

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 29, 2018

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

(State or Other Jurisdiction of Incorporation)

38-1686453

(I.R.S. Employer Identification Number)

63 Lancaster Avenue
Malvern, PA 19355-2143

(Address of Principal Executive Offices)

610-644-1300

(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 26, 2018, the registrant had 132,117,715 shares of its common stock and 12,097,427 shares of its Class B common stock outstanding.

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VISHAY INTERTECHNOLOGY, INC.
FORM 10-Q
September 29, 2018
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PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

VISHAY INTERTECHNOLOGY, INC.

Consolidated Condensed Balance Sheets
(Unaudited - In thousands)

	<u>September 29, 2018</u>	<u>December 31, 2017</u> (recast - see Note 1)
Assets		
Current assets:		
Cash and cash equivalents	\$ 928,105	\$ 748,032
Short-term investments	135,003	547,136
Accounts receivable, net	395,442	340,027
Inventories:		
Finished goods	144,622	127,272
Work in process	197,174	170,319
Raw materials	158,505	132,068
Total inventories	<u>500,301</u>	<u>429,659</u>
Prepaid expenses and other current assets	124,949	130,336
Total current assets	<u>2,083,800</u>	<u>2,195,190</u>
Property and equipment, at cost:		
Land	87,062	92,285
Buildings and improvements	616,713	606,168
Machinery and equipment	2,478,521	2,415,769
Construction in progress	90,776	103,058
Allowance for depreciation	<u>(2,364,205)</u>	<u>(2,311,522)</u>
Property and equipment, net	908,867	905,758
Goodwill	147,752	142,742
Other intangible assets, net	67,234	69,754
Other assets	141,981	148,645
Total assets	<u>\$ 3,349,634</u>	<u>\$ 3,462,089</u>

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

	<u>September 29, 2018</u>	<u>December 31, 2017</u> (recast - see Note 1)
Liabilities and equity		
Current liabilities:		
Notes payable to banks	\$ 4	\$ 4
Trade accounts payable	198,674	222,373
Payroll and related expenses	143,257	135,702
Other accrued expenses	174,689	154,230
Income taxes	45,664	50,226
Total current liabilities	<u>562,288</u>	<u>562,535</u>
Long-term debt less current portion	588,586	370,470
U.S. transition tax payable	154,953	151,200
Deferred income taxes	151,499	336,465
Other liabilities	84,827	75,249
Accrued pension and other postretirement costs	269,610	281,701
Total liabilities	<u>1,811,763</u>	<u>1,777,620</u>
Redeemable convertible debentures	79,186	252,070
Stockholders' equity:		
Vishay stockholders' equity		
Common stock	13,212	13,188
Class B convertible common stock	1,210	1,213
Capital in excess of par value	1,595,092	1,752,506
(Accumulated deficit) retained earnings	(151,404)	(362,254)
Accumulated other comprehensive income (loss)	(1,471)	25,714
Total Vishay stockholders' equity	<u>1,456,639</u>	<u>1,430,367</u>
Noncontrolling interests	2,046	2,032
Total equity	<u>1,458,685</u>	<u>1,432,399</u>
Total liabilities, temporary equity, and equity	<u>\$ 3,349,634</u>	<u>\$ 3,462,089</u>

See accompanying notes.

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

	Fiscal quarters ended	
	September 29, 2018	September 30, 2017
		(recast - see Note 1)
Net revenues	\$ 780,972	\$ 677,941
Costs of products sold	544,676	487,794
Gross profit	<u>236,296</u>	<u>190,147</u>
Selling, general, and administrative expenses	98,198	91,487
Restructuring and severance costs	-	3,244
Operating income	<u>138,098</u>	<u>95,416</u>
Other income (expense):		
Interest expense	(10,813)	(6,938)
Other components of net periodic pension cost	(3,367)	(3,088)
Other	2,890	798
Total other income (expense)	<u>(11,290)</u>	<u>(9,228)</u>
Income before taxes	126,808	86,188
Income tax expense	<u>48,737</u>	<u>21,605</u>
Net earnings	78,071	64,583
Less: net earnings attributable to noncontrolling interests	195	179
Net earnings attributable to Vishay stockholders	<u>\$ 77,876</u>	<u>\$ 64,404</u>
Basic earnings per share attributable to Vishay stockholders	\$ 0.54	\$ 0.44
Diluted earnings per share attributable to Vishay stockholders	\$ 0.51	\$ 0.41
Weighted average shares outstanding - basic	144,383	145,728
Weighted average shares outstanding - diluted	152,946	156,701
Cash dividends per share	\$ 0.0850	\$ 0.0625

See accompanying notes.

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

	Fiscal quarters ended	
	September 29, 2018	September 30, 2017
Net earnings	\$ 78,071	\$ 64,583
Other comprehensive income, net of tax		
Pension and other post-retirement actuarial items	1,670	1,292
Foreign currency translation adjustment	4,277	28,149
Unrealized gain on available-for-sale securities	-	220
Other comprehensive income	<u>5,947</u>	<u>29,661</u>
Comprehensive income	<u>84,018</u>	<u>94,244</u>
Less: comprehensive income attributable to noncontrolling interests	195	179
Comprehensive income attributable to Vishay stockholders	<u>\$ 83,823</u>	<u>\$ 94,065</u>

See accompanying notes.

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

	Nine fiscal months ended	September
	29, 2018	30, 2017
		(recast - see
		Note 1)
Net revenues	\$ 2,258,797	\$ 1,925,906
Costs of products sold	<u>1,589,963</u>	<u>1,400,173</u>
Gross profit	668,834	525,733
Selling, general, and administrative expenses	303,381	272,540
Restructuring and severance costs	-	5,194
Operating income	<u>365,453</u>	<u>247,999</u>
Other income (expense):		
Interest expense	(26,862)	(20,804)
Other components of net periodic pension cost	(10,336)	(8,947)
Other	5,440	1,151
Loss on early extinguishment of debt	(17,309)	-
Loss on disposal of equity affiliate	-	(7,060)
Total other income (expense)	<u>(49,067)</u>	<u>(35,660)</u>
Income before taxes	316,386	212,339
Income tax expense	<u>72,508</u>	<u>54,398</u>
Net earnings	243,878	157,941
Less: net earnings attributable to noncontrolling interests	539	628
Net earnings attributable to Vishay stockholders	<u>\$ 243,339</u>	<u>\$ 157,313</u>
Basic earnings per share attributable to Vishay stockholders	\$ 1.69	\$ 1.08
Diluted earnings per share attributable to Vishay stockholders	\$ 1.55	\$ 1.01
Weighted average shares outstanding - basic	144,364	146,128
Weighted average shares outstanding - diluted	156,702	155,626
Cash dividends per share	\$ 0.2375	\$ 0.1875

See accompanying notes.

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

	Nine fiscal months ended September 29, 2018	September 30, 2017
Net earnings	\$ 243,878	\$ 157,941
Other comprehensive income (loss), net of tax		
Pension and other post-retirement actuarial items	4,852	4,843
Foreign currency translation adjustment	(30,236)	98,965
Unrealized gain on available-for-sale securities	-	1,002
Other comprehensive income (loss)	<u>(25,384)</u>	<u>104,810</u>
Comprehensive income	<u>218,494</u>	<u>262,751</u>
Less: comprehensive income attributable to noncontrolling interests	539	628
Comprehensive income attributable to Vishay stockholders	<u>\$ 217,955</u>	<u>\$ 262,123</u>

See accompanying notes.

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

	Nine fiscal months ended	
	September	September
	29, 2018	30, 2017
Operating activities		
Net earnings	\$ 243,878	\$ 157,941
Adjustments to reconcile net earnings to net cash provided by operating activities:		
Depreciation and amortization	121,888	121,319
(Gain) loss on disposal of property and equipment	(2,216)	(106)
Accretion of interest on convertible debt instruments	6,966	3,703
Inventory write-offs for obsolescence	17,059	12,157
Loss on disposal of equity affiliate	-	7,060
Deferred income taxes	(12,348)	9,115
Loss on extinguishment of debt	17,309	-
Other	13,021	6,531
U.S. transition tax	(14,400)	-
Repatriation taxes	(156,767)	-
Net change in operating assets and liabilities, net of effects of businesses acquired	(125,499)	(71,875)
Net cash provided by operating activities	<u>108,891</u>	<u>245,845</u>
Investing activities		
Capital expenditures	(126,391)	(84,790)
Proceeds from sale of property and equipment	8,455	1,484
Purchase of businesses, net of cash received	(14,880)	-
Purchase of short-term investments	(172,732)	(598,937)
Maturity of short-term investments	577,524	610,573
Other investing activities	(1,608)	(6,663)
Net cash provided by (used in) investing activities	<u>270,368</u>	<u>(78,333)</u>
Financing activities		
Proceeds from long-term borrowings	600,000	-
Issuance costs	(15,621)	-
Repurchase of convertible debentures	(584,991)	-
Net proceeds (payments) on revolving credit lines	(150,000)	(5,000)
Common stock repurchases	-	(37,564)
Net changes in short-term borrowings	-	22
Dividends paid to common stockholders	(31,378)	(25,054)
Dividends paid to Class B common stockholders	(2,873)	(2,274)
Proceeds from stock options exercised	-	1,260
Distributions to noncontrolling interests	(525)	(1,140)
Acquisition of noncontrolling interests	-	(4,100)
Cash withholding taxes paid when shares withheld for vested equity awards	(2,297)	(1,971)
Other financing activities	-	(1,255)
Net cash provided by (used in) financing activities	<u>(187,685)</u>	<u>(77,076)</u>
Effect of exchange rate changes on cash and cash equivalents	<u>(11,501)</u>	<u>13,168</u>
Net increase in cash and cash equivalents	<u>180,073</u>	<u>103,604</u>
Cash and cash equivalents at beginning of period	<u>748,032</u>	<u>471,781</u>
Cash and cash equivalents at end of period	<u>\$ 928,105</u>	<u>\$ 575,385</u>

See accompanying notes.

VISHAY INTERTECHNOLOGY, INC.

Consolidated Condensed Statement of Equity

(Unaudited - In thousands, except share and per share amounts)

	Common Stock	Class B Convertible Common Stock	Capital in Excess of Par Value	Retained Earnings (Accumulated Deficit)	Accumulated Other Comprehensive Income (Loss)	Total Vishay Stockholders' Equity	Noncontrolling Interests	Total Equity
Balance at December 31, 2015	\$ 13,546	\$ 1,213	\$ 2,058,492	\$ (319,448)	\$ (131,327)	\$ 1,622,476	\$ 5,567	\$ 1,628,043
Cumulative effect of accounting change for adoption of ASU 2014-09 (see Notes 1 and 2)	-	-	-	2,210	-	2,210	-	2,210
Net earnings	-	-	-	48,792	-	48,792	581	49,373
Other comprehensive income	-	-	-	-	36,675	36,675	-	36,675
Distributions to noncontrolling interests	-	-	-	-	-	-	(707)	(707)
Common stock repurchase (1,752,454 shares)	(175)	-	(22,984)	-	-	(23,159)	-	(23,159)
Temporary equity reclassification	-	-	(88,659)	-	-	(88,659)	-	(88,659)
Issuance of stock and related tax withholdings for vested restricted stock units (110,825 shares)	11	-	(553)	-	-	(542)	-	(542)
Dividends declared (\$0.2500 per share)	-	-	36	(36,761)	-	(36,725)	-	(36,725)
Stock compensation expense	-	-	6,380	-	-	6,380	-	6,380
Stock options exercised (27,619 shares)	3	-	353	-	-	356	-	356
Tax effects of stock plan	-	-	(77)	-	-	(77)	-	(77)
Balance at December 31, 2016 (recast - see Note 1)	\$ 13,385	\$ 1,213	\$ 1,952,988	\$ (305,207)	\$ (94,652)	\$ 1,567,727	\$ 5,441	\$ 1,573,168
Cumulative effect of accounting change for adoption of ASU 2016-09	-	-	-	386	-	386	-	386
Net earnings (loss)	-	-	-	(20,344)	-	(20,344)	784	(19,560)
Other comprehensive income	-	-	-	-	120,366	120,366	-	120,366
Distributions to noncontrolling interests	-	-	-	-	-	-	(1,140)	(1,140)
Acquisition of noncontrolling interests	-	-	(1,047)	-	-	(1,047)	(3,053)	(4,100)
Common stock repurchase (2,250,236 shares)	(225)	-	(39,719)	-	-	(39,944)	-	(39,944)
Temporary equity reclassification	-	-	(163,411)	-	-	(163,411)	-	(163,411)
Issuance of stock and related tax withholdings for vested restricted stock units (200,688 shares)	20	-	(1,991)	-	-	(1,971)	-	(1,971)
Dividends declared (\$0.2550 per share)	-	-	40	(37,089)	-	(37,049)	-	(37,049)
Stock compensation expense	-	-	4,394	-	-	4,394	-	4,394
Stock options exercised (77,334 shares)	8	-	1,252	-	-	1,260	-	1,260
Balance at December 31, 2017 (recast - see Note 1)	\$ 13,188	\$ 1,213	\$ 1,752,506	\$ (362,254)	\$ 25,714	\$ 1,430,367	\$ 2,032	\$ 1,432,399
Cumulative effect of accounting change for adoption of ASU 2016-01 (see Notes 1 and 6)	-	-	-	1,801	(1,801)	-	-	-
Net earnings	-	-	-	243,339	-	243,339	539	243,878
Other comprehensive income	-	-	-	-	(25,384)	(25,384)	-	(25,384)
Conversion of Class B shares (31,800 shares)	3	(3)	-	-	-	-	-	-
Distributions to noncontrolling interests	-	-	-	-	-	-	(525)	(525)
Temporary equity reclassification	-	-	2,137	-	-	2,137	-	2,137
Issuance of stock and related tax withholdings for vested restricted stock units (211,328 shares)	21	-	(2,318)	-	-	(2,297)	-	(2,297)
Dividends declared (\$0.2375 per share)	-	-	39	(34,290)	-	(34,251)	-	(34,251)
Stock compensation expense	-	-	4,039	-	-	4,039	-	4,039
Issuance of convertible notes due 2025	-	-	85,262	-	-	85,262	-	85,262
Repurchase of convertible debentures due 2040 and due 2042	-	-	(246,573)	-	-	(246,573)	-	(246,573)
Balance at September 29,	\$ 13,212	\$ 1,210	\$ 1,595,092	\$ (151,404)	\$ (1,471)	\$ 1,456,639	\$ 2,046	\$ 1,458,685

See accompanying notes.

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, 2017. The results of operations for the fiscal quarter and nine fiscal months ended September 29, 2018 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 2018 end on March 31, 2018, June 30, 2018, September 29, 2018, and December 31, 2018, respectively. The four fiscal quarters in 2017 ended on April 1, 2017, July 1, 2017, September 30, 2017, and December 31, 2017, respectively.

Recently Adopted Accounting Guidance

In May 2014, the Financial Accounting Standards Board ("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 Company retrospectively adopted the ASU on January 1, 2018. The adoption of the ASU did not have a material impact on the Company's results of operations. See Note 2 and "Changes in Accounting Policies" below.

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities*. The ASU enhances the reporting model for financial instruments by addressing certain aspects, including requiring equity investments to be measured at fair value with changes in fair value recognized in net income; simplifying the impairment assessment of equity investments without readily determinable fair values; eliminating the requirement to disclose the method and significant assumptions used to estimate the disclosed fair value of financial instruments measured at amortized cost; and requiring the use of the exit price notion for fair value measurements of financial instruments for disclosure purposes. The Company adopted the ASU on January 1, 2018. The Company recognized a cumulative-effect adjustment to January 1, 2018 retained earnings (accumulated deficit) of \$1,801 for the cumulative change in fair value of available-for-sale equity investments previously recognized in other comprehensive income. The adoption of the ASU did not have a material impact on the Company's results of operations.

In March 2017, the FASB issued ASU No. 2017-07, *Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. The ASU amends the income statement presentation requirements of net periodic benefit cost of defined benefit pension and other postretirement plans. The Company retrospectively adopted the ASU on January 1, 2018. The adoption of the ASU did not have a material impact on the Company's results of operations. See "Changes in Accounting Policies" below.

Recently Issued Accounting Guidance

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.

Changes in Accounting Policies

Except for the changes described in "Recently Adopted Accounting Guidance" above and in this section below, the Company has consistently applied the accounting policies described in its Note 1 to its audited consolidated financial statement included in its annual report on Form 10-K for the year ended December 31, 2017, to all periods presented in these consolidated condensed financial statements.

Revenue Recognition

The Company adopted ASU 2014-09 as of January 1, 2018 using the full retrospective method. As a result, the Company has changed its accounting policy for revenue recognition. The details of significant changes and quantitative impact of the changes are disclosed below.

