as follows (dollars in thousands):

	Fiscal quarters ended		Nine fiscal months ended		
	September 30, 2017	July 1, 2017	October 1, 2016	September 30, 2017	October 1, 2016
Net revenues	\$677,883	\$644,892	\$591,955	\$1,929,033	\$1,752,612

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

	Fiscal quarter ended September 30, 2017		Nine fiscal months ended September 30, 2017	
	Change in net revenues	% change	Change in net revenues	% change
July 1, 2017	\$32,991	5.1 %		
October 1, 2016	\$85,928	14.5 %	\$176,421	10.1 %

Changes in net revenues were attributable to the following:

	vs. Prior Quarter	%	vs. Prior Year Quarter	%	vs. Prior Year-to-Date	%
Change attributable to:						
Change in volume	3.1	%	15.9	%	13.8	%
Decrease in average selling prices	-0.1	%	-2.4	%	-2.7	%
Foreign currency effects	2.1	%	1.6	%	-0.1	%
Other	0.0	%	-0.6	%	-0.9	%
Net change	5.1	%	14.5	%	10.1	%

We experienced a substantial, broad-based increase in demand for our products in the first half of 2017, which continued in the third fiscal quarter of 2017 and resulted in increased net revenues compared to the prior fiscal quarter and prior year periods.

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 \$22.4 million, \$23.3 million, and \$23.5 million for the fiscal quarters ended September 30, 2017, July 1, 2017, and October 1, 2016, respectively, or 3.2%, 3.5%, and 3.8% of gross revenues, respectively. Actual credits issued under the programs during the fiscal quarters ended September 30, 2017, July 1, 2017 and October 1, 2016 were \$28.1 million, \$20.1 million, and \$25.6 million, respectively. We recorded deductions from gross revenues under our distributor incentive programs of \$67.2 million and \$65.4 million for the nine fiscal months ended September 30, 2017 and October 1, 2016, respectively, or 3.4% and 3.6% of gross revenues, respectively. Actual credits issued under the programs during the nine fiscal months ended September 30, 2017 and October 1, 2016 were \$71.6 million and \$66.8 million, respectively. Increases and decreases in these incentives are largely attributable to the then-current business climate.

Gross Profit and Margins

Gross profit margins for the fiscal quarter ended September 30, 2017 were 27.9%, versus 26.8% and 26.0%, for the comparable prior quarter and prior year period, respectively. Gross profit margins for the nine fiscal months ended September 30, 2017 were 27.1%, versus 25.0% for the comparable prior year period. 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			Nine fiscal months ended		
	September 30, 2017	July 1, 2017	October 1, 2016	September 30, 2017	October 1, 2016	
Net revenues	\$126,522	\$114,035	\$101,687	\$346,086	\$304,839	
Gross profit margin	25.5 %	22.2 %	16.2 %	22.6 %	13.4 %	

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

	Fiscal quarter ended September 30, 2017		Nine fiscal months ended September 30, 2017	
	Change in net revenues	% change	Change in net revenues	% change
July 1, 2017	\$12,487	11.0 %		
October 1, 2016	\$24,835	24.4 %	\$41,247	13.5 %

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

	vs. Prior Quarter		vs. Prior Year		vs. Prior Year-to-Date	
		%		%		%
Change attributable to:						
Change in volume	9.9	%	27.1	%	18.3	%
Decrease in average selling prices	-0.1	%	-2.3	%	-3.4	%
Foreign currency effects	1.0	%	0.7	%	-0.1	%
Other	0.2	%	-1.1	%	-1.3	%
Net change	11.0	%	24.4	%	13.5	%

In the fiscal quarter and nine fiscal months ended September 30, 2017, the MOSFETs segment significantly increased its net revenue versus prior year periods and the already improved results of the prior fiscal quarter. The growth was achieved by significant volume increases in all regions and sales channels and particularly in Asia, the segment's biggest market. Declining average selling prices and other negative factors had only small offsetting effects on the growth. Our IC products business contributed strongly to the growth.

The gross profit margin for the third fiscal quarter and first nine fiscal months of 2017 was significantly higher than the prior year periods. 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 prior year periods were also burdened by the recognition of fixed costs in inventory produced in 2015 due to the restructuring program and sold beginning in the second fiscal quarter of 2016. The increase of the gross profit margin versus the prior fiscal quarter was primarily due to higher volume.

The positive business climate led to lower pricing pressure in the third fiscal quarter of 2017 for our established MOSFETs products. We have experienced a minimal decline in average selling prices versus the prior fiscal quarter and only moderate declines versus the prior year periods.

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 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.

We expect to incur cash charges of approximately \$7 to \$8 million, primarily related to severance, to implement these additional steps, and expect to realize annualized cost savings of approximately \$8 to \$9 million as a result of these additional 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. We are in the process of increasing manufacturing volume at third-party foundries and maximizing the output of our internal fab to meet the increased demand.

Diodes

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

Fiscal	Nine
quarters	fiscal
ended	months
September	ended
30,	
2017	