VEECO INSTRUMENTS INC
Form 10-Q
November 01, 2018
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2018

OR

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

Commission file number 0-16244

VEECO INSTRUMENTS INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization)	11-2989601 (I.R.S. Employer Identification No.)
Terminal Drive Plainview, New York (Address of Principal Executive Offices)	11803 (Zip Code)

Registrant's telephone number, including area code:

(516) 677-0200

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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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.

Large accelerated filer	Accelerated filer
Non-accelerated filer	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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date:

Title of Class	Shares Outstanding
Common Stock	as of October 24, 2018
par value $0.01 per share	47,793,001

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Safe Harbor Statement

This quarterly report on Form 10-Q (the "Report") contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Discussions containing such forward-looking statements may be found in Part I - Items 1, 2, and 3 hereof, as well as within this Report generally. In addition, when used in this Report, the words "believes," "anticipates," "expects," "estimates," "targets," "plans," "intends," "will," and similar expressions related to the future are intended to identify forward-looking statements. All forward-looking statements are subject to a number of risks and uncertainties that could cause actual results to differ materially from projected results.

In addition, the preparation of financial statements in conformity with U.S. Generally Accepted Accounting Principles ("U.S. GAAP") requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Although these estimates and assumptions are based on knowledge of current events and planned actions to be undertaken in the future, they may ultimately differ from actual results. Operating results for the nine months ended September 30, 2018 are not necessarily indicative of the results that may be expected for the year ending December 31, 2018. All estimates and assumptions are subject to a number of risks and uncertainties that could cause actual results to differ materially from these estimates and assumptions.

The risks and uncertainties of Veeco Instruments Inc. (together with its consolidated subsidiaries, "Veeco," the "Company," "we," "us," and "our," unless the context indicates otherwise) including, without limitation, those set forth under the heading "Risk Factors" Part 1, Item 1A in our 2017 Form 10-K and Part 2, Item 1A in this quarterly report, and the following:

- Unfavorable market conditions may adversely affect our operating results;
- We are exposed to the risks of operating a global business;
- We may be unable to effectively enforce and protect our intellectual property rights;
- We may be subject to claims of intellectual property infringement by others;
- We may be unable to successfully integrate the Ultratech business and may not realize the anticipated benefits of the acquisition;
- The price of our common shares is volatile and could further decline;

- We face significant competition;

- We operate in industries characterized by rapid technological change;

- Our sales to manufacturers are highly dependent on sales of consumer electronics applications, which can experience significant volatility due to seasonal and other factors;

- We have a concentrated customer base, located primarily in a limited number of regions, which operate in highly concentrated industries;

- A further reduction or elimination of foreign government subsidies and economic incentives may adversely affect the future order rate for our MOCVD equipment;

- The cyclicality of the industries we serve directly affects our business;

- The timing of our orders, shipments, and revenue recognition may cause our quarterly operating results to fluctuate significantly;

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- Our sales cycle is long and unpredictable;
- Our backlog is subject to customer cancellation or modification which could result in decreased sales, increased inventory obsolescence, and liabilities to our suppliers for products no longer needed;
- Our failure to estimate customer demand accurately could result in inventory obsolescence, liabilities to our suppliers for products no longer needed, and manufacturing interruptions or delays which could affect our ability to meet customer demand;
- Our failure to successfully manage our outsourcing activities or failure of our outsourcing partners to perform as anticipated could adversely affect our results of operations;
- We rely on a limited number of suppliers, some of whom are our sole source for particular components;
- Our inability to attract, retain, and motivate employees could have a material adverse effect on our business;
- We are exposed to risks associated with business combinations, acquisitions, and strategic investments;
- We may be unable to obtain required export licenses for the sale of our products;
- Our operating results may be adversely affected by tightening credit markets;
- We may be exposed to liabilities under the Foreign Corrupt Practices Act and other similar laws;
- We are subject to internal control evaluations and attestation requirements of Section 404 of the Sarbanes-Oxley Act and any delays or difficulties in satisfying these requirements or negative reports concerning our internal controls could adversely affect our future results of operations and our stock price;
- Changes in accounting pronouncements or taxation rules or practices may adversely affect our financial results;
- Our income taxes may change;
- We may be required to take additional impairment charges on assets;

- We have indebtedness in the form of convertible senior notes which could adversely affect our financial position, prevent us from implementing our strategy, and dilute the ownership interest of our existing shareholders;

- The accounting method for convertible debt securities that may be settled in cash, such as the Convertible Senior Notes, could have a material effect on our reported financial results;

- We are subject to foreign currency exchange risks;

- Our previously announced share repurchase program could affect the price of our common stock and increase volatility and may be suspended or terminated at any time, which may result in a decrease in the trading price of our common stock;

- If we are subject to cyber-attacks we could incur substantial costs and, if such attacks are successful, we could incur significant liabilities, reputational harm, and disruption to our operations;

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- We have adopted certain measures that may have anti-takeover effects which may make an acquisition of our Company by another company more difficult;

- We are subject to risks of non-compliance with environmental, health, and safety regulations;

- Regulations related to conflict minerals will force us to incur additional expenses, may make our supply chain more complex, and may harm our relationships with customers;

- We have significant operations in locations which could be materially and adversely impacted in the event of a natural disaster, an act of terrorism, or other significant disruption; and

- Our goodwill is sensitive to changes in our stock price and other factors, and we may be required to take additional impairment charges on goodwill.