Service-type warranty performance obligations

ASU 2014-09 introduces the concept of service-type warranties, which represent separate performance obligations. Upon adoption of ASU 2014-09, the Company considers its warranty obligations as service-type warranties and allocates a portion of the estimated consideration to be received from the related contract to the service-type warranty performance obligation and recognizes the related revenue over the warranty period. The impact of accounting for service-type warranties as separate performance obligations was not significant in the retrospective adoption period and is included in the tables below. See further discussion of the warranty obligations in Note 2.

Custom products

The Company previously recognized revenue when the sales process was completed, which generally occurred when the product was delivered and risk of loss was transferred to the customer. Upon adoption of ASU 2014-09, the Company analyzes its contractual arrangements to determine whether the promise in the contract to construct and transfer goods to the customer is a performance obligation that will be satisfied over time or at a point in time. When the Company's performance does not create an asset with an alternative use to the Company and the Company has an enforceable right to payment for performance completed to date, the Company transfers control of a good or service over time and, therefore, satisfies a performance obligation and recognizes revenue over time. The Company has a limited number of contracts for custom products that meet the criteria to recognize revenue over time. The dollar amount of these custom products did not materially change during the retrospective adoption period. The Company recorded a cumulative-effect adjustment of \$2,210 to January 1, 2016 retained earnings (accumulated deficit) and recorded adjustments to its consolidated balance sheets due to the impact of recognizing revenue for certain custom products over time rather than at a point in time.

ASU 2014-09 provides several transition practical expedients. The Company has not restated completed contracts that begin and end in the same annual reporting period; used the transaction price at the date the contract was completed rather than estimating variable consideration amounts in the comparative reporting periods; has not disclosed the amount of the transaction price allocated to the remaining performance obligations and an explanation of when the Company expects to recognize the amount as revenue for the reporting periods presented prior to January 1, 2016; and has not retrospectively restated the contract for modifications made prior to January 1, 2016 and instead reflected the aggregate effect of all modifications when identifying the satisfied and unsatisfied performance obligations, determining the transaction price and allocating the transaction price pursuant to the transition practical expedients available.

Pension and Other Postretirement Benefits

The Company retrospectively adopted ASU No. 2017-07 as of January 1, 2018. As a result, the Company has changed its accounting policy for pension and other postretirement benefits costs as detailed below.

ASU 2017-07 amends the income statement presentation requirements of net periodic benefit cost of defined benefit pension and other postretirement plans. The service cost component of net periodic pension cost is recorded in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period, and other components of net periodic pension cost are included on a separate line within other income (expense). The Company reclassified net benefit costs other than the current service component previously reported as cost of goods sold and selling, general, and administrative expenses to other expenses for each quarter in the retrospective adoption period in the table below. The Company also reclassified the \$79,321 U.S. pension settlement charges recorded for the year ended December 31, 2016 to other expenses. See the impact of this change in the tables below.

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The retrospective adoption of ASUs 2014-09 and 2017-07 did not impact net earnings (loss) attributed to Vishay stockholders. See the combined impact of the retrospective adoption in the tables below:

	Fiscal quarters ended											
	April 1, 2017			July 1, 2017			September 30, 2017			December 31, 2017		
	As Reported	Adjustments	Recast	As Reported	Adjustments	Recast	As Reported	Adjustments	Recast	As Reported	Adjustments	Recast
Net revenues	\$606,258	\$ (1,457)	\$604,801	\$644,892	\$ (1,728)	\$643,164	\$677,883	\$ 58	\$677,941	\$ 674,489	\$ (1,027)	\$ 673,462
Costs of products sold	445,383	(2,331)	443,052	471,929	(2,602)	469,327	488,610	(816)	487,794	497,988	(1,902)	496,086
Gross profit	160,875	874	161,749	172,963	874	173,837	189,273	874	190,147	176,501	875	177,376
Operating income	64,688	2,890	67,578	82,036	2,969	85,005	92,328	3,088	95,416	72,536	3,470	76,006
Total other income (expense)	(14,246)	(2,890)	(17,136)	(6,327)	(2,969)	(9,296)	(6,140)	(3,088)	(9,228)	(5,511)	(3,470)	(8,981)
Income before taxes	50,442	-	50,442	75,709	-	75,709	86,188	-	86,188	67,025	-	67,025
Income tax expense	13,493	-	13,493	19,300	-	19,300	21,605	-	21,605	244,526	-	244,526
Net earnings (loss)	36,949	-	36,949	56,409	-	56,409	64,583	-	64,583	(177,501)	-	(177,501)
Less: net earnings attributable to noncontrolling interests	230	-	230	219	-	219	179	-	179	156	-	156
Net earnings (loss) attributable to Vishay stockholders	\$ 36,719	\$ -	\$ 36,719	\$ 56,190	\$ -	\$ 56,190	\$ 64,404	\$ -	\$ 64,404	\$ (177,657)	\$ -	\$ (177,657)

	Years ended					
	December 31, 2016			December 31, 2017		
	As Reported	Adjustments	Recast	As Reported	Adjustments	Recast
Net revenues	\$ 2,323,431	\$ (6,103)	\$ 2,317,328	\$ 2,603,522	\$ (4,154)	\$ 2,599,368
Costs of products sold	1,753,648	(10,142)	1,743,506	1,903,910	(7,651)	1,896,259
Gross profit	569,783	4,039	573,822	699,612	3,497	703,109
Operating income	101,717	95,341	197,058	311,588	12,417	324,005
Total other income (expense)	(7,501)	(95,341)	(102,842)	(32,224)	(12,417)	(44,641)
Income before taxes	94,216	-	94,216	279,364	-	279,364
Income tax expense	44,843	-	44,843	298,924	-	298,924
Net earnings (loss)	49,373	-	49,373	(19,560)	-	(19,560)
Less: net earnings attributable to noncontrolling interests	581	-	581	784	-	784
Net earnings (loss) attributable to Vishay stockholders	\$ 48,792	\$ -	\$ 48,792	\$ (20,344)	\$ -	\$ (20,344)

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.

Note 2 – Revenue Recognition

As of January 1, 2018, the Company recognizes revenue from contracts with customers in accordance with ASU 2014-09. The Company has framework agreements with many of its customers that contain the terms and conditions of future sales, but do not create enforceable rights or obligations. Per ASU 2014-09, the Company's contracts are the combined purchase orders and the terms and conditions contained within such framework agreements.

Payment terms for the Company's sales are generally less than sixty days. Substantially all of the Company's receivables are collected within twelve months of the transfer of products to the customer and the Company expects this to continue going forward. The Company applies the practical expedient within ASU 2014-09 to all of its contracts with payment terms less than or equal to twelve months and does not recognize a financing component of the transaction price.

Revenue is measured based on the consideration specified in contracts with customers, and excludes any sales incentives and amounts collected on behalf of third parties. The Company recognizes revenue when it satisfies its performance obligations.

The Company's contracts contain two performance obligations: delivery of products and warranty protection. The Company does not sell separate, enhanced, or extended warranty coverage, but through its customary business practices, the Company has created implied service-type warranties, which are accounted for as separate performance obligations. Revenue is allocated between these two performance obligations and recognized as the obligations are satisfied. The allocation of revenue to warranty protection is based on an estimate of expected cost plus margin. The delivery of products performance obligation is satisfied and product sales revenue is recognized when the customer takes control of the products. Warranty revenue is deferred and the warranty protection performance obligation is satisfied and revenue is recognized over the warranty period, which is typically less than twenty-four months from sale to end customer. The warranty deferred revenue liability is recorded within Other Accrued Expenses and Other Liabilities on the accompanying consolidated condensed balance sheets. The deferred revenue balance associated with the service-type warranty performance obligations and the components that comprise the change in the deferred revenue balance are not significant.

The Company has a broad line of products that it sells to original equipment manufacturers ("OEMs"), electronic manufacturing services ("EMS") companies, which manufacture for OEMs on an outsourcing basis, and independent distributors that maintain large inventories of electronic components for resale to OEMs and EMS companies.

The Company has and will continue to recognize revenue on sales to distributors when the distributor takes control of the products ("sold-to" model). The Company has agreements with distributors that allow distributors a limited credit for unsaleable products, which it terms a "scrap allowance." Consistent with industry practice, the Company also has a "stock, ship and debit" program whereby it considers requests by distributors for credits on previously purchased products that remain in distributors' inventory, to enable the distributors to offer more competitive pricing. In addition, the Company has contractual arrangements whereby it provides distributors with protection against price reductions initiated by the Company after product is sold by the Company to the distributor and prior to resale by the distributor.

The Company recognizes the estimated variable consideration to be received as revenue and records a related accrued expense for the consideration not expected to be received, based upon its estimate of product returns, scrap allowances, "stock, ship and debit" credits, and price protection credits that will be attributable to sales recorded through the end of the period. The Company makes these estimates based upon sales levels to its distributors during the period, inventory levels at the distributors, current and projected market conditions, and historical experience under the programs. While the Company utilizes a number of different methodologies to estimate the accruals, all of the methodologies take into account sales levels to distributors during the relevant period, inventory levels at the distributors, current and projected market trends and conditions, recent and historical activity under the relevant programs, changes in program policies, and open requests for credits. These procedures require the exercise of significant judgments. The Company believes that it has a reasonable basis to estimate future credits under the programs.

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Distributor sales accrual activity is shown below:

	Fiscal quarters ended		Nine fiscal months ended		Years Ended December 31,	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017	2017	2016
Beginning balance	\$ 38,032	\$ 35,733	\$ 36,680	\$ 34,479	\$ 34,479	\$ 32,487
Sales allowances	27,986	22,421	77,539	67,191	89,009	86,896
Credits issued	(29,293)	(28,116)	(77,091)	(71,638)	(87,403)	(85,341)
Foreign currency	103	384	(300)	390	595	437
Ending balance	<u>\$ 36,828</u>	<u>\$ 30,422</u>	<u>\$ 36,828</u>	<u>\$ 30,422</u>	<u>\$ 36,680</u>	<u>\$ 34,479</u>

The Company pays commissions to external sales representatives on a per-sale basis. The Company applies the practical expedient available within ASU 2014-09 to all commissions paid as the future amortization period of the asset that the Company otherwise would have recognized is one year or less. Accordingly, these commissions are expensed as incurred. Internal staff are not paid commissions.

The Company has elected to account for shipping and handling as activities to fulfill the promise to transfer the product even if the shipping and handling activities are performed after the customer obtains control. The Company does not evaluate whether shipping and handling activities are promised services to its customers. If control transfers and revenue is recognized for the related products before the shipping and handling activities occur, the related costs of those shipping and handling activities is accrued. The Company applies this accounting policy election consistently to similar types of transactions.

See disaggregated revenue information in Note 10.

Note 3 – Acquisition Activities

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

On February 8, 2018, the Company acquired substantially all of the assets and liabilities of UltraSource, Inc., a U.S.-based, privately-held thin film circuit and thin film interconnect manufacturer, for \$13,596. Based on an estimate of their fair values, the Company allocated \$6,500 of the purchase price to definite-lived intangible assets. After allocating the purchase price to the assets acquired and liabilities assumed based on an estimation of their fair values at the date of acquisition, the Company recorded goodwill of \$4,227 related to this acquisition. The results and operations of this acquisition have been included in the Resistors & Inductors segment since February 8, 2018. The inclusion of this acquisition did not have a material impact on the Company's consolidated results for the fiscal quarter or nine fiscal months ended September 29, 2018. The goodwill related to this acquisition is included in the Resistors & Inductors reporting unit for goodwill impairment testing.

On June 11, 2018, the Company acquired EuroPower Holdings Ltd. ("EuroPower") for \$2,939, net of cash acquired. EuroPower is a distributor of electronic components in the United Kingdom. The inclusion of this business did not have a material impact on the Company's consolidated results for the fiscal quarter or nine fiscal months ended September 29, 2018. After allocating the purchase price to the assets acquired and liabilities assumed based on an estimation of their fair values at the date of acquisition, the Company recorded goodwill of \$1,068 related to this acquisition. The goodwill related to this acquisition is included in the Resistors & Inductors reporting unit for goodwill impairment testing.

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

The remaining fluctuation in the goodwill account balance is due to foreign currency translation.

Note 4 – 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. As of December 31, 2017, the Company's restructuring programs were substantially completed.

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 quarter ended September 30, 2017	Nine fiscal months ended September 30, 2017
MOSFETs Enhanced Competitiveness Program	\$ 2,463	\$ 2,911
Global Cost Reduction Programs	781	2,283
Total	<u>\$ 3,244</u>	<u>\$ 5,194</u>

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.

As a result of a review of the financial results and outlook for the Company's MOSFETs segment following the completion of production transfers, the Company 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 included 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 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	<u>\$ 2,061</u>
Expense recorded in 2014	6,025
Cash paid	(856)
Balance at December 31, 2014	<u>\$ 7,230</u>
Expense recorded in 2015	5,367
Cash paid	(426)
Foreign currency translation	1
Balance at December 31, 2015	<u>\$ 12,172</u>
Expense recorded in 2016	9,744
Cash paid	(15,686)
Foreign currency translation	2
Balance at December 31, 2016	<u>\$ 6,232</u>
Expense recorded in 2017	3,204
Cash paid	(7,173)
Balance at December 31, 2017	<u>\$ 2,263</u>
Cash paid	<u>(1,051)</u>
Balance at September 29, 2018	<u>\$ 1,212</u>

Severance benefits are generally paid in a lump sum at cessation of employment. The entire liability is considered current and is included in other accrued expenses in the accompanying consolidated condensed balance sheets.

Global Cost Reduction Programs

The global cost reduction programs announced in 2015 included 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. These programs were substantially implemented as of December 31, 2017.

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	8,069
Cash paid	(7,168)
Foreign currency translation	500
Balance at December 31, 2017	\$ 7,665
Cash paid	(2,881)
Foreign currency translation	(87)
Balance at September 29, 2018	<u>\$ 4,697</u>

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

	Fiscal quarter ended September 30, 2017	Nine fiscal months ended September 30, 2017
Diodes	\$ (13)	\$ -
Optoelectronic Components	-	242
Resistors & Inductors	468	1,403
Capacitors	88	334
Unallocated Selling, General, and Administrative Expenses	238	304
Total	<u>\$ 781</u>	<u>\$ 2,283</u>

Severance benefits are generally paid in a lump sum at cessation of employment, though some are being paid in installments. The current portion of the liability is \$2,772 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.

Note 5 – 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 29, 2018 and September 30, 2017 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.

On December 22, 2017, the Tax Cuts and Jobs Act (the "TCJA") was enacted in the United States. The TCJA represents sweeping changes in U.S. tax law. Among the numerous changes in tax law, the TCJA permanently reduced the U.S. corporate income tax rate to 21% beginning in 2018; imposed a one-time transition tax on deferred foreign earnings; established a partial territorial tax system by allowing a 100% dividends received deduction on qualifying dividends paid by foreign subsidiaries; limited deductions for net interest expense; expanded the U.S. taxation of foreign earned income to include "global intangible low-taxed income" ("GILTI") of foreign subsidiaries; and imposed a base erosion and anti-abuse minimum tax ("BEAT").

The TCJA represents the first significant change in U.S. tax law in over 30 years. As permitted by SAB No. 118, the tax expense recorded in the fourth fiscal quarter of 2017 due to the enactment of the TCJA was considered "provisional," based on reasonable estimates. As further described below, after additional analysis was completed in the second and third fiscal quarters of 2018, the Company identified additional amounts available to be repatriated to the U.S. and additional information regarding the foreign taxes payable and recorded additional provisional tax expense to accrue the incremental foreign income taxes and withholding taxes payable to foreign jurisdiction. The Company is continuing to collect and analyze detailed information about the earnings and profits of its non-U.S. subsidiaries, the related taxes paid, the amounts which could be repatriated, the foreign taxes which may be incurred on repatriation, and the associated impact of these items under the TCJA. The Company may record further adjustments to refine those estimates during the measurement period, as additional analysis is completed.

The TCJA transitions the U.S. from a worldwide tax system to a partial territorial tax system. Under previous law, companies could indefinitely defer U.S. income taxation on unremitted foreign earnings. The TCJA imposes a one-time transition tax on deferred foreign earnings of 15.5% for liquid assets and 8% for illiquid assets, payable in defined increments over eight years. As a result of this requirement, the Company recognized provisional tax expense of \$215,558 in 2017, and provisionally expects to pay \$184,468, net of estimated applicable foreign tax credits, and after utilization of net operating loss, R&D credits, and foreign tax credit carryforwards. As a result of additional analysis completed in the third fiscal quarter of 2018, the Company accrued additional provisional tax expense of \$6,214. The first installment of \$14,400 was paid in the second fiscal quarter of 2018. These previously deferred foreign earnings may now be repatriated to the United States without additional U.S. federal taxation. However, any such repatriation could incur withholding and other foreign taxes in the source and intervening foreign jurisdictions, and certain U.S. state taxes.

Due to the changes in taxation of dividends received from foreign subsidiaries, and also because of the need to finance the payment of the transition tax, the Company made the determination during the fourth fiscal quarter of 2017 that certain unremitted foreign earnings in Israel, Germany, Austria, and France are no longer permanently reinvested, and recorded provisional tax expense of \$213,000 to accrue the incremental foreign income taxes and withholding taxes payable to foreign jurisdictions assuming the hypothetical repatriation to the United States of these approximately \$1,100,000 of available foreign earnings. As a result of additional analysis completed in the second and third fiscal quarters of 2018, the Company adjusted the amount of foreign unremitted earnings available from Israel, Germany, Austria, and France to approximately \$1,200,000, identified additional information regarding the foreign taxes payable, and accrued additional provisional tax expense of \$19,282.

The Company repatriated approximately \$274,000 and approximately \$450,000 to the United States, and paid withholding and foreign taxes of \$92,093 and \$64,674 in the second and third fiscal quarters of 2018, respectively. Substantially all of the amounts repatriated in the second fiscal quarter were used to reduce the outstanding balance of the credit facility (see Note 6) and to repay certain intercompany indebtedness. A portion of the amounts repatriated in the third fiscal quarter were used to eliminate the remaining outstanding balance of the credit facility.

After completing these phases of cash repatriation, there is approximately \$300,000 of unremitted foreign earnings that the Company has deemed not permanently reinvested and thus has accrued foreign withholding and other taxes. The Company expects to repatriate these remaining amounts at a measured pace over several years, and may decide to ultimately not repatriate some of these amounts.

The Company's effective tax rate for the periods ended September 29, 2018 was negatively impacted by certain provisions of the TCJA. The provisions of the TCJA are interrelated and the impact of any specific provision cannot be isolated. The Company operates at a pre-tax loss in the U.S. and the reduction in the federal tax rate reduces the tax benefit recorded. In addition, the inclusion of GILTI income and the limitation on the deductibility of interest expense increased the effective tax rate. The Company has elected to account for GILTI tax in the period in which it is incurred, and therefore did not provide any deferred taxes in the consolidated financial statements at December 31, 2017. BEAT could potentially increase the Company's U.S. federal income tax by disallowing certain otherwise deductible payments from the U.S. to non-U.S. subsidiaries and imposing a minimum tax if greater than the regular tax. The Company expects to be subject to BEAT in 2018 and future periods, but BEAT did not have a material impact on the Company's effective tax rate for the periods ended September 29, 2018.

The Company's repurchase of a portion of the outstanding convertible debentures in the second fiscal quarter of 2018 (see Note 6) reduced the Company's expected full year 2018 tax rate.

The Company recognized a tax benefit on the pre-tax loss on early extinguishment of debt. The Company also recognized a tax benefit of \$33,963 in the second fiscal quarter of 2018 resulting from the extinguishment, reflecting the reduction in deferred tax liabilities related to the special tax attributes of the debentures.

Income tax expense for the fiscal quarter and nine fiscal months ended September 29, 2018, includes tax expense of \$680 and tax benefits of \$7,010 for the periodic remeasurement of the deferred tax liability recorded for the foreign taxes associated with the cash repatriation program described above.

Income tax expense for the fiscal quarter and nine fiscal months ended September 30, 2017 included a tax benefit of \$892 and \$3,100 for the periodic remeasurement of the deferred tax liability recorded for the cash repatriation program that was terminated as a result of the enactment of the TCJA.

During the nine fiscal months ended September 29, 2018, the liabilities for unrecognized tax benefits increased by \$3,486 on a net basis, due to increases for tax positions taken in the current period and interest, offset by payments and foreign currency effects.

Note 6 – Long-Term Debt

Long-term debt consists of the following:

	<u>September 29, 2018</u>	<u>December 31, 2017</u>
Credit facility	\$ -	\$ 150,000
Convertible senior debentures, due 2040	22,486	110,412
Convertible senior debentures, due 2041	57,695	56,641
Convertible senior debentures, due 2042	34,268	62,518
Convertible notes, due 2025	491,853	-
Deferred financing costs	(17,716)	(9,101)
	<u>588,586</u>	<u>370,470</u>
Less current portion	-	-
	<u>\$ 588,586</u>	<u>\$ 370,470</u>

Convertible Senior Notes due 2025

In June 2018, the Company issued \$600,000 aggregate principal amount of 2.25% convertible senior notes due 2025 to qualified institutional investors. The Company used the net proceeds from this offering to repurchase \$220,000 and \$69,060 principal amounts of convertible senior debentures due 2040 and 2042, respectively, as further described below.

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 notes are reflected in the Company's consolidated balance sheets as follows:

	<u>Principal amount of the notes</u>	<u>Unamortized discount</u>	<u>Carrying value of liability component</u>	<u>Equity component - net carrying value</u>
September 29, 2018				
Due 2025	\$ 600,000	(108,147)	\$ 491,853	\$ 85,262

Interest is payable on the convertible notes due 2025 semi-annually in arrears on June 15 and December 15 of each year, beginning December 15, 2018, at a rate of 2.25% per annum; however, the remaining debt discount is being amortized as additional non-cash interest expense using an effective annual interest rate of 5.50% based on the Company's estimated nonconvertible debt borrowing rate.

Interest expense for the fiscal quarter and nine fiscal months ended September 29, 2018 related to the convertible notes due 2025 is reflected on the consolidated condensed statements of operations as follows:

	<u>Contractual coupon interest</u>	<u>Non-cash amortization of debt discount</u>	<u>Non-cash amortization of deferred financing costs</u>	<u>Total interest expense related to the debentures</u>
Fiscal quarter ended September 29, 2018	\$ 3,375	3,334	454	\$ 7,163
Nine fiscal months ended September 29, 2018	\$ 4,088	3,890	605	\$ 8,583

The convertible notes due 2025 will mature on June 15, 2025, unless earlier repurchased or converted. Prior to December 15, 2024, such conversion is subject to the satisfaction of certain conditions set forth below. The convertible notes due 2025 are not redeemable by the Company before the maturity date.

Prior to December 15, 2024, the holders may only convert their notes under the following circumstances: (1) during any fiscal quarter after the fiscal quarter ending September 29, 2018, if the sale price of Vishay common stock reaches 130% of the conversion price for a specified period (initially \$40.94); (2) the trading price of the notes falls below 98% of the product of the sale price of Vishay's common stock and the conversion rate for a specified period; or (3) upon the occurrence of specified corporate transactions.

The convertible notes due 2025 are initially convertible into cash, shares of Vishay common stock, or a combination thereof, at the Company's option, at a conversion rate of 31.7536 shares of common stock per \$1,000 principal amount of notes. This initial conversion price represents a premium of 27.5% to the closing price of Vishay's common stock on June 8, 2018, which was \$24.70 per share. The conversion rate of the convertible notes is not adjusted for quarterly cash dividends equal to or less than \$0.085 per share of common stock. This represents an initial effective conversion price of approximately \$31.49 per share. At the direction of its Board of Directors, Vishay intends, upon conversion, to repay the principal amount of the notes in cash and settle any additional amounts in shares. Vishay must provide additional shares upon conversion if there is a "fundamental change" in the business as defined in the indenture governing the notes.

Convertible Senior Debentures

Vishay currently has three issuances of convertible senior debentures outstanding with generally congruent terms.

The Company used substantially all of the net proceeds of the June 2018 issuance of convertible senior notes due 2025 to repurchase \$220,000 and \$69,060 principal amounts of convertible senior debentures due 2040 and due 2042, respectively. The net carrying value of the debentures repurchased were \$89,276 and \$29,037, respectively. In accordance with the authoritative accounting guidance for convertible debentures, the aggregate repurchase payment of \$584,991 was allocated between the liability (\$133,647) and equity (including temporary equity, \$451,344) components of the convertible debentures, using the Company's nonconvertible debt borrowing rate at the time of the repurchase. As a result, the Company recognized a loss on extinguishment of convertible debentures of \$17,309, including the write-off of a portion of unamortized debt issuance costs.

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 27, 2018 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 as of September 29, 2018	\$ 55,000	\$ 150,000	\$ 80,940
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 13, 2018 (per \$1 principal amount)	78.0506	56.9573	91.7689
Effective conversion price effective September 13, 2018 (per share)	\$ 12.81	\$ 17.56	\$ 10.90
130% of the conversion price (per share)	\$ 16.65	\$ 22.83	\$ 14.17
Call date	November 20, 2020	May 20, 2021	June 7, 2022

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

The convertible debentures due 2042 became convertible subsequent to the December 31, 2016 evaluation of the conversion criteria, and have remained convertible for each subsequent quarterly evaluation through the September 29, 2018 evaluation, due to the sale price of Vishay's common stock exceeding 130% of the conversion price for the applicable periods. The convertible debentures due 2040 became convertible subsequent to the September 30, 2017 evaluation of the conversion criteria, and have remained convertible for each subsequent quarterly evaluation through the September 29, 2018 evaluation, due to the sale price of Vishay's common stock exceeding 130% of the conversion price for the applicable periods. The debentures due 2040 and due 2042 will remain convertible until December 31, 2018, 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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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
September 29, 2018					
Due 2040	\$ 55,000	(32,561)	47	\$ 22,486	\$ 22,019
Due 2041	\$ 150,000	(92,549)	244	\$ 57,695	\$ 62,246
Due 2042	\$ 80,940	(46,735)	63	\$ 34,268	\$ 31,229
Total	<u>\$ 285,940</u>	<u>\$ (171,845)</u>	<u>\$ 354</u>	<u>\$ 114,449</u>	<u>\$ 115,494</u>
December 31, 2017					
Due 2040	\$ 275,000	(164,794)	206	\$ 110,412	\$ 110,094
Due 2041	\$ 150,000	(93,573)	214	\$ 56,641	\$ 62,246
Due 2042	\$ 150,000	(87,600)	118	\$ 62,518	\$ 57,874
Total	<u>\$ 575,000</u>	<u>\$ (345,967)</u>	<u>\$ 538</u>	<u>\$ 229,571</u>	<u>\$ 230,214</u>

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
September 29, 2018					
Due 2040	\$ 310	135	4	20	\$ 469
Due 2041	\$ 844	349	12	71	\$ 1,276
Due 2042	\$ 455	184	7	19	\$ 665
Total	<u>\$ 1,609</u>	<u>\$ 668</u>	<u>\$ 23</u>	<u>\$ 110</u>	<u>\$ 2,410</u>
September 30, 2017					
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	<u>\$ 3,235</u>	<u>\$ 1,259</u>	<u>\$ 46</u>	<u>\$ (95)</u>	<u>\$ 4,445</u>

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

	<u>Contractual coupon interest</u>	<u>Non-cash amortization of debt discount</u>	<u>Non-cash amortization of deferred financing costs</u>	<u>Non-cash change in value of derivative liability</u>	<u>Total interest expense related to the debentures</u>
<u>September 29, 2018</u>					
Due 2040	\$ 2,991	1,269	42	81	\$ 4,383
Due 2041	\$ 2,532	1,024	36	30	\$ 3,622
Due 2042	\$ 2,013	783	31	4	\$ 2,831
Total	<u>\$ 7,536</u>	<u>\$ 3,076</u>	<u>\$ 109</u>	<u>\$ 115</u>	<u>\$ 10,836</u>
<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	<u>\$ 9,705</u>	<u>\$ 3,703</u>	<u>\$ 141</u>	<u>\$ (123)</u>	<u>\$ 13,426</u>

Note 7 – 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, 2018	\$ (69,041)	\$ 92,954	\$ 1,801	\$ 25,714
Cumulative effect of accounting for adoption of ASU 2016-01	-	-	(1,801)	\$ (1,801)
Other comprehensive income before reclassifications	-	(30,236)	-	\$ (30,236)
Tax effect	-	-	-	\$ -
Other comprehensive income before reclassifications, net of tax	-	(30,236)	-	\$ (30,236)
Amounts reclassified out of AOCI	6,734	-	-	\$ 6,734
Tax effect	(1,882)	-	-	\$ (1,882)
Amounts reclassified out of AOCI, net of tax	4,852	-	-	\$ 4,852
Net other comprehensive income	\$ 4,852	\$ (30,236)	\$ -	\$ (25,384)
Balance at September 29, 2018	\$ (64,189)	\$ 62,718	\$ -	\$ (1,471)

The Company recognized a cumulative-effect adjustment to retained earnings (accumulated deficit) of \$1,801 for the cumulative change in fair value of available-for-sale equity investments previously recognized in other comprehensive income due to the adoption of ASU 2016-01. See Note 1 for further information.

Reclassifications of pension and other post-retirement actuarial items out of AOCI are included in the computation of net periodic benefit cost. See Note 8 for further information.

Note 8 – 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 2018 and 2017 for the Company's defined benefit pension plans:

	Fiscal quarter ended September 29, 2018		Fiscal quarter ended September 30, 2017	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Net service cost	\$ -	\$ 900	\$ -	\$ 948
Interest cost	371	1,175	411	1,247
Expected return on plan assets	-	(463)	-	(519)
Amortization of prior service cost	36	52	36	19
Amortization of losses	159	1,520	82	1,595
Curtailement and settlement losses	-	441	-	331
Net periodic benefit cost	<u>\$ 566</u>	<u>\$ 3,625</u>	<u>\$ 529</u>	<u>\$ 3,621</u>

The following table shows the components of the net periodic pension cost for the nine fiscal months ended September 29, 2018 and September 30, 2017 for the Company's defined benefit pension plans:

	Nine fiscal months ended September 29, 2018		Nine fiscal months ended September 30, 2017	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Net service cost	\$ -	\$ 2,775	\$ -	\$ 2,776
Interest cost	1,113	3,628	1,232	3,613
Expected return on plan assets	-	(1,430)	-	(1,543)
Amortization of prior service cost	108	161	108	55
Amortization of losses	477	4,690	247	4,596
Curtailement and settlement losses	-	1,358	-	983
Net periodic benefit cost	<u>\$ 1,698</u>	<u>\$ 11,182</u>	<u>\$ 1,587</u>	<u>\$ 10,480</u>

Other Postretirement Benefits

The following table shows the components of the net periodic benefit cost for the third fiscal quarters of 2018 and 2017 for the Company's other postretirement benefit plans:

	Fiscal quarter ended September 29, 2018		Fiscal quarter ended September 30, 2017	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Service cost	\$ 35	\$ 71	\$ 33	\$ 71
Interest cost	69	28	77	26
Amortization of prior service (credit)	(37)	-	(209)	-
Amortization of losses (gains)	(10)	26	(24)	16
Net periodic benefit cost	<u>\$ 57</u>	<u>\$ 125</u>	<u>\$ (123)</u>	<u>\$ 113</u>

The following table shows the components of the net periodic pension cost for the nine fiscal months ended September 29, 2018 and September 30, 2017 for the Company's other postretirement benefit plans:

	Nine fiscal months ended September 29, 2018		Nine fiscal months ended September 30, 2017	
	U.S. Plans	Non-U.S. Plans	U.S. Plans	Non-U.S. Plans
Service cost	\$ 103	\$ 219	\$ 99	\$ 202
Interest cost	205	86	232	76
Amortization of prior service (credit)	(111)	-	(627)	-
Amortization of losses (gains)	(29)	80	(70)	45
Net periodic benefit cost	<u>\$ 168</u>	<u>\$ 385</u>	<u>\$ (366)</u>	<u>\$ 323</u>

Note 9 – 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 Company determines compensation cost for restricted stock units ("RSUs") and phantom stock units 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 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Restricted stock units	\$ 778	\$ 676	\$ 3,825	3,556
Phantom stock units	-	-	214	163
Total	\$ 778	\$ 676	\$ 4,039	3,719

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 29, 2018 (amortization periods in years):

	Unrecognized Compensation Cost	Weighted Average Remaining Amortization Periods
Restricted stock units	\$ 3,838	1.2
Phantom stock units	-	0.0
Total	\$ 3,838	

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.

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 29, 2018 and changes during the nine fiscal months then ended are presented below (number of RSUs in thousands):

	<u>Number of RSUs</u>	<u>Weighted Average Grant-date Fair Value per Unit</u>
Outstanding:		
January 1, 2018	986	\$ 13.34
Granted	252	18.90
Vested*	(334)	13.67
Cancelled or forfeited	-	-
Outstanding at September 29, 2018	<u>904</u>	<u>\$ 14.77</u>
Expected to vest at September 29, 2018	<u>904</u>	

* 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	<u>Expected to Vest</u>	<u>Not Expected to Vest</u>	<u>Total</u>
January 1, 2019	213	-	213
January 1, 2020	167	-	167
January 1, 2021	141	-	141

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.

Phantom stock unit activity under the phantom stock plan as of September 29, 2018 and changes during the nine fiscal months then ended are presented below (number of phantom stock units in thousands):

	<u>Number of units</u>	<u>Grant-date Fair Value per Unit</u>
Outstanding:		
January 1, 2018	157	
Granted	10	\$ 21.35
Dividend equivalents issued	2	
Outstanding at September 29, 2018	<u>169</u>	

Note 10 – 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.