- We recently discovered an attack on our computer systems that could result in the loss or misuse of confidential information of the Company or that of our customers or others, result in litigiation and potential liability, and damage our reputation.

Consequently, such forward looking statements and estimates should be regarded solely as the current plans and beliefs of Veeco. We do not undertake any obligation to update any forward looking statements to reflect future events or circumstances after the date of such statements.

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PART I—FINANCIAL INFORMATION

Item 1. Financial Statements

Veeco Instruments Inc. and Subsidiaries

Consolidated Balance Sheets

(in thousands, except share amounts)

(unaudited)

	September 30, 2018	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 213,506	$ 279,736
Restricted cash	828	847
Short-term investments	52,063	47,780
Accounts receivable, net	90,816	98,866
Contract assets	7,441	160
Inventories	149,832	120,266
Deferred cost of sales	2,986	15,994
Prepaid expenses and other current assets	23,400	33,437
Total current assets	540,872	597,086
Property, plant, and equipment, net	80,626	85,058
Intangible assets, net	89,398	369,843
Goodwill	307,131	307,131
Deferred income taxes	2,183	3,047
Other assets	30,356	25,310
Total assets	$ 1,050,566	$ 1,387,475
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 65,042	$ 50,318
Accrued expenses and other current liabilities	40,430	58,068
Customer deposits and deferred revenue	64,443	112,032
Income taxes payable	1,819	3,846
Total current liabilities	171,734	224,264
Deferred income taxes	7,170	36,845
Long-term debt	284,369	275,630
Other liabilities	9,206	10,643
Total liabilities	472,479	547,382
Stockholders' equity:		

Preferred stock, $0.01 par value; 500,000 shares authorized; no shares issued and outstanding.	—	—
Common stock, $0.01 par value; 120,000,000 shares authorized; 48,633,204 and 48,229,251 shares issued at September 30, 2018 and December 31, 2017, respectively; 47,793,001 and 48,144,416 shares outstanding at September 30, 2018 and December 31, 2017, respectively.	486	482
Additional paid-in capital	1,060,733	1,051,953
Accumulated deficit	(475,284)	(212,870)
Accumulated other comprehensive income	1,812	1,812
Treasury stock, at cost, 840,203 and 84,835 shares at September 30, 2018 and December 31, 2017, respectively.	(9,660)	(1,284)
Total stockholders' equity	578,087	840,093
Total liabilities and stockholders' equity	$ 1,050,566	$ 1,387,475

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See accompanying Notes to the Consolidated Financial Statements.

Veeco Instruments Inc. and Subsidiaries

Consolidated Statements of Operations

(in thousands, except per share amounts)

(unaudited)

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Net sales	$ 126,757	$ 129,308	$ 443,110	$ 336,025
Cost of sales	80,372	78,779	284,651	215,150
Gross profit	46,385	50,529	158,459	120,875
Operating expenses, net:				
Research and development	23,544	24,061	72,793	57,669
Selling, general, and administrative	20,186	29,771	70,842	71,574
Amortization of intangible assets	4,183	12,500	28,102	21,722
Restructuring	2,057	5,010	7,669	9,605
Acquisition costs	249	783	2,906	16,277
Asset impairment	—	2	252,343	1,139
Other, net	39	(140)	325	(228)
Total operating expenses, net	50,258	71,987	434,980	177,758
Operating income (loss)	(3,873)	(21,458)	(276,521)	(56,883)
Interest income	823	357	2,266	1,932
Interest expense	(5,602)	(5,105)	(16,113)	(14,301)
Income (loss) before income taxes	(8,652)	(26,206)	(290,368)	(69,252)
Income tax expense (benefit)	301	(2,466)	(27,954)	(26,334)
Net income (loss)	$ (8,953)	$ (23,740)	$ (262,414)	$ (42,918)
Income (loss) per common share:				
Basic	$ (0.19)	$ (0.51)	$ (5.55)	$ (1.00)
Diluted	$ (0.19)	$ (0.51)	$ (5.55)	$ (1.00)
Weighted average number of shares:				
Basic	46,982	46,941	47,283	43,100
Diluted	46,982	46,941	47,283	43,100

See accompanying Notes to the Consolidated Financial Statements.

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Veeco Instruments Inc. and Subsidiaries

Consolidated Statements of Comprehensive Income (Loss)

(in thousands)

(unaudited)

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Net income (loss)	$ (8,953)	$ (23,740)	$ (262,414)	$ (42,918)
Other comprehensive income (loss), net of tax:				
Unrealized gain (loss) on available-for-sale securities	4	70	4	10
Foreign currency translation	(4)	1	(4)	25
Total other comprehensive income (loss), net of tax	—	71	—	35
Total comprehensive income (loss)	$ (8,953)	$ (23,669)	$ (262,414)	$ (42,883)

See accompanying Notes to the Consolidated Financial Statements.

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Veeco Instruments Inc. and Subsidiaries

Consolidated Statements of Cash Flows

(in thousands)

(unaudited)

	Nine months ended September 30,	
	2018	2017
Cash Flows from Operating Activities		
Net income (loss)	$ (262,414)	$ (42,918)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation and amortization	41,110	32,295
Non-cash interest expense	8,739	7,641
Deferred income taxes	(28,872)	(22,600)
Share-based compensation expense	12,720	19,976
Asset impairment	252,343	1,139
Provision for bad debts	—	99
Changes in operating assets and liabilities:		
Accounts receivable and contract assets	769	(6,360)
Inventories and deferred cost of sales	(17,748)	9,328
Prepaid expenses and other current assets	10,037	(331)
Accounts payable and accrued expenses	(4,006)	3,129
Customer deposits and deferred revenue	(47,589)	19,030
Income taxes receivable and payable, net	(3,552)	(16)
Long-term income tax liability	—	(4,877)
Other, net	(915)	(259)
Net cash provided by (used in) operating activities	(39,378)	15,276
Cash Flows from Investing Activities		
Acquisitions of businesses, net of cash acquired	(2,662)	(399,478)
Capital expenditures	(5,788)	(17,403)
Proceeds from the sale of investments	65,365	307,757
Payments for purchases of investments	(72,303)	(279,945)
Proceeds from held for sale assets	—	2,284
Net cash provided by (used in) investing activities	(15,388)	(386,785)
Cash Flows from Financing Activities		
Proceeds (net of tax withholdings) from option exercises and employee stock purchase plan	3,007	2,546
Restricted stock tax withholdings	(3,029)	(7,797)
Proceeds from long-term debt borrowings	—	335,752
Purchases of common stock	(11,457)	—

Principal payments on long-term debt	—	(1,193)
Net cash provided by (used in) financing activities	(11,479)	329,308
Effect of exchange rate changes on cash and cash equivalents	(4)	25
Net increase (decrease) in cash, cash equivalents, and restricted cash	(66,249)	(42,176)
Cash, cash equivalents, and restricted cash - beginning of period	280,583	277,444
Cash, cash equivalents, and restricted cash - end of period	$ 214,334	$ 235,268
Supplemental Disclosure of Cash Flow Information		
Interest paid	$ 9,655	$ 4,667
Income taxes paid	4,269	1,767
Non-cash operating and financing activities		
Net transfer of inventory to property, plant and equipment	1,170	33

See accompanying Notes to the Consolidated Financial Statements.

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Veeco Instruments Inc. and Subsidiaries

Notes to the Consolidated Financial Statements

(unaudited)

Note 1 — Basis of Presentation

The accompanying unaudited Consolidated Financial Statements of Veeco have been prepared in accordance with U.S. GAAP as defined in Financial Accounting Standards Board ("FASB") Accounting Standards Codification 270 for interim financial information and with the instructions to Rule 10-01 of Securities and Exchange Commission Regulation S-X. Accordingly, they do not include all of the information and footnotes required by U.S. GAAP for complete financial statements as the interim information is an update of the information that was presented in Veeco's most recent annual financial statements. For further information, refer to Veeco's Consolidated Financial Statements and Notes thereto included in the Annual Report on Form 10-K for the year ended December 31, 2017 ("2017 Form 10-K"). In the opinion of management, all adjustments considered necessary for a fair presentation have been included. All such adjustments are of a normal, recurring nature.

Veeco reports interim quarters on a 13-week basis ending on the last Sunday of each quarter. The fourth quarter always ends on the last day of the calendar year, December 31. The 2018 interim quarters end on April 1, July 1, and September 30, and the 2017 interim quarters ended on April 2, July 2, and October 1. These interim quarters are reported as March 31, June 30, and September 30 in Veeco's interim consolidated financial statements.

Change in Accounting Policy

The Company adopted ASC Topic 606, Revenue from Contracts with Customers ("ASC 606"), as of January 1, 2018, using the full retrospective method. All amounts and disclosures set forth in this Form 10-Q reflect these changes. The most significant financial statement impacts of adopting ASC 606 are the elimination of the constraint on revenue associated with the billing retention related to the receipt of customer final acceptance and the identification of installation services as a performance obligation. The elimination of the constraint on revenue related to customer final acceptance, which is usually about 10 percent of a system sale, is now generally recognized at the time the Company transfers control of the system to the customer, which is earlier than under the Company's previous revenue recognition model for certain contracts that were subject to the billing constraint. The new performance obligation related to installation services is now recognized as the installation services are performed, which is later than the Company's previous revenue recognition model.