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The following tables set forth business segment information:

	<u>MOSFETs</u>	<u>Diodes</u>	<u>Optoelectronic Components</u>	<u>Resistors & Inductors</u>	<u>Capacitors</u>	<u>Total</u>
Fiscal quarter ended September 29, 2018:						
Product Sales	\$ 144,227	\$ 186,492	\$ 76,443	\$ 257,330	\$ 116,447	\$ 780,939
Royalty Revenues	33	-	-	-	-	\$ 33
Total Revenue	<u>\$ 144,260</u>	<u>\$ 186,492</u>	<u>\$ 76,443</u>	<u>\$ 257,330</u>	<u>\$ 116,447</u>	<u>\$ 780,972</u>
Gross Profit	\$ 38,991	\$ 54,690	\$ 27,653	\$ 88,213	\$ 26,749	\$ 236,296
Segment Operating Income	\$ 29,502	\$ 49,561	\$ 23,144	\$ 80,042	\$ 21,655	\$ 203,904
Fiscal quarter ended September 30, 2017:*						
Product Sales	\$ 126,522	\$ 160,562	\$ 77,145	\$ 217,489	\$ 96,215	\$ 677,933
Royalty Revenues	-	-	-	8	-	\$ 8
Total Revenue	<u>\$ 126,522</u>	<u>\$ 160,562</u>	<u>\$ 77,145</u>	<u>\$ 217,497</u>	<u>\$ 96,215</u>	<u>\$ 677,941</u>
Gross Profit	\$ 32,349	\$ 43,575	\$ 29,042	\$ 65,586	\$ 19,595	\$ 190,147
Segment Operating Income	\$ 23,434	\$ 38,694	\$ 25,214	\$ 58,328	\$ 14,705	\$ 160,375
Nine fiscal months ended September 29, 2018:						
Product Sales	\$ 408,280	\$ 535,975	\$ 224,110	\$ 755,262	\$ 335,064	\$ 2,258,691
Royalty Revenues	45	-	-	61	-	\$ 106
Total Revenue	<u>\$ 408,325</u>	<u>\$ 535,975</u>	<u>\$ 224,110</u>	<u>\$ 755,323</u>	<u>\$ 335,064</u>	<u>\$ 2,258,797</u>
Gross Profit	\$ 109,440	\$ 150,298	\$ 81,290	\$ 251,712	\$ 76,094	\$ 668,834
Segment Operating Income	\$ 80,577	\$ 134,592	\$ 68,103	\$ 226,292	\$ 60,258	\$ 569,822
Nine fiscal months ended September 30, 2017:*						
Product Sales	\$ 345,399	\$ 460,492	\$ 215,040	\$ 626,684	\$ 278,241	\$ 1,925,856
Royalty Revenues	-	-	-	50	-	\$ 50
Total Revenue	<u>\$ 345,399</u>	<u>\$ 460,492</u>	<u>\$ 215,040</u>	<u>\$ 626,734</u>	<u>\$ 278,241</u>	<u>\$ 1,925,906</u>
Gross Profit	\$ 78,423	\$ 123,499	\$ 77,091	\$ 188,936	\$ 57,784	\$ 525,733
Segment Operating Income	\$ 51,917	\$ 109,014	\$ 64,007	\$ 167,035	\$ 43,041	\$ 435,014

*Recast for the retrospective adoption of ASUs 2014-09 and 2017-07. See Note 1.

	<u>Fiscal quarters ended September 29, 2018</u>	<u>September 30, 2017***</u>	<u>Nine fiscal months ended September 29, 2018</u>	<u>September 30, 2017***</u>
Reconciliation:				
Segment Operating Income	\$ 203,904	\$ 160,375	\$ 569,822	\$ 435,014
Restructuring and Severance Costs	-	(3,244)	-	(5,194)
Unallocated Selling, General, and Administrative Expenses	<u>(65,806)</u>	<u>(61,715)</u>	<u>(204,369)</u>	<u>(181,821)</u>
Consolidated Operating Income	\$ 138,098	\$ 95,416	\$ 365,453	\$ 247,999
Unallocated Other Income (Expense)	<u>(11,290)</u>	<u>(9,228)</u>	<u>(49,067)</u>	<u>(35,660)</u>
Consolidated Income Before Taxes	<u>\$ 126,808</u>	<u>\$ 86,188</u>	<u>\$ 316,386</u>	<u>\$ 212,339</u>

***Recast for the adoption of ASU 2017-07. See Note 1.

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The Company has a broad line of products that it sells to OEMs, EMS companies, and independent distributors. The distribution of sales by customer type is shown below:

	Fiscal quarters ended		Nine fiscal months ended		Years Ended December 31,	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017	2017	2016
Distributors	\$ 452,051	\$ 383,727	\$ 1,302,127	\$ 1,102,232	\$ 1,484,276	\$ 1,280,060
OEMs	276,299	247,551	803,128	685,565	931,291	861,322
EMS companies	52,622	46,663	153,542	138,109	183,801	175,946
Total Revenue	<u>\$ 780,972</u>	<u>\$ 677,941</u>	<u>\$ 2,258,797</u>	<u>\$ 1,925,906</u>	<u>\$ 2,599,368</u>	<u>\$ 2,317,328</u>

Net revenues were attributable to customers in the following regions:

	Fiscal quarters ended		Nine fiscal months ended		Years Ended December 31,	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017	2017	2016
Asia	\$ 315,701	\$ 282,416	\$ 904,047	\$ 811,987	\$ 1,091,107	\$ 948,195
Europe	269,518	237,874	809,501	665,049	902,357	810,543
Americas	195,753	157,651	545,249	448,870	605,904	558,590
Total Revenue	<u>\$ 780,972</u>	<u>\$ 677,941</u>	<u>\$ 2,258,797</u>	<u>\$ 1,925,906</u>	<u>\$ 2,599,368</u>	<u>\$ 2,317,328</u>

The Company generates substantially all of its revenue from product sales to end customers in the industrial, automotive, telecommunications, computing, consumer products, power supplies, military and aerospace, and medical end markets. Sales by end market are presented below:

	Fiscal quarters ended		Nine fiscal months ended		Years Ended December 31,	
	September 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017	2017	2016
Industrial	\$ 283,134	\$ 242,038	\$ 858,963	\$ 691,678	\$ 934,631	\$ 796,031
Automotive	224,041	185,781	642,293	537,008	727,220	640,767
Telecommunications	51,935	50,710	144,326	143,828	190,682	193,456
Computing	62,774	55,380	163,862	143,948	198,850	172,481
Consumer Products	48,583	40,155	126,781	108,711	145,243	150,741
Power Supplies	34,899	44,327	110,468	120,223	160,038	132,555
Military and Aerospace	41,881	33,029	117,355	98,753	132,898	128,523
Medical	33,725	26,521	94,749	81,757	109,806	102,774
Total revenue	<u>\$ 780,972</u>	<u>\$ 677,941</u>	<u>\$ 2,258,797</u>	<u>\$ 1,925,906</u>	<u>\$ 2,599,368</u>	<u>\$ 2,317,328</u>

Note 11 – 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 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Numerator:				
Net earnings attributable to Vishay stockholders	\$ 77,876	\$ 64,404	\$ 243,339	\$ 157,313
Denominator:				
Denominator for basic earnings per share:				
Weighted average shares	144,215	145,572	144,197	145,973
Outstanding phantom stock units	168	156	167	155
Adjusted weighted average shares	<u>144,383</u>	<u>145,728</u>	<u>144,364</u>	<u>146,128</u>
Effect of dilutive securities:				
Convertible and exchangeable debt instruments	8,062	10,480	11,827	9,160
Restricted stock units	501	493	511	338
Dilutive potential common shares	<u>8,563</u>	<u>10,973</u>	<u>12,338</u>	<u>9,498</u>
Denominator for diluted earnings per share:				
Adjusted weighted average shares - diluted	<u>152,946</u>	<u>156,701</u>	<u>156,702</u>	<u>155,626</u>
Basic earnings per share attributable to Vishay stockholders	\$ 0.54	\$ 0.44	\$ 1.69	\$ 1.08
Diluted earnings per share attributable to Vishay stockholders	\$ 0.51	\$ 0.41	\$ 1.55	\$ 1.01

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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 29, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Convertible debt:				
Convertible Senior Debentures, due 2041	-	8,401	-	8,371
Convertible Senior Notes, due 2025	19,052	-	7,607	-
Weighted average other	307	379	307	514

The Company's convertible debt instruments are only convertible for specified periods upon the occurrence of certain events. The convertible debentures due 2042 became convertible subsequent to the December 31, 2016 evaluation of the conversion criteria, and have remained convertible for each subsequent quarterly evaluation through the September 29, 2018 evaluation. The convertible debentures due 2040 became convertible subsequent to the September 30, 2017 evaluation of the conversion criteria, and have remained convertible for each subsequent quarterly evaluation through the September 29, 2018 evaluation. In periods that the debentures are not convertible, the certain conditions which could trigger conversion of the remaining debentures have been deemed to be non-substantive, and accordingly, the Company assumes the conversion of these instruments in its diluted earnings per share computation during periods in which they are dilutive.

At the direction of its Board of Directors, the Company intends, upon conversion, to repay the principal amounts of the convertible senior debentures, due 2040, due 2041, and due 2042, and the convertible senior notes, due 2025, in cash and settle any additional amounts in shares of Vishay common stock. Accordingly, the convertible instruments 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 \$12.81, 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 \$17.56, no shares are included in the diluted earnings per share computation for the convertible senior debentures due 2041, if the average market price is less than \$10.90, no shares are included in the diluted earnings per share computation for the convertible senior debentures due 2042, and if the average market price is less than \$31.49, no shares are included in the diluted earnings per share computation for the convertible senior notes due 2025.

Note 12 – 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
September 29, 2018				
Assets:				
Assets held in rabbi trusts	\$ 43,701	\$ 26,363	\$ 17,338	\$ -
Available for sale securities	\$ 4,429	4,429	-	-
	\$ 48,130	\$ 30,792	\$ 17,338	\$ -
Liabilities:				
Embedded derivative - convertible debentures due 2040	\$ (47)	\$ -	\$ -	\$ (47)
Embedded derivative - convertible debentures due 2041	\$ (244)	-	-	(244)
Embedded derivative - convertible debentures due 2042	\$ (63)	-	-	(63)
	\$ (354)	\$ -	\$ -	\$ (354)
December 31, 2017				
Assets:				
Assets held in rabbi trusts	\$ 45,252	\$ 28,589	16,663	\$ -
Available for sale securities	\$ 4,621	4,621	-	-
	\$ 49,873	\$ 33,210	\$ 16,663	\$ -
Liabilities:				
Embedded derivative - convertible debentures due 2040	\$ (206)	\$ -	\$ -	\$ (206)
Embedded derivative - convertible debentures due 2041	\$ (214)	-	-	(214)
Embedded derivative - convertible debentures due 2042	\$ (118)	-	-	(118)
	\$ (538)	\$ -	\$ -	\$ (538)

As described in Note 6, the Company allocated the aggregate repurchase payment of convertible senior debentures between the associated liability and equity components of the repurchased convertible senior debentures based on a nonrecurring fair value measurement of the convertible senior debentures due 2040 and due 2042 immediately prior to the repurchase. The nonrecurring fair value measurement is considered a Level 3 measurement. See Note 6 for further information on the measurement and input.

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.

The Company holds investments in equity 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 period. 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 has entered 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 \$100,000 as of December 31, 2017. There were no such contracts outstanding as of September 29, 2018. The forward contracts were short-term in nature and were renewed at the Company's discretion until the intercompany loans were repaid. We did not designate the forward contracts as hedges for accounting purposes, and as such the change in the fair value of the contracts was recognized in the consolidated condensed statements of operations as a component of other income (expense). The Company estimated 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 December 31, 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 29, 2018 and December 31, 2017 is approximately \$989,400 and \$1,071,200, respectively, compared to its carrying value, excluding the derivative liabilities and deferred financing costs, of \$605,948 and \$379,033, 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 29, 2018 and December 31, 2017, 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 29, 2018 and December 31, 2017, 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.

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. The quarterly cash dividend was increased by 26% to \$0.085 per share in the second fiscal quarter of 2018. In December 2015, we amended our credit facility to increase our ability to repurchase shares of stock or pay cash dividends. The Company repurchased 2,250,236 shares of stock for \$39.9 million pursuant to the stock repurchase plan that expired on June 1, 2018. No repurchases were made in 2018. In the second fiscal quarter of 2018, we issued \$600 million convertible senior notes due 2025. We used the net proceeds from the issuance of these notes to repurchase \$220.0 million and \$69.1 million principal amount of convertible senior debentures due 2040 and due 2042, respectively. We recognized a loss of \$17.3 million due to the early extinguishment of the repurchased convertible senior debentures.

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 had expected 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.

As a result of the enactment of the Tax Cuts and Jobs Act ("TCJA") in December 2017, we terminated the aforementioned cash repatriation plan and replaced it with a plan to repatriate approximately \$1.1 billion of unremitted foreign earnings in Israel, Germany, Austria, and France in the fourth fiscal quarter of 2017. As a result of additional analysis completed in the second fiscal quarter of 2018, we adjusted the amount of foreign unremitted earnings available from Israel, Germany, Austria, and France to approximately \$1.2 billion and accrued additional provisional tax expense. We repatriated approximately \$274.0 million and \$450.0 million to the United States, and paid withholding and foreign taxes of approximately \$92.1 million and \$64.7 million in the second and third fiscal quarters of 2018, respectively. Substantially all of the amounts repatriated in the second fiscal quarter were used to reduce the outstanding balance of the credit facility and to repay certain intercompany indebtedness. A portion of the amounts repatriated in the third fiscal quarter were used to eliminate the remaining outstanding balance of the credit facility. The provisional tax expense recorded in the fourth quarter of 2017 related to the enactment of the TCJA included these amounts paid in the second and third fiscal quarters of 2018.

As permitted by Securities and Exchange Commission ("SEC") Staff Accounting Bulletin ("SAB") No. 118, the net tax expense recorded in our financial statements due to the enactment of the TCJA for the fourth fiscal quarter of 2017, and adjusted in the second and third fiscal quarters of 2018 is considered "provisional," based on reasonable estimates. We are continuing to collect and analyze detailed information that could impact this amount and may record further adjustments to refine those estimates during the measurement period defined in SAB No. 118, as additional analysis is completed. See further information in "U.S. Tax Reform: Tax Cuts and Jobs Act" below.

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 fourth fiscal quarter of 2017, we substantially completed our cost reduction programs, which had been ongoing since 2013. Our cost reduction programs are more fully described in Note 4 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, 2017, filed with the SEC on February 16, 2018.

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" below. In the first fiscal quarter of 2018, we retrospectively adopted two new accounting standards, which impacted previously reported net revenues, gross profit margin, and segment operating income. The amounts previously reported for these metrics have been recast. See additional information in Note 1 to the consolidated condensed financial statements included in Item 1. We continued to experience excellent business conditions in virtually all end-markets in the third fiscal quarter of 2018. Net revenues continued to increase and are significantly higher than the prior year quarter. The key financial metrics continue to be strong even as distributors, particularly of semiconductor products in Asia, normalized their backlogs during the third fiscal quarter.

Net revenues for the fiscal quarter ended September 29, 2018 were \$781.0 million, compared to \$761.0 million and \$677.9 million for the fiscal quarters ended June 30, 2018 and September 30, 2017, respectively. The net earnings attributable to Vishay stockholders for the fiscal quarter ended September 29, 2018 were \$77.9 million, or \$0.51 per diluted share, compared to \$103.1 million, or \$0.65 per share for the fiscal quarter ended June 30, 2018, and \$64.4 million, or \$0.41 per diluted share for the fiscal quarter ended September 30, 2017.

Net revenues for the nine fiscal months ended September 29, 2018 were \$2,258.8 million, compared to \$1,925.9 million for the nine fiscal months ended September 30, 2017. The net earnings attributable to Vishay stockholders for the nine fiscal months ended September 29, 2018 were \$243.3 million, or \$1.55 per diluted share, compared to \$157.3 million, or \$1.01 per diluted share for the nine fiscal months ended September 30, 2017.