The Company applied ASC 606 retrospectively and elected to use the disclosure exemption in the transition guidance under which the Company does not disclose prior period information regarding the amount of the transaction price allocated to remaining performance obligations. The cumulative effect of the adoption was recognized as a decrease to Accumulated deficit of $6.9 million on January 1, 2016. The following tables summarize the impact of adoption on the Company's previously reported financial position and results:

	December 31, 2017		
	As reported	Adjustments	As adjusted
	(in thousands)		
Balance Sheet			
Contract assets	$ —	$ 160	$ 160
Deferred cost of sales	16,060	(66)	15,994
Deferred income taxes	2,953	94	3,047
Accrued expenses and other current liabilities	60,339	(2,271)	58,068
Customer deposits and deferred revenue	108,953	3,079	112,032
Additional paid-in capital	1,053,079	(1,126)	1,051,953
Accumulated deficit	(213,376)	506	(212,870)

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Veeco Instruments Inc. and Subsidiaries

Notes to the Consolidated Financial Statements - continued

(unaudited)

	Three months ended September 30, 2017			Nine months ended September 30, 2017		
	As reported	Adjustments	As adjusted	As reported	Adjustments	As adjusted
	(in thousands, except per share amounts)					
Statement of Operations						
Net sales	$ 131,872	$ (2,564)	$ 129,308	$ 341,324	$ (5,299)	$ 336,025
Cost of sales	78,811	(32)	78,779	215,344	(194)	215,150
Income tax expense (benefit)	(1,790)	(676)	(2,466)	(24,969)	(1,365)	(26,334)
Net income (loss)	(21,884)	(1,856)	(23,740)	(39,177)	(3,741)	(42,918)
Diluted earnings (loss) per share	(0.47)	(0.04)	(0.51)	(0.91)	(0.09)	(1.00)

The Company’s adoption of the standard had no impact to cash provided by or used in operating, investing, or financing activities on the Consolidated Statements of Cash Flows.

Revenue Recognition

Revenue is recognized upon the transfer of control of the promised product or service to the customer in an amount that reflects the consideration the Company expects to receive in exchange for such product or service. The Company’s contracts with customers generally do not contain variable consideration. In the rare instances where variable consideration is included, the Company estimates the amount of variable consideration and determines what portion of that, if any, has a high probability of significant subsequent revenue reversal, and if so, that amount is excluded from the transaction price. The Company’s contracts with customers frequently contain multiple deliverables, such as systems, upgrades, components, spare parts, installation, maintenance, and service plans. Judgment is required to properly identify the performance obligations within a contract and to determine how the revenue should be allocated among the performance obligations. The Company also evaluates whether multiple transactions with the same customer or related parties should be considered part of a single contract based on an assessment of whether the contracts or agreements are negotiated or executed within a short time frame of each other or if there are indicators that the contracts are negotiated in contemplation of one another.

When there are separate units of accounting, the Company allocates revenue to each performance obligation on a relative stand-alone selling price basis. The stand-alone selling prices are determined based on the prices at which the Company separately sells the systems, upgrades, components, spare parts, installation, maintenance, and service plans. For items that are not sold separately, the Company estimates stand-alone selling prices generally using an expected cost plus margin approach.

Most of the Company's revenue is recognized at a point in time when the performance obligation is satisfied. The Company considers many facts when evaluating each of its sales arrangements to determine the timing of revenue recognition, including its contractual obligations and the nature of the customer's post-delivery acceptance provisions. The Company's system sales arrangements, including certain upgrades, generally include field acceptance provisions that may include functional or mechanical test procedures. For many of these arrangements, a customer source inspection of the system is performed in the Company's facility or test data is sent to the customer documenting that the system is functioning to the agreed upon specifications prior to delivery. Historically, such source inspection or test data replicates the field acceptance provisions that are performed at the customer's site prior to final acceptance of the system. When the Company objectively demonstrates that the criteria specified in the contractual acceptance provisions are achieved prior to delivery, transfer of control of the product to the customer is considered to have occurred and revenue is recognized upon system delivery since there is no substantive contingency remaining related to the acceptance provisions at that date. For new products, new applications of existing products, or for products with substantive customer acceptance provisions where the Company cannot objectively demonstrate that the criteria specified in the contractual acceptance provisions have been achieved prior to delivery, revenue and the associated costs are deferred. The Company recognizes such revenue and costs upon obtaining objective evidence that the acceptance provisions can be achieved, assuming all other revenue recognition criteria have been met.

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Veeco Instruments Inc. and Subsidiaries

Notes to the Consolidated Financial Statements - continued

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In certain cases the Company's contracts with customers contain a billing retention, typically 10% of the sales price, which is billed by the Company and payable by the customer when field acceptance provisions are completed. Revenue recognized in advance of the amount that has been billed is recorded as a contract asset on the Consolidated Balance Sheets.

The Company recognizes revenue related to maintenance and service contracts over time based upon the respective contract term. Installation revenue is recognized over time as the installation services are performed. The Company recognizes revenue from the sales of components, spare parts, and specified service engagements at a point in time, which is typically consistent with the time of delivery in accordance with the terms of the applicable sales arrangement.

The Company may receive customer deposits on system transactions. The timing of the transfer of goods or services related to the deposits is either at the discretion of the customer or expected to be within one year from the deposit receipt. As such, the Company does not adjust transaction prices for the time value of money. Incremental direct costs incurred related to the acquisition of a customer contract, such as sales commissions, are expensed as incurred since the expected amortization period is one year or less.

The Company has elected to treat shipping and handling costs as a fulfillment activity, and such costs are included in cost of services when the Company recognizes revenue for the related goods. Taxes assessed by governmental authorities that are collected by the Company from a customer are excluded from revenue.

Income Taxes

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act ("2017 Tax Act"), which makes broad and complex changes to the U.S. tax code. Certain income tax effects of the 2017 Tax Act are reflected in the Company's financial results in accordance with Staff Accounting Bulletin No. 118 ("SAB 118"), which provides SEC staff guidance regarding the application of ASC Topic 740, Income Taxes ("ASC 740"). Refer to Note 10, "Income Taxes," for further information on the financial statement impact of the 2017 Tax Act.