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 29, 2018	June 30, 2018	September 30, 2017	September 29, 2018	September 30, 2017
GAAP net earnings attributable to Vishay stockholders	\$ 77,876	\$ 103,097	\$ 64,404	\$ 243,339	\$ 157,313
Reconciling items affecting operating income:					
Restructuring and severance costs	\$ -	\$ -	\$ 3,244	\$ -	\$ 5,194
Reconciling items affecting other income (expense):					
Loss on disposal of equity affiliate	\$ -	\$ -	\$ -	\$ -	\$ 7,060
Loss on early extinguishment of debt	-	17,309	-	17,309	-
Reconciling items affecting tax expense:					
Enactment of TCJA	\$ 13,496	\$ 12,000	\$ -	\$ 25,496	\$ -
Effects of cash repatriation program	680	(9,006)	(892)	(7,010)	(3,100)
Change in deferred taxes due to early extinguishment of debt	-	(33,963)	-	(33,963)	-
Effects of changes in uncertain tax positions	-	-	(804)	-	(804)
Tax effects of pre-tax items above	-	(3,784)	(674)	(3,784)	(1,271)
Adjusted net earnings	<u>\$ 92,052</u>	<u>\$ 85,653</u>	<u>\$ 65,278</u>	<u>\$ 241,387</u>	<u>\$ 164,392</u>
Adjusted weighted average diluted shares outstanding	152,946	157,657	156,701	156,702	155,626
Adjusted earnings per diluted share	\$ 0.60	\$ 0.54	\$ 0.42	\$ 1.54	\$ 1.06

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

	Fiscal quarters ended			Nine fiscal months ended	
	September 29, 2018	June 30, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Net cash provided by (used in) continuing operating activities	\$ 70,721	\$ (8,689)	\$ 117,579	\$ 108,891	\$ 245,845
Proceeds from sale of property and equipment	77	8,194	196	8,455	1,484
Less: Capital expenditures	(49,745)	(48,373)	(35,723)	(126,391)	(84,790)
Free cash	<u>\$ 21,053</u>	<u>\$ (48,868)</u>	<u>\$ 82,052</u>	<u>\$ (9,045)</u>	<u>\$ 162,539</u>

Our results for the fiscal quarters ended September 29, 2018, June 30, 2018, and September 30, 2017 and nine fiscal months ending September 29, 2018 and September 30, 2017 represent the effects of a strong business environment, our cost reduction programs, and our organic growth initiatives. We experienced a relatively sharp upturn in demand beginning in the first quarter of 2017 that has continued through first nine fiscal months of 2018 and further improved results. Distributors, particularly of semiconductor products in Asia, normalized their backlogs in the third fiscal quarter, which negatively impacted the book-to-bill ratio. 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.

Our free cash results for the fiscal quarter and nine fiscal months ended September 29, 2018 were significantly impacted by the payment of cash taxes of \$92.1 million and \$64.7 million related to the cash repatriated to the U.S. in the second and third fiscal quarters of 2018, respectively, and the payment of the first \$14.4 million installment of the U.S. transition tax in the second fiscal quarter of 2018.

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 2017 through the third fiscal quarter of 2018 (*dollars in thousands*):

	<u>3rd Quarter 2017*</u>	<u>4th Quarter 2017*</u>	<u>1st Quarter 2018</u>	<u>2nd Quarter 2018</u>	<u>3rd Quarter 2018</u>
Net revenues	\$ 677,941	\$ 673,462	\$ 716,795	\$ 761,030	\$ 780,972
Gross profit margin	28.0%	26.3%	28.6%	29.9%	30.3%
Operating margin (1)	14.1%	11.3%	14.5%	16.2%	17.7%
End-of-period backlog	\$ 1,122,200	\$ 1,320,200	\$ 1,498,700	\$ 1,595,200	\$ 1,559,700
Book-to-bill ratio	1.11	1.28	1.22	1.17	0.95
Inventory turnover	4.5	4.5	4.6	4.6	4.4
Change in ASP vs. prior quarter	-0.1%	-0.2%	-0.2%	0.7%	0.6%

* Recast for the retrospective adoption of ASUs 2014-09 and 2017-07. See Note 1 to the consolidated condensed financial statements included in Item 1.

(1) Operating margin for the third and fourth fiscal quarters of 2017 includes \$3.2 million and \$6.1 million, respectively, of restructuring and severance expenses (see Note 4 to our consolidated condensed financial statements).

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 2017. Distributors, particularly of semiconductor products in Asia, normalized their backlogs in the third fiscal quarter, which decreased the backlog and negatively impacted the book-to-bill ratio. Many of our product lines are operating at or near capacity, but the high order rates have increased product delivery leadtimes and even caused some shortages of supply. We continue to raise critical capacities, while remaining careful in adding operational fixed costs. Pricing pressures have been minimal due to the strong business environment.

Gross profit margin increased versus the prior fiscal quarter and the third fiscal quarter of 2017. The increases are primarily volume-driven.

The book-to-bill ratio in the third fiscal quarter of 2018 was impacted by the normalization of distributor backlog, particularly of semiconductor products in Asia, and decreased to 0.95 versus 1.17 in the second fiscal quarter of 2018. The book-to-bill ratios in the third fiscal quarter of 2018 for distributors and original equipment manufacturers ("OEM") were 0.80 and 1.15, respectively, versus ratios of 1.23 and 1.08, respectively, during the second fiscal quarter of 2018.

For the fourth fiscal quarter of 2018, we anticipate revenues between \$745 million and \$785 million and gross margins of 28.0% to 29.5% 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 2017 through the third fiscal quarter of 2018 (*dollars in thousands*):

	<u>3rd Quarter 2017*</u>	<u>4th Quarter 2017*</u>	<u>1st Quarter 2018</u>	<u>2nd Quarter 2018</u>	<u>3rd Quarter 2018</u>
<u>MOSFETs</u>					
Net revenues	\$ 126,522	\$ 122,077	\$ 127,506	\$ 136,559	\$ 144,260
Book-to-bill ratio	1.19	1.59	1.23	0.96	0.88
Gross profit margin	25.6%	25.5%	25.1%	28.1%	27.0%
Segment operating margin	18.5%	18.2%	17.7%	20.9%	20.5%
<u>Diodes</u>					
Net revenues	\$ 160,562	\$ 159,466	\$ 167,017	\$ 182,466	\$ 186,492
Book-to-bill ratio	1.18	1.34	1.30	1.08	0.86
Gross profit margin	27.1%	26.1%	25.9%	28.7%	29.3%
Segment operating margin	24.1%	23.0%	22.7%	25.8%	26.6%
<u>Optoelectronic Components</u>					
Net revenues	\$ 77,145	\$ 69,389	\$ 71,958	\$ 75,709	\$ 76,443
Book-to-bill ratio	0.94	1.21	1.24	1.20	0.88
Gross profit margin	37.6%	30.1%	37.8%	34.9%	36.2%
Segment operating margin	32.7%	23.8%	31.7%	29.3%	30.3%
<u>Resistors & Inductors</u>					
Net revenues	\$ 217,497	\$ 216,795	\$ 244,046	\$ 253,947	\$ 257,330
Book-to-bill ratio	1.15	1.19	1.15	1.16	1.02
Gross profit margin	30.2%	29.0%	32.2%	33.5%	34.3%
Segment operating margin	26.8%	25.8%	28.7%	30.0%	31.1%
<u>Capacitors</u>					
Net revenues	\$ 96,215	\$ 105,735	\$ 106,268	\$ 112,349	\$ 116,447
Book-to-bill ratio	0.97	1.08	1.26	1.59	1.03
Gross profit margin	20.4%	19.5%	22.9%	22.3%	23.0%
Segment operating margin	15.3%	14.7%	17.8%	17.5%	18.6%

*Recast for the retrospective adoption of ASU 2014-09 and 2017-07. See Note 1 of the consolidated condensed financial statements included in Item 1.

U.S. Tax Reform: Tax Cuts and Jobs Act

On December 22, 2017, the Tax Cuts and Jobs Act (the "TCJA") was enacted in the United States. The TCJA represents sweeping changes in U.S. tax law. Among the numerous changes in tax law, the TCJA permanently reduces the U.S. corporate income tax rate to 21% beginning in 2018; imposes a one-time transition tax on deferred foreign earnings; establishes a partial territorial tax system by allowing a 100% dividends received deduction on qualifying dividends paid by foreign subsidiaries; limits deductions for net interest expense; and expands the U.S. taxation of foreign earned income to include "global intangible low-taxed income" of foreign subsidiaries.

Under U.S. GAAP (specifically, ASC Topic 740), the effects of changes in tax rates and laws on deferred tax balances are recognized in the period in which the new legislation is enacted. The total effect of tax law changes on deferred tax balances was recorded as a component of income tax expense in the fourth fiscal quarter of 2017.

In response to the TCJA, the Staff of the U.S. Securities and Exchange Commission issued Staff Accounting Bulletin No. 118 ("SAB No. 118") to provide guidance to registrants in applying ASC Topic 740 in connection with the TCJA. SAB No. 118 provides that in the period of enactment, the income tax effects of the TCJA may be reported as a provisional amount based on a reasonable estimate (to the extent a reasonable estimate can be determined), which would be subject to adjustment during a "measurement period". The measurement period begins in the reporting period of the TCJA's enactment and ends when a registrant has obtained, prepared, and analyzed the information that was needed in order to complete the accounting requirements under ASC Topic 740. SAB No. 118 also describes supplemental disclosures that should accompany the provisional amounts.

The TCJA represents the first significant change in U.S. tax law in over 30 years. As permitted by SAB No. 118, the net tax expense recorded in our financial statements for the fourth fiscal quarter of 2017 due to the enactment of the TCJA is considered "provisional," based on reasonable estimates. As further described below, the Company adjusted its estimates for the impact of enactment of the TCJA in the second and third fiscal quarters of 2018. We are continuing to collect and analyze detailed information about the earnings and profits of our non-U.S. subsidiaries, the related taxes paid, the amounts which could be repatriated, the foreign taxes which may be incurred on repatriation, and the associated impact of these items under the TCJA. We may record additional adjustments to refine those estimates during the measurement period, as additional analysis is completed. Furthermore, we are continuing to evaluate the TCJA's provisions and may prospectively adjust our financial and capital structure and business practices accordingly.

The provisional amount of net tax expense recorded in the fourth fiscal quarter of 2017, as adjusted in the second and third fiscal quarters of 2018, that is directly and indirectly related to the TCJA is summarized as follows (*amounts in thousands*):

Remeasurement of net deferred tax liabilities	\$ (76,027)
Transition tax on unremitted foreign earnings	222,983
Incremental foreign taxes on assumed repatriation	232,282
Reversal of deferred taxes due to cancellation of 2015 repatriation plan	(118,887)
Total tax expense related to the enactment of the TCJA	<u>\$ 260,351</u>

As a result of the TCJA, we recognized a provisional tax benefit of \$76.0 million to remeasure our net deferred tax liabilities at the lower, 21% rate.

The TCJA transitions the U.S. from a worldwide tax system to a partial territorial tax system. Under previous law, companies could indefinitely defer U.S. income taxation on unremitted foreign earnings. The TCJA imposes a one-time transition tax on deferred foreign earnings of 15.5% for liquid assets and 8% for illiquid assets, payable in defined increments over eight years. As a result of this requirement, we recognized provisional tax expense of \$215.6 million in the fourth fiscal quarter of 2017 and an additional \$6.2 million based on additional analysis completed in the third fiscal quarter of 2018, and provisionally expect to pay \$184.5 million, net of estimated applicable foreign tax credits, and after utilization of net operating loss, R&D credit, and foreign tax credit carryforwards. We paid the first installment of \$14.4 million in the second fiscal quarter of 2018. These previously deferred foreign earnings may now be repatriated to the United States without additional U.S. federal taxation. However, any such repatriation could incur withholding and other foreign taxes in the source and intervening foreign jurisdictions, and certain U.S. state taxes.

Due to the changes in taxation of dividends received from foreign subsidiaries, and also because of the need to finance the payment of the transition tax, we made the determination during the fourth fiscal quarter of 2017 that certain unremitted foreign earnings in Israel, Germany, Austria, and France are no longer permanently reinvested, and recorded provisional tax expense of \$213.0 million to accrue the incremental foreign income taxes and withholding taxes payable to foreign jurisdictions assuming the hypothetical repatriation to the United States of these approximately \$1.1 billion of available foreign earnings. As a result of additional analysis completed in the second and third fiscal quarters of 2018, the Company revised the amount available to be repatriated to the U.S. to approximately \$1.2 billion and recorded additional provisional tax expense to accrue the incremental foreign income taxes and withholding taxes payable to foreign jurisdictions. During the third fiscal quarter of 2018, we identified additional information regarding the foreign taxes payable on such repatriation, and recorded an additional adjustment of \$7.3 million. We repatriated approximately \$274.0 million and \$450.0 million to the United States, and paid withholding and foreign taxes of approximately \$92.1 million and \$64.7 million in the second and third fiscal quarters of 2018, respectively. See further information in "Financial Condition, Liquidity, and Capital Resources" below.

After completing these phases of cash repatriation, there is approximately \$300 million of unremitted foreign earnings that we have deemed not permanently reinvested and thus have accrued foreign withholding and other taxes. We expect to repatriate these remaining amounts at a measured pace over several years, and may decide to ultimately not repatriate some of these amounts.

There are additional amounts of unremitted foreign earnings in other countries, which continue to be reinvested indefinitely, and we have made no provision for incremental foreign income taxes and withholding taxes payable to foreign jurisdictions related to these amounts. Determination of the amount of the unrecognized deferred foreign tax liability for these amounts is not practicable because of the complexities associated with its hypothetical calculation.

During the fourth fiscal quarter of 2015, we recognized income tax, 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. This tax expense was recognized in 2015 following an evaluation of our anticipated domestic cash needs over the next several years and our most efficient use of liquidity, and with consideration of the amount of cash that could be repatriated to the U.S. efficiently with lesser withholding taxes in foreign jurisdictions. We repatriated \$38.0 million and \$46.0 million pursuant to this program in 2017 and 2016, respectively. Prior to the enactment of the TCJA, the related deferred tax liability for the 2015 repatriation plan was \$118.9 million. We have terminated the 2015 cash repatriation plan and recorded a provisional income tax benefit to reverse this deferred tax liability, which was replaced by the liability for the transition tax and foreign income and withholding taxes described above.

The deferred tax liability related to these unremitted foreign earnings is based on the available sources of cash, applicable tax rates, foreign currency exchange rates, and other factors and circumstances, as of each balance sheet date. Changes in these underlying facts and circumstances result in changes in the deferred tax liability balance, which are recorded as tax benefit or expense. We recorded expense of \$0.7 million and benefit of \$7.0 million for the third fiscal quarter and nine fiscal months ended September 29, 2018, respectively, for such remeasurements.

We expect to continue to generate a significant amount of cash and profits from our non-U.S. subsidiaries, and our provision for income taxes will continue to be based on various assertions regarding the future use of that cash and profits. Such assertions require us to consider a wide variety of U.S. federal and foreign tax laws, and the application of such laws to our operational and strategic needs.

Our GAAP interest expense generally exceeds our U.S.-based operating income, resulting in pre-tax losses in the U.S. We have historically recorded U.S. federal tax benefits on these losses, at 35%, which had the effect of reducing our consolidated GAAP tax rate. Accordingly, the reduction in the statutory U.S. tax rate will generally increase our consolidated GAAP tax rate due to the lower tax benefits recognized on a GAAP basis.

The TCJA expands the U.S. current taxation of foreign earned income beginning in 2018. Global intangible low-taxed income ("GILTI") is income of our non-U.S. subsidiaries that exceeds an allowable return and which will then be included in U.S. current taxable income, subject to certain adjustments, and possibly reduced by indirect foreign tax credits. We have elected to account for GILTI tax in the period in which it is incurred, and therefore have not provided any deferred tax impacts of GILTI in our consolidated financial statements for the year ended December 31, 2017. We expect to recognize a significant amount of GILTI income in 2018, and have included an estimate of such amounts in our provision for income taxes for the fiscal quarter and nine fiscal months ended September 29, 2018. Because of the complexity of the new GILTI provisions, the rules around its implementation are not yet clear and as such, this estimate could change. The TCJA also imposes a base erosion and anti-abuse minimum tax ("BEAT"). BEAT could potentially increase our U.S. federal income tax by disallowing certain otherwise deductible payments from the U.S. to non-U.S. subsidiaries and imposing a minimum tax if greater than the regular tax. We expect to be subject to BEAT in 2018 and future periods, but BEAT did not have a material impact on our provision for income taxes for the fiscal quarter or nine fiscal months ended September 29, 2018. We are still evaluating the potential impacts of the new GILTI and BEAT tax rules.

We historically derived significant cash tax savings from our convertible debentures. For U.S. federal income tax purposes, the interest deduction for the convertible debentures is computed based on the comparable yield of a hypothetical fixed rate debt instrument with similar terms and conditions but no conversion feature. Accordingly, annual interest deductions are calculated at 8.0%, 8.375%, and 7.5% of the adjusted issue price. The adjusted issue price, and consequently the interest deduction for income tax purposes, grows over the term of the debt due to the difference between the interest deduction using a comparable yield applied to the adjusted issue price, and the coupon rate of 2.25% on the principal amount. Interest expense recognized in accordance with GAAP is calculated at the comparable yield multiplied by the carrying amount of the liability component of convertible debentures, which is substantially lower than the adjusted issue price for tax purposes. The difference between the tax and GAAP interest computations resulted in substantially greater interest deductions for tax purposes than GAAP interest expense. The TCJA limits deduction for net interest expense, which makes the convertible debentures less attractive financial instruments. We repurchased \$220.0 million and \$69.1 million of convertible debentures due 2040 and due 2042, respectively, in the second fiscal quarter of 2018. Our repurchase of a portion of the outstanding convertible debentures reduced our expected full year 2018 tax rate. While the remaining convertible debentures due 2040 and 2042 are currently convertible at the option of the holders, none of the convertible debentures are currently callable by us.

The effects of the various TCJA provisions are all interrelated and the impact of any specific item on our effective tax rate is difficult to isolate.

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.

On February 8, 2018, we acquired substantially all of the assets and liabilities of UltraSource, Inc. ("UltraSource"), a U.S.-based, privately-held thin film circuit and thin film interconnect manufacturer, for \$13.6 million. The results and operations of this acquisition have been included in the Resistors & Inductors segment since February 8, 2018. UltraSource contributed \$4.8 million and \$12.3 million of net revenues to the third fiscal quarter and nine fiscal months ended September 29, 2018.

On June 11, 2018, we acquired EuroPower Holdings Ltd. ("EuroPower"), a distributor of electronic components in the United Kingdom for \$2.9 million. The results and operations of this acquisition have been included in the Resistors & Inductors segment since June 11, 2018. EuroPower did not have a material impact on the Company's consolidated results for the fiscal quarter or nine fiscal months ended September 29, 2018.

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

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 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. These programs, including the extension of the MOSFET Enhanced Competitiveness Program, were substantially completed as of December 31, 2017.

Programs were also initiated in 2015. The programs initiated in 2015 included 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 implementation of these programs did not impact planned R&D activities, or our growth initiatives in Asian markets. As of December 31, 2017, these programs were substantially implemented.

We do not anticipate any material restructuring activities in 2018. We continue to monitor the economic environment and its potential effects on our customers and the end markets that we serve. We also continue to closely monitor our costs and may be required to implement additional restructuring activities if we were to experience a significant economic downturn.

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.

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 first nine fiscal months of 2018 compared to the prior year-to-date period, with the translation of foreign currency revenues and expenses into U.S. dollars increasing reported revenues and expenses versus the prior year-to-date period. The dollar generally was stronger during the third fiscal quarter compared to the prior year quarter and prior fiscal quarter, with the translation of foreign currency revenues and expenses into U.S. dollars decreasing reported revenues and expenses versus the prior year quarter and prior fiscal 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 for the third fiscal quarter of 2018 have been favorably impacted (compared to the prior year quarter and prior fiscal quarter) by local currency transactions of subsidiaries which use the U.S. dollar as their functional currency. The cost of products sold for the first nine fiscal months of 2018 have been unfavorably impacted compared to the prior year-to-date period.

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 29, 2018	June 30, 2018	September 30, 2017*	September 29, 2018	September 30, 2017*
Cost of products sold	69.7%	70.1%	72.0%	70.4%	72.7%
Gross profit	30.3%	29.9%	28.0%	29.6%	27.3%
Selling, general & administrative expenses	12.6%	13.7%	13.5%	13.4%	14.2%
Operating income	17.7%	16.2%	14.1%	16.2%	12.9%
Income before taxes and noncontrolling interest	16.2%	12.8%	12.7%	14.0%	11.0%
Net earnings attributable to Vishay stockholders	10.0%	13.5%	9.5%	10.8%	8.2%
Effective tax rate	38.4%	-5.8%	25.1%	22.9%	25.6%

*Recast for the retrospective adoption of ASUs 2014-09 and 2017-07. See Note 1 to our consolidated condensed financial statement included in Item 1.

Net Revenues

Net revenues were as follows (*dollars in thousands*):

	Fiscal quarters ended			Nine fiscal months ended	
	September 29, 2018	June 30, 2018	September 30, 2017**	September 29, 2018	September 30, 2017**
Net revenues	\$ 780,972	\$ 761,030	\$ 677,941	\$ 2,258,797	\$ 1,925,906

**Recast for the retrospective adoption of ASU 2014-09. See Note 1 to our consolidated condensed financial statements included in Item 1.

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

	Fiscal quarter ended September 29, 2018		Nine fiscal months ended September 29, 2018	
	Change in net revenues	% change	Change in net revenues	% change
June 30, 2018	\$ 19,942	2.6%		
September 30, 2017	\$ 103,031	15.2%	\$ 332,891	17.3%

Changes in net revenues were attributable to the following:

	vs. Prior Quarter	vs. Prior Year Quarter	vs. Prior Year-to-Date
Change attributable to:			
Increase in volume	2.9%	14.2%	13.4%
Change in average selling prices	0.6%	0.5%	0.1%
Foreign currency effects	-0.9%	-0.3%	2.6%
Acquisitions	0.2%	0.9%	0.7%
Other	-0.2%	-0.1%	0.5%
Net change	2.6%	15.2%	17.3%

We experienced a substantial, broad-based increase in demand for our products beginning in the first fiscal quarter of 2017 that continued through the third fiscal quarter of 2018, which resulted in increased net revenues compared to the prior fiscal quarter and prior year periods.

Gross Profit and Margins

Gross profit margins for the fiscal quarter ended September 29, 2018 were 30.3%, versus 29.9% and 28.0%, for the comparable prior quarter and prior year period, respectively. Gross profit margins for the nine fiscal months ended September 29, 2018 were 29.6%, versus 27.3% for the comparable prior year period. The increases are due primarily to increased sales volume. We were able to offset the negative impacts of inflation and negative foreign currency impacts 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 29, 2018	June 30, 2018	September 30, 2017*	September 29, 2018	September 30, 2017*
Net revenues	\$ 144,260	\$ 136,559	\$ 126,522	\$ 408,325	\$ 345,399
Gross profit margin	27.0%	28.1%	25.6%	26.8%	22.7%

*Recast for the retrospective adoption of ASUs 2014-09 and 2017-07. See Note 1 to our consolidated condensed financial statements included in Item 1.

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

	Fiscal quarter ended September 29, 2018		Nine fiscal months ended September 29, 2018	
	Change in net revenues	% change	Change in net revenues	% change
June 30, 2018	\$ 7,701	5.6%		
September 30, 2017	\$ 17,738	14.0%	\$ 62,926	18.2%

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

	vs. Prior Quarter	vs. Prior Year Quarter	vs. Prior Year-to-Date
Change attributable to:			
Increase in volume	5.9%	13.9%	17.7%
Change in average selling prices	0.3%	0.3%	-0.3%
Foreign currency effects	-0.4%	-0.2%	1.0%
Other	-0.2%	0.0%	-0.2%
Net change	5.6%	14.0%	18.2%

MOSFETs segment net revenues in the fiscal quarter and nine fiscal months ended September 29, 2018 increased significantly versus the prior fiscal quarter and prior year periods. All regions and sales channels contributed to the significant increase versus the prior year quarter with the Americas and Europe regions experiencing above average growth. The strong performance of our IC product business in the third fiscal quarter of 2017 results in comparatively lower growth with Asian distributors in the current year periods.

Gross profit margin increased versus the prior year periods due to the significant increases in net revenues, a more profitable product mix, and the impact of the cost reduction program, which were partially offset by cost inflation and the impact of U.S. tariffs on goods imported from China.

Due to the continuing positive business climate in the third fiscal quarter of 2018, the reduction in the pricing pressure from last year continued for our established MOSFETs products. Price increases for select products and ongoing price reductions for other products resulted in a net increase of average selling prices versus the prior fiscal quarter and prior year quarter and a slight decline versus the prior year-to-date period.

We recently completed major cost reduction activities, which had been ongoing since 2013, to improve the operating results of the MOSFETs segment. See Note 4 to our consolidated condensed financial statements included in Item 1.

We continue to make capital and R&D investments in this business. We will maintain our R&D and management presence in the Silicon Valley area, and in the second fiscal quarter of 2018 we moved into a new R&D facility in San Jose. 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 quarters ended			Nine fiscal months ended	
	September 29, 2018	June 30, 2018	September 30, 2017*	September 29, 2018	September 30, 2017*
Net revenues	\$ 186,492	\$ 182,466	\$ 160,562	\$ 535,975	\$ 460,492
Gross profit margin	29.3%	28.7%	27.1%	28.0%	26.8%

*Recast for the retrospective adoption of ASUs 2014-09 and 2017-07. See Note 1 to our consolidated condensed financial statements included in Item 1.

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

	Fiscal quarter ended September 29, 2018		Nine fiscal months ended September 29, 2018	
	Change in net revenues	% change	Change in net revenues	% change
June 30, 2018	\$ 4,026	2.2%		
September 30, 2017	\$ 25,930	16.1%	\$ 75,483	16.4%

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

	vs. Prior Quarter	vs. Prior Year Quarter	vs. Prior Year-to-Date
Change attributable to:			
Increase in volume	1.9%	13.3%	12.1%
Increase in average selling prices	1.1%	2.4%	1.5%
Foreign currency effects	-0.8%	-0.2%	2.0%
Other	0.0%	0.6%	0.8%
Net change	2.2%	16.1%	16.4%

The Diodes segment achieved significant growth in net revenues in the fiscal quarter and nine fiscal months ended September 29, 2018 versus the prior year periods and slight growth versus the prior fiscal quarter. The increases versus the prior year periods were primarily due to volume growth, especially with distributors in all regions, and higher average selling prices. The positive impacts from a stronger euro also contributed to the growth versus the prior year-to-date period. The increase versus the prior fiscal quarter was primarily due to volume growth, especially in the Asia and Americas regions, and higher average selling prices, partially offset by negative impacts from a weaker euro.

Gross profit margin increased versus the prior fiscal quarter and prior year periods primarily due to increased net revenues and higher average selling prices, partially offset by general cost inflation and the impact of U.S. tariffs on goods imported from China. Weaker local foreign currency exchange rates also contributed to the increase in gross profit margin versus the prior fiscal quarter.

The positive business climate mostly eliminated the pricing pressure for our established Diodes products. The net increases in average selling prices are primarily due to a more favorable customer mix.

Optoelectronic Components

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

	Fiscal quarters ended			Nine fiscal months ended	
	September 29, 2018	June 30, 2018	September 30, 2017*	September 29, 2018	September 30, 2017*
Net revenues	\$ 76,443	\$ 75,709	\$ 77,145	\$ 224,110	\$ 215,040
Gross profit margin	36.2%	34.9%	37.6%	36.3%	35.8%

*Recast for the retrospective adoption of ASUs 2014-09 and 2017-07. See Note 1 to our consolidated condensed financial statements included in Item 1.

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

	Fiscal quarter ended September 29, 2018		Nine fiscal months ended September 29, 2018	
	Change in net revenues	% change	Change in net revenues	% change
June 30, 2018	\$ 734	1.0%		
September 30, 2017	\$ (702)	-0.9%	\$ 9,070	4.2%

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

	vs. Prior Quarter	vs. Prior Year Quarter	vs. Prior Year-to-Date
Change attributable to:			
Increase in volume	2.9%	2.8%	2.5%
Decrease in average selling prices	-1.1%	-2.6%	-1.5%
Foreign currency effects	-0.9%	-0.3%	2.8%
Other	0.1%	-0.8%	0.4%
Net change	<u>1.0%</u>	<u>-0.9%</u>	<u>4.2%</u>

The Optoelectronic Components segment experienced a slight increase in net revenues versus the prior fiscal quarter, a slight decrease versus the prior year quarter, and a moderate increase versus the prior year-to-date period. The increase versus the prior fiscal quarter is primarily due to increased volume, particularly in the Asia region, partially offset by lower average selling prices and a weaker euro. The decrease versus the prior year quarter is primarily due to lower average selling prices. The increase versus the prior year-to-date period is primarily due to increased volume in Europe and with distributors in the Americas region and positive impacts from a stronger euro, partially offset by declining average selling prices.

The gross profit margin increased versus the prior fiscal quarter primarily due to increased revenues and manufacturing efficiencies, partially offset by lower average selling prices. The gross profit margin increased versus the prior year-to-date period primarily due to increased revenues, a more profitable product mix, and the currency impacts of a stronger euro, which impacted revenues more than expenses. The increases were partially offset by lower average selling prices and cost inflation. The gross profit margin decreased versus the prior year quarter primarily due to lower average selling prices, partially offset by increased revenues.

The pricing pressure for our established Optoelectronic Components products has reduced versus prior years, but continues. Average selling prices decreased slightly versus the prior quarter and the prior year-to-date period.

Resistors & Inductors

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

	Fiscal quarters ended			Nine fiscal months ended	
	September 29, 2018	June 30, 2018	September 30, 2017*	September 29, 2018	September 30, 2017*
Net revenues	\$ 257,330	\$ 253,947	\$ 217,497	\$ 755,323	\$ 626,734
Gross profit margin	34.3%	33.5%	30.2%	33.3%	30.1%

*Recast for the retrospective adoption of ASUs 2014-09 and 2017-07. See Note 1 to our consolidated condensed financial statements included in Item 1.

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

	Fiscal quarter ended September 29, 2018		Nine fiscal months ended September 29, 2018	
	Change in net revenues	% change	Change in net revenues	% change
June 30, 2018	\$ 3,383	1.3%		
September 30, 2017	\$ 39,833	18.3%	\$ 128,589	20.5%

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

	vs. Prior Quarter	vs. Prior Year Quarter	vs. Prior Year-to-Date
Change attributable to:			
Increase in volume	0.5%	14.3%	14.5%
Change in average selling prices	0.4%	0.2%	-0.3%
Foreign currency effects	-1.1%	-0.4%	3.5%
Acquisitions	0.6%	3.0%	2.2%
Other	0.9%	1.2%	0.6%
Net change	<u>1.3%</u>	<u>18.3%</u>	<u>20.5%</u>

Net revenues of the Resistors & Inductors segment increased significantly versus the prior year periods and slightly versus the prior fiscal quarter. All regions contributed to the increase in net revenues versus the prior year periods. The Americas and Asia regions contributed to the increase in net revenues versus the prior fiscal quarter, while the Europe region decreased slightly primarily due to unfavorable foreign currency effects and seasonality. Distribution and the automotive and industrial end markets contributed the most to the revenue increase. The acquisition of UltraSource in the first fiscal quarter of 2018 also contributed to the increase, particularly versus the prior year periods. See further information in "Acquisition Activity" above and Note 3 to our consolidated condensed financial statements included in Item 1.

The gross profit margin improved versus the prior fiscal quarter and the prior year periods. The increases in gross profit margin are primarily due to cost reductions and volume efficiencies associated with increased net revenues, partially offset by unfavorable foreign currency effects. Higher average selling prices contributed to the increases versus the prior fiscal quarter and prior year quarter.

Due to the continuing positive business climate in the third fiscal quarter of 2018 average selling prices increased slightly versus the prior fiscal quarter and prior year quarter and decreased slightly versus the prior year-to-date period.

Market demand currently exceeds our capacity for certain product lines. Capital spending projects to expand capacity are underway to meet the increased demand.

Capacitors

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

	Fiscal quarters ended			Nine fiscal months ended	
	September 29, 2018	June 30, 2018	September 30, 2017*	September 29, 2018	September 30, 2017*
Net revenues	\$ 116,447	\$ 112,349	\$ 96,215	\$ 335,064	\$ 278,241
Gross profit margin	23.0%	22.3%	20.4%	22.7%	20.8%

*Recast for the retrospective adoption of ASUs 2014-09 and 2017-07. See Note 1 to our consolidated condensed financial statements included in Item 1.

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

	Fiscal quarter ended September 29, 2018		Nine fiscal months ended September 29, 2018	
	Change in net revenues	% change	Change in net revenues	% change
June 30, 2018	\$ 4,098	3.6%		
September 30, 2017	\$ 20,232	21.0%	\$ 56,823	20.4%

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

	vs. Prior Quarter	vs. Prior Year Quarter	vs. Prior Year-to-Date
Change attributable to:			
Increase in volume	3.6%	21.1%	16.1%
Increase in average selling prices	1.5%	0.4%	0.3%
Foreign currency effects	-1.2%	-0.6%	3.3%
Other	-0.3%	0.1%	0.7%
Net change	<u>3.6%</u>	<u>21.0%</u>	<u>20.4%</u>

Net revenues of the Capacitors segment for the fiscal quarter and nine fiscal months ended September 29, 2018 increased significantly versus the prior year periods and moderately versus the prior fiscal quarter. All regions contributed to the growth in net revenues versus the prior year periods. The Asia and Americas regions contributed to the growth in net revenues versus the prior fiscal quarter, with the Americas region experiencing the most significant growth. Net revenues in the Europe region decreased slightly versus the prior fiscal quarter primarily due to unfavorable foreign currency effects. Distribution and the industrial and automotive end markets were the main contributors to the sales growth.

The gross profit margin increased versus the prior quarter and the prior year periods. The increases are primarily due to higher average selling prices and cost reduction and volume efficiencies associated with the increased net revenues, which were partially offset by higher metal prices and the impact of U.S. tariffs on goods imported from China.

Due to the continuing positive business climate in the third fiscal quarter of 2018, average selling prices increased slightly versus the prior quarter and prior year periods.