Because of the complexity of the new global intangible low-taxed income (“GILTI”) rule, the Company is continuing to evaluate this provision of the 2017 Tax Act and the application of ASC 740. Under U.S. GAAP, the Company is allowed to make an accounting policy choice of either (1) treating taxes due on future U.S. inclusions in taxable income related to GILTI as a current-period expense when incurred (“period cost method”) or (2) factoring such amounts into a company’s measurement of its deferred taxes (“deferred method”). The Company’s selection of an accounting policy with respect to the new GILTI tax rules will depend, in part, on analyzing its global income to determine whether it expects to have future U.S. inclusions in taxable income related to GILTI, and if so, what the impact will be. This assessment depends not only on the Company’s current structure and estimated future results of global operations, but also on its intent and ability to modify its structure and/or business. The Company is not yet able to reasonably estimate the effect of this provision of the 2017 Tax Act; therefore, the Company has not made any deferred tax adjustments related to potential GILTI tax in its consolidated financial statements and has not made a policy election decision regarding whether to record deferred taxes on GILTI.

Recent Accounting Pronouncements

In February 2016, the FASB issued ASU 2016-02: Leases, which generally requires operating lessee rights and obligations to be recognized as assets and liabilities on the balance sheet. In addition, in July 2018, the FASB issued ASU 2018-11: Leases, Targeted Improvements, which adds a transition option whereby companies can recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption rather than in the earliest period presented. The Company plans to adopt using this transition option. These ASUs are effective for fiscal

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Veeco Instruments Inc. and Subsidiaries

Notes to the Consolidated Financial Statements - continued

(unaudited)

years beginning after December 15, 2018. The Company is evaluating the impact of adopting these ASUs on the consolidated financial statements.

The Company is also evaluating other pronouncements recently issued but not yet adopted. The adoption of these pronouncements is not expected to have a material impact on the Company's consolidated financial statements.

Recently Adopted Accounting Pronouncements

The Company adopted ASU 2016-01, Financial Instruments – Overall, as of January 1, 2018. This ASU requires certain equity investments to be measured at fair value, with changes in fair value recognized in net income. The Company measures equity investments without readily observable market prices at cost, adjusted for changes in observable prices minus impairment. Changes in measurement are included in "Other, net" in the Consolidated Statements of Operations. This ASU has not had a material impact on the consolidated financial statements upon adoption, and the Company will monitor its equity investments each reporting period for changes in observable market prices, if any, which may be material in future periods.

The Company adopted ASU 2016-16, Income Taxes: Intra-Entity Transfers of Assets Other Than Inventory, as of January 1, 2018. This ASU requires the Company to recognize the income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. This ASU has not had a material impact on the consolidated financial statements.

The Company adopted ASU 2016-18, Statement of Cash Flows: Restricted Cash, as of January 1, 2018. This ASU requires the Company to include restricted cash with cash and cash equivalents when reconciling the beginning and end of period total amounts shown on the Statement of Cash Flows. This ASU has not had a material impact on the consolidated financial statements.

Note 2 — Income (Loss) Per Common Share

The Company considers unvested share-based awards that have non-forfeitable rights to dividends prior to vesting to be participating shares, which are treated as a separate class of security from the Company's common shares for calculating per share data. Therefore, the Company applies the two-class method when calculating income (loss) per share. The two-class method is an earnings allocation formula that determines earnings per share for each class of common stock and participating security according to dividends declared and participation rights in undistributed earnings. However, since the holders of the participating shares are not obligated to fund losses, participating shares are excluded from the calculation of loss per share.

The dilutive effect of the Convertible Senior Notes on income (loss) per share is calculated using the treasury stock method since the Company has both the current intent and ability to settle the principal amount of the Convertible Senior Notes in cash. See Note 5, "Liabilities," for additional information on the Convertible Senior Notes.

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Veeco Instruments Inc. and Subsidiaries

Notes to the Consolidated Financial Statements - continued

(unaudited)

Basic income (loss) per share is calculated by dividing net income (loss) by the weighted average number of shares outstanding during the period under the two-class method. Diluted income per share is calculated by dividing net income by the weighted average number of shares used to calculate basic income (loss) per share plus the weighted average number of common share equivalents outstanding during the period. The dilutive effect of outstanding options to purchase common stock and non-participating share-based awards is considered in diluted income per share by application of the treasury stock method. The dilutive effect of performance share units is included in diluted income per common share in the periods the performance targets have been achieved. The computations of basic and diluted income (loss) per share for the three and nine months ended September 30, 2018 and 2017 are as follows:

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands, except per share amounts)			
Net income (loss)	$ (8,953)	$ (23,740)	$ (262,414)	$ (42,918)
Net income (loss) per common share:				
Basic	$ (0.19)	$ (0.51)	$ (5.55)	$ (1.00)
Diluted	$ (0.19)	$ (0.51)	$ (5.55)	$ (1.00)
Basic weighted average shares outstanding	46,982	46,941	47,283	43,100
Effect of potentially dilutive share-based awards	—	—	—	—
Diluted weighted average shares outstanding	46,982	46,941	47,283	43,100
Unvested participating shares excluded from basic weighted average shares outstanding since the securityholders are not obligated to fund losses	2	166	2	166
Common share equivalents excluded from the diluted weighted average shares outstanding since Veeco incurred a net loss and their effect would be antidilutive	16	220	17	275
Potentially dilutive non-participating shares excluded from the diluted calculation as their effect would be antidilutive	2,617	1,956	2,469	1,628
Maximum potential shares to be issued for settlement of Convertible Senior Notes excluded from the diluted calculation as their effect would be antidilutive	8,618	8,618	8,618	8,618

Note 3 — Business Combinations

Ultratech

On May 26, 2017, the Company completed its acquisition of Ultratech, Inc. (“Ultratech”). Ultratech develops, manufactures, sells, and supports lithography, laser annealing, and inspection equipment for manufacturers of semiconductor devices, including front-end semiconductor manufacturing and advanced packaging. Ultratech also develops, manufactures, sells, and supports ALD equipment for scientific and industrial applications. Ultratech’s customers are primarily located throughout the United States, Europe, China, Japan, Taiwan, Singapore, and Korea. The results of Ultratech’s operations have been included in the consolidated financial statements since the date of acquisition.

Ultratech shareholders received (i) $21.75 per share in cash and (ii) 0.2675 of a share of Veeco common stock for each Ultratech common share outstanding on the acquisition date. Approximately $2.7 million of the cash merger consideration is included in “Accrued expenses and other current liabilities” on the Consolidated Balance Sheets as of December 31, 2017, related to shareholder appraisal proceedings that were subsequently settled and paid during the third quarter of 2018.

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The following table presents unaudited pro forma financial information as if the acquisition of Ultratech had occurred on January 1, 2016:

	Three months ended September 30, 2017	Nine months ended September 30, 2017
	(in thousands, except per share amounts)	
Net sales	$ 129,308	$ 406,767
Loss before income taxes	(24,847)	(72,091)
Diluted earnings per share	$ (0.49)	$ (1.23)

The pro-forma results were calculated by combining the unaudited results of the Company with the stand-alone unaudited results of Ultratech for the pre-acquisition period, and adjusting for the following:

(i) Additional amortization expense related to identified intangible assets valued as part of the purchase price allocation that would have been incurred starting on January 1, 2016.

(ii) Additional depreciation expense for the property, plant, and equipment fair value adjustments that would have been incurred starting on January 1, 2016.

(iii) All acquisition related costs incurred by the Company as well as by Ultratech pre-acquisition have been removed from the year ended December 31, 2017 and included in the year ended December 31, 2016, as such expenses would have been incurred in the first quarter following the acquisition.

(iv) All amortization of inventory step-up has been removed from the year ended December 31, 2017 and recorded in the year ended December 31, 2016, as such costs would have been incurred as the corresponding inventory was sold.

(v) Additional interest expense related to the Convertible Senior Notes (see Note 5, “Liabilities”) as if the Notes had been issued on January 1, 2016.

(vi) Income tax expense (benefit) was adjusted for the impact of the above adjustments for each period.

(vii) All shares issued in connection with the acquisition were considered outstanding as of January 1, 2016 for purposes of calculating diluted earnings per share.

During the second quarter of 2018, the Company lowered its projected results for the Ultratech asset group and determined that the revised projections were significantly lower than projected results at the time of the acquisition and that these revised projections required the Company to assess the Ultratech asset group for impairment. See Note 4, “Assets” - Intangible Assets, for additional information.

Note 4 — Assets

Investments

Short-term investments are generally classified as available-for-sale and reported at fair value, with unrealized gains and losses, net of tax, presented as a separate component of stockholders’ equity under the caption “Accumulated other comprehensive income” in the Consolidated Balance Sheets. These securities may include U.S. treasuries, government agency securities, corporate debt, and commercial paper, all with maturities of greater than three months when purchased. All realized gains and losses and unrealized losses resulting from declines in fair value that are other than temporary are included in “Other, net” in the Consolidated Statements of Operations.

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Fair value is the price that would be received for an asset or the amount paid to transfer a liability in an orderly transaction between market participants. Veeco classifies certain assets based on the following fair value hierarchy:

Level 1: Quoted prices in active markets that are unadjusted and accessible at the measurement date for identical, unrestricted assets or liabilities;

Level 2: Quoted prices for identical assets and liabilities in markets that are not active, quoted prices for similar assets and liabilities in active markets or financial instruments for which significant inputs are observable, either directly or indirectly; and

Level 3: Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable.

A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Veeco has evaluated the estimated fair value of financial instruments using available market information and valuations as provided by third-party sources. The use of different market assumptions or estimation methodologies could have a significant effect on the estimated fair value amounts.