Selling, General, and Administrative Expenses

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

	Fiscal quarters ended			Nine fiscal months ended	
	September 29, 2018	June 30, 2018	September 30, 2017*	September 29, 2018	September 30, 2017*
Total SG&A expenses	\$ 98,198	\$ 103,945	\$ 91,487	\$ 303,381	\$ 272,540
as a percentage of revenues	12.6%	13.7%	13.5%	13.4%	14.2%

*Recast for the retrospective adoption of ASUs 2014-09 and 2017-07. See Note 1 to our consolidated condensed financial statements included in Item 1.

SG&A expenses were favorably impacted by foreign currency exchange rates and less legal expenses in the third fiscal quarter of 2018. The overall increase in SG&A expenses versus the prior year periods is primarily attributable to general salary and cost inflation, incentive compensation, and exchange rate impacts, partially offset by the benefits of our restructuring programs (see "Cost Management" above).

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

	Fiscal quarters ended			Nine fiscal months ended	
	September 29, 2018	June 30, 2018	September 30, 2017	September 29, 2018	September 30, 2017
Amortization of intangible assets	\$ 3,240	\$ 3,224	\$ 3,432	\$ 9,665	\$ 10,830
Net loss (gain) on sales of assets	26	(2,066)	(55)	(2,216)	(106)

Certain intangible assets became fully amortized in the second fiscal quarter of 2017 and in the third fiscal quarter of 2018.

Other Income (Expense)

Interest expense for the fiscal quarter ended September 29, 2018 increased \$2.4 million and \$3.9 million versus the fiscal quarters ended June 30, 2018 and September 30, 2017, respectively. Interest expense for the nine fiscal months ended September 29, 2018 increased by \$6.1 million versus the nine fiscal months ended September 30, 2017. The increases are primarily attributable to the issuance of convertible senior notes due 2025 in the second fiscal quarter of 2018. The increases are partially offset by reduced interest expense on the revolving credit facility as a result of using cash repatriated in the second and third fiscal quarters of 2018 to reduce the outstanding balance.

In June 2018, we issued \$600 million principal amount of 2.25% senior convertible notes due 2025 to qualified institutional investors. We used the net proceeds from this offering to repurchase \$220.0 million and \$69.1 million principal amounts of convertible senior debentures due 2040 and 2042, respectively, for \$585.0 million. We recognized a \$17.3 million loss on early extinguishment of the repurchased convertible debentures in the second fiscal quarter of 2018.

Based on our current debt structure, including our expected usage of the revolving credit facility, we expect future interest expense to be approximately \$10.4 million per quarter, of which \$5.5 million will be payable in cash and the remainder will represent non-cash accretion and amortization of issuance costs.

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

	Fiscal quarters ended		Change
	September 29, 2018	September 30, 2017	
Foreign exchange gain (loss)	\$ (254)	\$ (904)	\$ 650
Interest income	3,504	1,802	1,702
Investment income (expense)†	(37)	-	(37)
Other	(323)	(100)	(223)
	<u>\$ 2,890</u>	<u>\$ 798</u>	<u>\$ 2,092</u>

	Fiscal quarters ended		Change
	September 29, 2018	June 30, 2018	
Foreign exchange gain (loss)	\$ (254)	\$ 1,182	\$ (1,436)
Interest income	3,504	2,762	742
Investment income (expense)†	(37)	(550)	513
Other	(323)	3	(326)
	<u>\$ 2,890</u>	<u>\$ 3,397</u>	<u>\$ (507)</u>

	Nine fiscal months ended		Change
	September 29, 2018	September 30, 2017	
Foreign exchange gain (loss)	\$ (997)	\$ (3,325)	\$ 2,328
Interest income	8,302	4,599	3,703
Investment income (expense)†	(1,491)	-	(1,491)
Other	(374)	(123)	(251)
	<u>\$ 5,440</u>	<u>\$ 1,151</u>	<u>\$ 4,289</u>

†Recognized in "Other" subsequent to the prospective adoption of ASU 2016-01. Previously recorded in accumulated other comprehensive income until realized. See Note 1 to our consolidated condensed financial statements included in Item 1.

Income Taxes

For the fiscal quarter ended September 29, 2018, our effective tax rate was 38.4%, as compared to (5.8)% and 25.1% for the fiscal quarters ended June 30, 2018 and September 30, 2017, respectively. For the nine fiscal months ended September 29, 2018, our effective tax rate was 22.9%, as compared to 25.6% for the nine fiscal months ended September 30, 2017. Historically, the effective tax rates were generally less than the pre-2018 U.S. statutory rate primarily because of earnings in foreign jurisdictions. With the reduction in the U.S. statutory rate to 21% beginning January 1, 2018, we expect that our effective tax rate will now be higher than the U.S. statutory rate, excluding unusual transactions.

The effective tax rate for the fiscal quarters ended December 31, 2017 and June 30, 2018 were significantly impacted by the effect of the TCJA (see "U.S. Tax Reform: Tax Cuts and Jobs Act" above). As permitted by SAB No. 118, the net tax expense recorded in our financial statements for the fourth fiscal quarter of 2017 due to the enactment of the TCJA is considered "provisional," based on reasonable estimates. The net tax expense recorded in the fourth fiscal quarter of 2017 was \$234.9 million. We are continuing to collect and analyze detailed information that could impact this amount, and recorded adjustments of \$12.0 million and \$13.5 million in the second and third fiscal quarters of 2018, respectively, and may record additional adjustments to refine those estimates during the measurement period defined in SAB No. 118, as additional analysis is completed.

The effective tax rate for the nine fiscal months ended September 29, 2018 was also significantly impacted by the effect of the repurchase of convertible senior debentures due 2040 and 2042 in the second fiscal quarter. We recognized a tax benefit of \$34.0 million resulting from the extinguishments, reflecting the reduction in deferred tax liabilities related to the special tax attributes of the debentures. See Note 6 to our consolidated condensed financial statements included in Item 1 for further information.

During the third fiscal quarter and nine fiscal months ended September 29, 2018, we recorded tax expense of \$0.7 million and tax benefit of \$7.0 million, respectively, due to the remeasurement of the deferred tax liability related to our cash repatriation program. These types of remeasurement adjustments will continue until the amounts are repatriated. We repatriated \$274 million and \$450 million to the U.S. pursuant to this program in the second and third fiscal quarters of 2018, respectively. As a result of these repatriations, we paid cash taxes of \$92.1 million and \$64.7 million in the second and third fiscal quarters of 2018, respectively.

We operate in a global environment with significant operations in various locations outside the United States. Accordingly, the consolidated income tax rate is a composite rate reflecting our earnings and the applicable tax rates in the various locations where we operate. Part of our historical strategy has been to achieve cost savings through the transfer and expansion of manufacturing operations to countries where we can take advantage of lower labor costs and available tax and other government-sponsored incentives. Accordingly, our effective tax rate has historically been less than the U.S. statutory rate, except in years where there are material discrete items.

The TCJA significantly reduces the U.S. statutory tax rate, to a rate that is less than the applicable tax rates of many of the jurisdictions in which we operate. Furthermore, our GAAP interest expense generally exceeds our U.S.-based operating income, resulting in pre-tax losses in the U.S. We have historically recorded U.S. federal tax benefits, at 35%, which had the effect of reducing our consolidated GAAP tax rate. Accordingly, the reduction in the statutory U.S. tax rate generally has the effect of increasing our consolidated GAAP tax rate due to the lower tax benefits recognized on a GAAP basis. Our consolidated GAAP tax rate is negatively impacted by other provisions of the TCJA, including GILTI and the limitation on the deductibility of interest expense. The negative impact of limitations on the deductibility of interest expense was partially mitigated by the partial repurchase of convertible debentures due 2040 and due 2042 in the second fiscal quarter of 2018.

During the nine fiscal months ended September 29, 2018, the liabilities for unrecognized tax benefits increased by \$3.5 million on a net basis, due to increases for tax positions taken in the current period and interest, offset by payments and foreign currency effects.

Additional information about income taxes is included in Note 5 to our consolidated condensed financial statements included in Item 1.

Financial Condition, Liquidity, and Capital Resources

We focus on our ability to generate cash flows from operations. The cash generated from operations is used to fund our capital expenditure plans, and cash in excess of our capital expenditure needs is available to fund our acquisition strategy, to reduce debt levels, and to pay dividends and repurchase stock. We have generated cash flows from operations in excess of \$200 million in each of the past 16 years, and cash flows from operations in excess of \$100 million in each of the past 23 years.

Management uses a non-GAAP measure, "free cash," to evaluate our ability to fund acquisitions, repay debt, and otherwise enhance stockholder value through stock repurchases or dividends. See "Overview" above for "free cash" definition and reconciliation to GAAP. Vishay has generated positive "free cash" in each of the past 21 years, and "free cash" in excess of \$80 million in each of the past 16 years. In this volatile economic environment, we continue to focus on the generation of free cash, including an emphasis on cost controls.

During the second and third fiscal quarters of 2018, we repatriated approximately \$274 million and approximately \$450 million, respectively, to the United States, and paid cash taxes of \$92.1 and \$64.7 million, respectively, related to the repatriations. The payment of these cash taxes was recorded as an operating cash flow and any future cash taxes associated with the TCJA transition tax and related foreign taxes on repatriated cash will generally be recorded as operating cash flows. The payment of these cash taxes significantly impacted cash flows from operations and free cash for the nine fiscal months ended September 29, 2018. We expect our business to continue to be a reliable generator of free cash, partially offset by such tax payments. There is no assurance, however, that we will be able to continue to generate cash flows from operations and free cash at the same levels, or at all, going forward if the current economic environment worsens.

We maintain a revolving credit facility, first entered into in 2010, which was amended and restated on August 8, 2013, and further amended and restated on December 10, 2015. The credit facility provides an aggregate commitment of \$640 million of revolving loans available until December 10, 2020, and we have the ability to request up to \$50 million of incremental revolving commitments, subject to the satisfaction of certain conditions. At December 31, 2017, \$150 million was outstanding under our credit facility. We utilized most of the cash repatriated to the U.S. in the second fiscal quarter of 2018 to reduce the outstanding balance of the credit facility and to repay certain intercompany indebtedness. We utilized a portion of the cash repatriated to the U.S. in the third fiscal quarter of 2018 to reduce the outstanding balance of the credit facility to zero.

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

Borrowings under the credit facility bear interest at LIBOR plus an interest margin. The applicable interest margin is based on our leverage ratio. Based on our leverage ratio for the third fiscal quarter of 2018, borrowings bore interest at LIBOR plus 1.75%. The interest rate on our borrowings decreases to LIBOR plus 1.50% if our leverage ratio is less than 1.50 to 1 and increases to LIBOR plus 2.00% if our leverage ratio equals or exceeds 2.50 to 1. Based on our leverage ratio as of the end of the third fiscal quarter of 2018, any new borrowings will bear interest at LIBOR plus 1.50%.

We also pay a fee, also based on our leverage ratio, on undrawn amounts. The undrawn commitment fee, based on our leverage ratio for the third fiscal quarter of 2018, was 0.35% per annum. Such undrawn commitment fee decreases to 0.30% per annum if our leverage ratio is less than 1.50 to 1 and increases to 0.40% per annum if our leverage ratio equals or exceeds 2.50 to 1. Based on our leverage ratio as of the end of the third fiscal quarter of 2018, our undrawn commitment fee will be 0.30% per annum.

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

The credit facility also limits or restricts us from, among other things, incurring indebtedness, incurring liens on assets, making investments and acquisitions, and making asset sales, and making other restricted payments (assuming our leverage ratio is greater than 2.25 to 1), and requires us to comply with other covenants, including the maintenance of specific financial ratios.

The financial maintenance covenants include (a) an interest expense coverage ratio of not less than 2.00 to 1; and (b) a leverage ratio of not more than 3.25 to 1 (and a pro forma ratio of 2.75 to 1 on the date of incurrence of additional debt). The computation of these ratios is prescribed in Article VI of the Credit Agreement between Vishay Intertechnology, Inc. and JPMorgan Chase Bank, N.A., which has been filed with the SEC as Exhibit 10.1 to our current report on Form 8-K filed December 10, 2015.

We were in compliance with all financial covenants under the credit facility at September 29, 2018. Our interest expense coverage ratio and leverage ratio were 16.68 to 1 and 1.48 to 1, respectively. We expect to continue to be in compliance with these covenants based on current projections.

If we are not in compliance with all of the required financial covenants, the credit facility could be terminated by the lenders, and any amounts then outstanding pursuant to the credit facility could become immediately payable. Additionally, our convertible senior debentures due 2040, due 2041, and due 2042 and our convertible notes due 2025 have cross-default provisions that could accelerate repayment in the event the indebtedness under the credit facility is accelerated.

The balance of our revolving credit facility was \$150 million at December 31, 2017. We borrowed \$317 million and repaid \$467 million on our credit facility during the nine fiscal months ended September 29, 2018. The average outstanding balance on our credit facility calculated at fiscal month-ends was \$165.9 million and the highest amount outstanding on our credit facility at a month end was \$314 million during the nine fiscal months ended September 29, 2018.

In June 2018, we issued \$600 million principal amount of 2.25% senior convertible notes due 2025 to qualified institutional investors. We used the net proceeds from this offering to repurchase \$220.0 million and \$69.1 million principal amounts of convertible senior debentures due 2040 and 2042, respectively, for \$585.0 million. Prior to six months before the maturity date, our convertible notes are convertible by the holders under certain circumstances. The convertible notes are not convertible as of September 29, 2018 and will not be contingently convertible before the fourth fiscal quarter of 2018.

Prior to three months before the maturity date, our convertible senior debentures are convertible by the holders under certain circumstances. The convertible debentures due 2042 became convertible subsequent to the December 31, 2016 evaluation of the conversion criteria, and have remained convertible for each subsequent quarterly evaluation through the September 29, 2018 evaluation, due to the sale price of our common stock exceeding 130% of the conversion price for the applicable periods. The convertible debentures due 2040 became convertible subsequent to the September 30, 2017 evaluation of the conversion criteria, and have remained convertible for each subsequent quarterly evaluation through the September 29, 2018 evaluation, due to the sale price of our common stock exceeding 130% of the conversion price for the applicable periods. Such debentures will remain convertible until December 31, 2018, at which time the conversion criteria will be reevaluated. At the direction of our Board of Directors, we intend, upon conversion, to repay the principal amount of the convertible debentures in cash and settle any additional amounts in shares of our common stock. We intend to finance the principal amount of any converted debentures using borrowings under our credit facility. Accordingly, the debt component of the convertible debentures due 2040 and due 2042 continues to be classified as a noncurrent liability on the consolidated condensed balance sheets. No conversions have occurred to date. The convertible debentures due 2041 are not currently convertible.

The TCJA imposes a one-time transition tax on deferred foreign earnings of 15.5% for liquid assets and 8% for illiquid assets, payable in defined increments over eight years. As a result of this requirement, we provisionally expect to pay \$184.5 million, net of estimated applicable foreign tax credits, and after utilization of net operating loss and R&D and FTC Credit carryforwards. Based on our U.S. cash position, we expect that we will be required to repatriate amounts from our non-U.S. subsidiaries to the United States to satisfy this tax obligation.

These previously deferred foreign earnings may now be repatriated to the United States without additional U.S. federal taxation. However, any such repatriation could incur withholding and other foreign taxes in the source jurisdiction, and certain U.S. state taxes. Accordingly, our provisional tax expense for the impact of enactment of the TCJA included amounts for these incremental withholding and foreign taxes and certain U.S. state taxes.

During the second and third fiscal quarters of 2018, we repatriated approximately \$274 million and approximately \$450 million, respectively, to the United States, and paid cash taxes of \$92.1 and \$64.7 million, respectively, related to the repatriations. We used some of these repatriated amounts to reduce the outstanding balance of the credit facility to zero and to repay certain intercompany indebtedness.

After completing these phases of cash repatriation, there is approximately \$300 million of unremitted foreign earnings that we have deemed not permanently reinvested and thus have accrued foreign withholding and other taxes. We expect to repatriate these remaining amounts at a measured pace over several years, and may decide to ultimately not repatriate some of these amounts.

For several years, substantially all of our cash and cash equivalents and short-term investments were held by subsidiaries outside of the United States. As of September 29, 2018, following these repatriation transactions and the uses of such cash described above, approximately 40% of our cash and cash equivalents and short-term investments are held by the United States parent company.

We are continuing to evaluate the future utilization of the remaining repatriated cash. The U.S. parent company, Vishay Intertechnology, Inc., must fund cash dividends to stockholders (which were increased 26% in the second fiscal quarter of 2018), any stock repurchases, principal and interest payments on our debt instruments, and the TCJA transition tax. Our U.S. subsidiaries have other operating cash needs.

In October 2018, our Board of Directors authorized us to begin repurchasing certain convertible debt instruments in open market repurchases or through privately negotiated transactions, subject to market and business conditions, legal requirements, and other factors. Such authorization also includes the open market repurchase of an equivalent number of shares issued upon the exercise of the conversion rights by any holder of convertible debentures. Such authorization does not obligate us to acquire any particular amount of convertible debt instruments, and it may be terminated or suspended at any time at our discretion, in accordance with applicable laws and regulations. We expect to fund any repurchases through cash on hand (including repatriated cash), and if necessary, borrowings under our revolving credit facility.