The following table presents the portion of Veeco's assets that were measured at fair value on a recurring basis at September 30, 2018 and December 31, 2017:

	Level 1	Level 2	Level 3	Total
	(in thousands)			
September 30, 2018				
Short-term investments				
U.S. treasuries	$ 36,527	$ —	$ —	$ 36,527

Corporate debt	—	8,561	—	8,561
Commercial paper	—	6,975	—	6,975
Total	$ 36,527	$ 15,536	$ —	$ 52,063
December 31, 2017				
Cash equivalents				
U.S. treasuries	$ 12,490	$ —	$ —	$ 12,490
Total	$ 12,490	$ —	$ —	$ 12,490
Short-term investments				
U.S. treasuries	$ 33,895	$ —	$ —	$ 33,895
Corporate debt	—	10,886	—	10,886
Commercial paper	—	2,999	—	2,999
Total	$ 33,895	$ 13,885	$ —	$ 47,780

There were no transfers between fair value measurement levels during the three and nine months ended September 30, 2018.

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At September 30, 2018 and December 31, 2017, the amortized cost and fair value of available-for-sale securities consist of:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
	(in thousands)			
September 30, 2018				
U.S. treasuries	$ 36,538	$ 1	$ (12)	$ 36,527
Corporate debt	8,573	—	(12)	8,561
Commercial paper	6,975	—	—	6,975
Total	$ 52,086	$ 1	$ (24)	$ 52,063
December 31, 2017				
U.S. treasuries	$ 33,914	$ —	$ (19)	$ 33,895
Corporate debt	10,894	—	(8)	10,886
Commercial paper	2,999	—	—	2,999
Total	$ 47,807	$ —	$ (27)	$ 47,780

Available-for-sale securities in a loss position at September 30, 2018 and December 31, 2017 consist of:

	September 30, 2018		December 31, 2017	
	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
	(in thousands)			
U.S. treasuries	$ 29,621	$ (12)	$ 33,895	$ (19)
Corporate debt	8,561	(12)	10,886	(8)
Total	$ 38,182	$ (24)	$ 44,781	$ (27)

At September 30, 2018 and December 31, 2017, there were no short-term investments that had been in a continuous loss position for more than 12 months.

The maturities of securities classified as available-for-sale at September 30, 2018 were all due in one year or less. Actual maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties. There were no realized gains or losses for the three and nine months ended September 30, 2018 and minimal realized gains for the three and nine months ending September 30, 2017.

Accounts Receivable

Accounts receivable is presented net of an allowance for doubtful accounts of $0.3 million at both September 30, 2018 and December 31, 2017.

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Inventories

Inventories are stated at the lower of cost or net realizable value, with cost determined on a first-in, first-out basis. Inventories at September 30, 2018 and December 31, 2017 consist of the following:

	September 30, 2018	December 31, 2017
	(in thousands)	
Materials	$ 84,864	$ 59,919
Work-in-process	41,423	37,222
Finished goods	23,545	23,125
Total	$ 149,832	$ 120,266

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets primarily consist of supplier deposits, prepaid value-added tax, lease deposits, prepaid insurance, and prepaid licenses. Veeco had deposits with its suppliers of $8.9 million and $7.6 million at September 30, 2018 and December 31, 2017, respectively.

Property, Plant, and Equipment

Property, plant, and equipment at September 30, 2018 and December 31, 2017 consist of the following:

	September 30, 2018	December 31, 2017
	(in thousands)	

Land	$ 5,669	$ 5,669
Building and improvements	59,547	54,449
Machinery and equipment (1)	126,126	126,829
Leasehold improvements	8,802	10,073
Gross property, plant, and equipment	200,144	197,020
Less: accumulated depreciation and amortization	119,518	111,962
Net property, plant, and equipment	$ 80,626	$ 85,058

(1) Machinery and equipment also includes software, furniture and fixtures

For the three and nine months ended September 30, 2018, depreciation expense was $4.6 million and $13.0 million, respectively, and $4.2 million and $10.6 million for the comparable 2017 periods.

Goodwill

Goodwill represents the future economic benefits arising from assets acquired in a business combination that are not individually identified and separately recognized. The Company is required to assess goodwill annually for impairment, which it does at the beginning of the fourth quarter, or on an interim basis whenever certain events occur or circumstances change, such as an adverse change in business climate, a decline in the adjusted market capitalization of the Company below the book value of the Company's equity for an extended period of time, or other events that would more likely than not indicate that the fair value of the Company's single goodwill reporting unit is less than its carrying amount. There were no changes to goodwill during the nine months ended September 30, 2018.

As the Company maintains a single goodwill reporting unit, it determines the fair value of its reporting unit based upon the Company's adjusted market capitalization. The adjusted market capitalization is calculated by multiplying the

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average closing share price of the Company's common stock for the last ten trading days prior to the measurement date by the number of outstanding common shares and adding a control premium.

Based on the most recent annual impairment test as of October 1, 2018, the Company determined that the fair value of its single goodwill reporting unit exceeded its carrying amount by approximately $60 million. However, this analysis is sensitive to changes in the Company's stock price and absent other qualitative factors, the Company may be required to record a goodwill impairment charge in future periods if the stock price declines subsequent to its annual measurement date and remains depressed for an extended period of time.

Intangible Assets

Intangible assets consist of purchased technology, customer relationships, patents, trademarks and tradenames, and backlog, and are initially recorded at fair value. Long-lived intangible assets are amortized over their estimated useful lives in a method reflecting the pattern in which the economic benefits are consumed or amortized on a straight-line basis if such pattern cannot be reliably determined.