Although we do not currently have any amounts outstanding on the revolving credit facility, management expects to use the credit facility from time-to-time to meet certain short-term financing needs. We expect that cash on-hand and cash flows from operations will be sufficient to meet our longer-term financing needs related to normal operating requirements, regular dividend payments, and our research and development and capital expenditure plans. Additional acquisition activity, share repurchases, convertible debt repurchases, or conversion of our convertible debentures may require additional borrowing under our credit facility or may otherwise require us to incur additional debt. No principal payments on our debt are due before the maturity of our revolving credit facility in December 2020.

We are continuing to evaluate the TCJA's provisions and may prospectively adjust our financial and capital structure and business practices accordingly.

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

The interest rates on our short-term investments vary by location, but can be up to 150 bps higher than the interest rates on our cash accounts. The average interest rate on our short-term investments was 1.5% due to the low interest rate environment in Europe. Transactions related to these investments are classified as investing activities on our consolidated condensed statements of cash flows.

The following table summarizes the components of net cash and short-term investments (debt) at September 29, 2018 and December 31, 2017 (*in thousands*):

	September 29, 2018	December 31, 2017
Credit facility	\$ -	\$ 150,000
Convertible senior debentures, due 2040*	22,486	110,412
Convertible senior debentures, due 2041*	57,695	56,641
Convertible senior debentures, due 2042*	34,268	62,518
Convertible senior notes, due 2025*	491,853	-
Deferred financing costs	(17,716)	(9,101)
Total debt	588,586	370,470
Cash and cash equivalents	928,105	748,032
Short-term investments	135,003	547,136
Net cash and short-term investments (debt)	\$ 474,522	\$ 924,698

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

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

Our financial condition as of September 29, 2018 continued to be strong, with a current ratio (current assets to current liabilities) of 3.7 to 1, as compared to 3.9 as of December 31, 2017. The decrease is primarily due to the decrease in cash and cash equivalents and short-term investments. Our ratio of total debt to Vishay stockholders' equity was 0.40 to 1 at September 29, 2018, as compared to 0.26 to 1 at December 31, 2017. The increase in the ratio is primarily due to increases in long-term debt after the issuance of the convertible notes due 2025.

Cash flows provided by operating activities were \$108.9 million for the nine fiscal months ended September 29, 2018, as compared to cash flows provided by operations of \$245.8 million for the nine fiscal months ended September 30, 2017. The decrease in operating cash flows reflects the \$156.7 million payment of cash taxes associated with repatriation activity and the first installment of the TCJA transition tax of \$14.4 million.

Cash paid for property and equipment for the nine fiscal months ended September 29, 2018 was \$126.4 million, as compared to \$84.8 million for the nine fiscal months ended September 30, 2017. We expect capital spending of approximately \$220 million in 2018. Some of this 2018 capital spending represents an acceleration of expected expansion from later years of our long-range plan.

Cash paid for dividends to our common and Class B common stockholders totalled \$34.3 million and \$27.3 million for the nine fiscal months ended September 29, 2018 and September 30, 2017, respectively. On May 7, 2018, our Board of Directors increased the quarterly dividend to \$0.085 per share, representing a 26% increase over the previous quarterly dividend. We expect dividend payments in 2018 to total approximately \$46.5 million. However, any future dividend declaration and payment remains subject to authorization by our Board of Directors.

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 expired on June 1, 2018. We repurchased 2,250,236 shares of stock for \$39.9 million pursuant to this plan. We did not repurchase any shares of stock in 2018.

Contractual Commitments and Off-Balance Sheet Arrangements

Our Annual Report on Form 10-K for the year ended December 31, 2017 filed on February 16, 2018, includes a table of contractual commitments. Except as described below, there were no material changes to these commitments during the nine fiscal months ended September 29, 2018.

The following tables represent our long-term debt obligations, expected cash requirements for interest, and expected cash requirements for payment of the TCJA transition tax as of September 29, 2018 and December 31, 2017, reflecting the issuance of \$600 million principal amount of 2.25% senior convertible notes due 2025, the use of the net proceeds from the offering to repurchase \$220.0 million and \$69.1 million principal amounts of convertible senior debentures due 2040 and due 2042, respectively, the use of cash repatriated to the U.S. to reduce the outstanding balance of the revolving credit facility, and the \$14.0 million first installment payment of the TCJA transition tax in the second fiscal quarter of 2018.

Contractual Obligations as of September 29, 2018 (in thousands):

	<u>Total</u>	<u>Payments due by period</u>			<u>2023 and beyond</u>
		<u>2018</u>	<u>2019 - 2020</u>	<u>2021 - 2022</u>	
Long-term debt (1)	\$ 885,940	\$ -	\$ -	\$ -	\$ 885,940
Interest payments on long-term debt (2)	\$ 242,317	5,543	44,223	39,867	152,684
TCJA transition tax	\$ 170,068	357	29,515	29,515	110,681

(1) Excludes unamortized debt discount associated with our convertible senior debentures due 2040, due 2041, and due 2042 and our convertible senior notes due 2025.

(2) Excludes the non-cash interest expense related to the amortization of the discount associated with our convertible senior debentures due 2040, due 2041, and due 2042 and convertible senior notes due 2025.

Contractual Obligations as of December 31, 2017 (in thousands):

	<u>Total</u>	<u>Payments due by period</u>			<u>2023 and beyond</u>
		<u>2018</u>	<u>2019 - 2020</u>	<u>2021 - 2022</u>	
Long-term debt (1)	\$ 725,000	\$ -	\$ 150,000	\$ -	\$ 575,000
Interest payments on long-term debt (2)	\$ 322,206	19,516	38,667	25,875	238,148
TCJA transition tax	\$ 180,000	28,800	28,800	41,400	81,000

(1) Excludes unamortized debt discount associated with our convertible senior debentures due 2040, due 2041, and due 2042.

(2) Excludes the non-cash interest expense related to the amortization of the discount associated with our convertible senior debentures due 2040, due 2041, and due 2042.

We do not participate in nor have we created any off-balance sheet variable interest entities or other off-balance sheet financing, other than the operating leases described in our Annual Report on Form 10-K for the year ended December 31, 2017.

Dividends

In 2014, our Board of Directors approved the initiation of a quarterly cash dividend program. Cash dividends of \$0.0625 per share of common stock and Class B common stock were paid in the first three fiscal quarters of 2017. The quarterly cash dividend was increased to \$0.0675 per share of common stock and Class B common stock in the fourth fiscal quarter of 2017. The quarterly cash dividend was increased to \$0.085 per share of common stock and Class B common stock in the second fiscal quarter of 2018. We expect to continue to pay quarterly dividends, although each dividend is subject to approval by our Board of Directors.

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

<u>Fiscal Period</u>	<u>Amount</u>	<u>Month of Payment</u>
Three fiscal months ended March 31, 2018	\$ 9,735	March
Three fiscal months ended June 30, 2018	12,258	June
Three fiscal months ended September 29, 2018	12,258	September

Safe Harbor Statement

From time to time, information provided by us, including but not limited to statements in this report, or other statements made by or on our behalf, may contain "forward-looking" information within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as "believe," "estimate," "will be," "will," "would," "expect," "anticipate," "plan," "project," "intend," "could," "should," or other similar words or expressions often identify forward-looking statements.

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

Our 2017 Annual Report on Form 10-K listed various important factors that could cause actual results to differ materially from projected and historic results. We note these factors for investors as permitted by the Private Securities Litigation Reform Act of 1995. Readers can find them in Part I, Item 1A, of that filing under the heading "Risk Factors." You should understand that it is not possible to predict or identify all such factors. Consequently, you should not consider any such list to be a complete set of all potential risks or uncertainties.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Part II, Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," of our Annual Report on Form 10-K for the year ended December 31, 2017, filed with the SEC on February 16, 2018, describes our exposure to market risks. There have been no material changes to our market risks since December 31, 2017.

Item 4. Controls and Procedures

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

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

Changes in Internal Control Over Financial Reporting

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

PART II - OTHER INFORMATION

Item 1. Legal Proceedings

Item 3 of Part I of our Annual Report on Form 10-K for the year ended December 31, 2017, filed with the SEC on February 16, 2018 and Item 1 of Part II of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, filed with the SEC on May 8, 2018 describe certain of our legal proceedings. Except as described below, there have been no material developments to the legal proceedings previously disclosed.

On September 17, 2018, the Korea Fair Trade Commission ("KFTC") announced a fine of approximately \$32 thousand against Vishay Polytech Co., Ltd. ("VPC"), a wholly owned subsidiary of the Company, for violations of applicable antitrust laws. Concurrently, the KFTC issued a corrective order prohibiting VPC from engaging in similar activities again and referred the matter to the Korean Ministry of Justice for further review. The conduct attributable to VPC occurred prior to the acquisition of that entity from Holy Stone Enterprises Co. Ltd. ("Holy Stone") in 2014.

Holy Stone has agreed to indemnify VPC for losses, including penalties and expenses associated with the decision described above.

Item 1A. Risk Factors

Except as described below, there have been no material changes to the risk factors we previously disclosed under Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2017, filed with the SEC on February 16, 2018.

The liquidity of any trading market that currently exists for our convertible senior debentures may be adversely affected by the repurchase of \$220.0 million and \$69.1 million principal amounts of the convertible debentures due 2040 and due 2042, respectively, during the second fiscal quarter of 2018, and the holders of the remaining convertible debentures may be more likely to present their convertible debentures for conversion.

Following the repurchase of convertible debentures by us in June 2018, 20% and approximately 54% of the original principal amount of the original issuances of convertible debentures due 2040 and due 2042, respectively, remain outstanding. Both the convertible debentures due 2040 and due 2042 are currently convertible at the option of the holders. As a result of the repurchase, the trading market for the remaining convertible debentures may be less liquid and more sporadic and prices may fluctuate significantly depending on the volume of trading in the debentures. This decreased liquidity may also make it more likely that the holders of the remaining debentures will present their debentures for conversion. At the direction of our Board of Directors, we intend, upon conversion, to repay the principal amounts of the convertible senior debentures, due 2040, due 2041, and due 2042, and the convertible senior notes, due 2025 in cash and settle any additional amounts in shares of Vishay common stock.

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

The recorded and principal amount of our outstanding debt increased from approximately \$370.5 million and \$725.0 million, respectively as of December 31, 2017 to approximately \$588.6 million and \$885.9 million, respectively, as of September 29, 2018, primarily due to the issuance of the convertible senior notes due 2025. The carrying value of our convertible debt will continue to increase as the discount associated with the convertible instruments are amortized. Additionally, we and our subsidiaries may incur substantial additional debt in the future, subject to the conditions contained in our existing debt instruments, some of which may be secured debt. The marketplace could react negatively to our current debt levels which in turn could affect our share price and also make it more difficult to obtain financing in the future.

Prior to three months before the respective maturity dates of our convertible senior debentures due 2040, 2041, and 2042, the holders of the debentures may only convert the debentures under specific circumstances as defined in the indentures governing the debentures. Prior to six months before the maturity date of our convertible senior notes due 2025, the holders of the notes may only convert the notes under specific circumstances as defined in the indentures governing the notes. As of June 30, 2018, our convertible senior debentures due 2040 and 2042 are convertible (See Note 6 to our consolidated condensed financial statements included in Item 1). Regardless of current convertibility of the debentures, GAAP requires convertible debentures to be included in the calculation of diluted EPS using either the "If Converted" or the "Treasury Stock Method" depending on our intent and ability to settle the debentures upon repurchase or conversion. The application of the "If Converted" method generally results in significantly more potentially dilutive securities compared to the "Treasury Stock Method." Pursuant to the indentures governing the respective debentures and notes, we have the right to pay the conversion value or purchase price for the debentures in cash, Vishay common stock, or a combination of both. At the direction of our Board of Directors, we intend, upon conversion, to repay the principal amounts of the debentures and notes and settle any additional amounts in shares of Vishay common stock. Accordingly, the debentures and notes are included in the diluted EPS computation using the "Treasury Stock" method" rather than the "If Converted" method. If we were unable to employ the "Treasury Stock" method due to increased debt levels or changes in intentions, the number of potentially dilutive securities could increase significantly.

Changes in U.S. trade policies, and related factors beyond our control, may adversely impact our business, financial condition, and results of operations.

Our business is subject to risks associated with U.S. and foreign legislation and regulations relating to imports, including quotas, duties, tariffs or taxes, and other import charges or restrictions, which could adversely affect our operations and our ability to import products. The U.S. has taken actions that impact U.S. trade with China, including imposing tariffs on certain goods manufactured in China and imported into the U.S., including certain of our products. Such actions may impact our competitiveness and adversely affect the demand for these products, or if those costs cannot be passed on to our customers, could adversely impact our results of operations for affected segments and the Company as a whole.

Further changes in U.S. trade policy could trigger additional retaliatory actions by affected countries. If these consequences are realized, it could result in a general economic downturn or otherwise have a material adverse effect on our business.

Most of our operating cash is generated by our non-U.S. subsidiaries, and our U.S. parent company and U.S. subsidiaries have significant payment obligations.

We generate a significant amount of cash and profits from our non-U.S. subsidiaries. For several years, substantially all of our cash and cash equivalents and short-term investments were held by subsidiaries outside of the United States.

The Tax Cuts and Jobs Act ("TCJA"), enacted on December 22, 2017, transitions the U.S. from a worldwide tax system to a territorial tax system. Under previous law, companies could indefinitely defer U.S. income taxation on unremitted foreign earnings. The TCJA imposes a one-time transition tax on deferred foreign earnings, payable in defined increments over eight years. As a result of this requirement, we expect to pay \$184.5 million, net of estimated applicable foreign tax credits, and after utilization of net operating loss and R&D and FTC Credit carryforwards.

These previously deferred foreign earnings may now be repatriated to the United States without additional U.S. federal taxation. However, any such repatriation could incur withholding and other foreign taxes in the source and intervening foreign jurisdictions, and certain U.S. state taxes.

During 2018, we repatriated over \$700 million to the United States, net of these withholding and other foreign taxes. We used some of these repatriated amounts to reduce the outstanding balance of the credit facility to zero and to repay certain intercompany indebtedness.

Following these repatriation transactions and the uses of such cash described above, approximately 40% of our cash and cash equivalents and short-term investments are in the United States. Our unused revolving credit facility provides us with additional U.S. liquidity.

The transition tax under the TCJA, cash dividends to stockholders, share repurchases, convertible debt repurchases, and principal and interest payments on our debt instruments need to be paid by the U.S. parent company, Vishay Intertechnology, Inc. Our U.S. subsidiaries have other operating cash needs.

If our U.S. cash and cash equivalents and short-term investment and other liquidity sources are inadequate to satisfy these obligations, we may be required to repatriate additional cash to the United States. If we are unable to repatriate adequate cash to the United States to satisfy these obligations, it could materially and adversely affect our overall financial condition, results of operations and our liquidity.

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

Not applicable.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

On October 30, 2018, the Company received a waiver to its credit agreement, to allow cash payments to repurchase certain convertible debt instruments.

Item 6.**Exhibits**

- | | |
|------|--|
| 31.1 | <u>Certification pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 - Dr. Gerald Paul, Chief Executive Officer.</u> |
| 31.2 | <u>Certification pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 - Lori Lipcaman, Chief Financial Officer.</u> |
| 32.1 | <u>Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 – Dr. Gerald Paul, Chief Executive Officer.</u> |
| 32.2 | <u>Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 – Lori Lipcaman, Chief Financial Officer.</u> |
| 101 | Interactive Data File (Quarterly Report on Form 10-Q, for the quarterly period ended September 29, 2018, furnished in XBRL (eXtensible Business Reporting Language)). |

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

VISHAY INTERTECHNOLOGY, INC.

/s/ Lori Lipcaman

Lori Lipcaman

Executive Vice President and Chief Financial Officer

(as a duly authorized officer and principal financial and
accounting officer)

Date: October 30, 2018

CERTIFICATIONS

I, Dr. Gerald Paul, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Vishay Intertechnology, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 30, 2018

/s/ Gerald Paul
Dr. Gerald Paul
Chief Executive Officer

CERTIFICATIONS

I, Lori Lipcaman, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Vishay Intertechnology, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 30, 2018

/s/ Lori Lipcaman
Lori Lipcaman
Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Vishay Intertechnology, Inc. (the "Company") on Form 10-Q for the fiscal quarter ended September 29, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Dr. Gerald Paul, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Gerald Paul
Dr. Gerald Paul
Chief Executive Officer
October 30, 2018

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Vishay Intertechnology, Inc. (the "Company") on Form 10-Q for the fiscal quarter ended September 29, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Lori Lipcaman, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Lori Lipcaman
Lori Lipcaman
Chief Financial Officer
October 30, 2018