During the second quarter of 2018, the Company lowered its projected results for the Ultratech asset group, which were significantly below the projected results at the time of the acquisition. The reduced projections were based on lower than expected unit volume of certain smartphones, which incorporate advanced packaging methods such as Fan-Out Wafer Level Packaging ("FOWLP"), and a delay in the adoption of FOWLP advanced packaging by other electronics manufacturers, both of which slowed orders and reduced revenue projections for the Company's advanced packaging lithography systems. In addition, there has been a delay in the build out of 28nm facilities by companies in China who were expected to purchase the Company's Laser Spike Anneal ("LSA") systems. Taken together, the reduced projections identified during the second quarter of 2018 required the Company to assess the Ultratech asset group for impairment. As a result of the analysis, which included projected cash flows that required the use of unobservable inputs, the Company recorded non-cash impairment charges of $216.4 million and $35.9 million related to definite-lived intangible assets and in-process research and development assets, respectively, during the second quarter of 2018.

The components of purchased intangible assets were as follows:

	September 30, 2018			December 31, 2017		
	Gross Carrying Amount	Accumulated Amortization and Impairment	Net Amount	Gross Carrying Amount	Accumulated Amortization and Impairment	Net Amount
	(in thousands)					
Technology	$ 320,888	$ 273,821	$ 47,067	$ 307,588	$ 133,121	$ 174,467
Customer relationships	164,595	134,760	29,835	164,595	39,336	125,259
In-process R&D	30,040	25,000	5,040	43,340	—	43,340
Trademarks and tradenames	30,910	23,560	7,350	30,910	4,321	26,589
Other	3,686	3,580	106	3,686	3,498	188
Total	$ 550,119	$ 460,721	$ 89,398	$ 550,119	$ 180,276	$ 369,843

Other intangible assets primarily consist of patents, licenses, and backlog.

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Based on the revised intangible asset values resulting from the impairment recorded during the period ended June 30, 2018, the remaining estimated annual amortization expense, excluding in-process R&D, is expected to be as follows:

	Amortization (in thousands)
2018	$ 4,184
2019	16,554
2020	15,628
2021	12,506
2022	10,172
Thereafter	25,314
Total	$ 84,358

Other Assets

Veeco has an ownership interest of less than 20% in a non-marketable investment, Kateeva, Inc. (“Kateeva”), over which Veeco does not exert significant influence. The carrying value of the investment was $21.0 million at September 30, 2018 and December 31, 2017. Additionally, during the nine months ended September 30, 2018, the Company made a separate non-marketable investment of $3.5 million. The Company does not exert significant influence over this investment, and its ownership interest is less than 20%. Neither equity investment has a readily observable market price, and therefore the Company has elected to measure these investments at cost, adjusted for changes in observable market prices minus impairment. The investments are included in “Other assets” on the Consolidated Balance Sheets. There were no changes in observable market prices for either investment for the nine months ended September 30, 2018. These investments are subject to periodic impairment reviews; as there are no open-market valuations, the impairment analyses require judgment. The analyses include assessments of the companies’ financial condition, the business outlooks for their products and technologies, their projected results and cash flow, business valuation indications from recent rounds of financing, the likelihood of obtaining subsequent rounds of financing, and the impact of equity preferences held by Veeco relative to other investors.

Note 5 — Liabilities

Accrued Expenses and Other Current Liabilities

The components of accrued expenses and other current liabilities at September 30, 2018 and December 31, 2017 consist of:

	September 30, 2018	December 31, 2017
	(in thousands)	
Payroll and related benefits	$ 18,498	$ 32,996
Warranty	7,371	6,532
Interest	1,992	4,430
Professional fees	3,457	3,942
Merger consideration payable	—	2,662
Sales, use, and other taxes	532	2,144
Restructuring liability	2,901	1,520
Other	5,679	3,842
Total	$ 40,430	$ 58,068

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Warranty

Warranties are typically valid for one year from the date of system final acceptance, and Veeco estimates the costs that may be incurred under the warranty. Estimated warranty costs are determined by analyzing specific product and historical configuration statistics and regional warranty support costs and are affected by product failure rates, material usage, and labor costs incurred in correcting product failures during the warranty period. Unforeseen component failures or exceptional component performance can also result in changes to warranty costs. Changes in product warranty reserves for the nine months ended September 30, 2018 include:

	(in thousands)
Balance - December 31, 2017	$ 6,532
Warranties issued	5,249
Consumption of reserves	(5,161)
Changes in estimate	751
Balance - September 30, 2018	$ 7,371

Restructuring Accruals

During 2017, the Company initiated certain restructuring activities related to its efforts to streamline operations, enhance efficiencies, and reduce costs, as well as reduced its investments in certain technology development. In addition, during 2017, the Company began the Ultratech acquisition integration process to enhance efficiencies, resulting in reductions in headcount and other facility costs. During the nine months ended September 30, 2018, additional accruals were recognized and payments were made related to these restructuring initiatives.

During the second quarter of 2018, the Company initiated plans to further reduce excess capacity associated with the manufacture and support of the Company's advanced packaging lithography and 3D wafer inspection systems by consolidating these operations into its San Jose, California facility. As a result of this and other cost saving initiatives, the Company announced headcount reductions of approximately 40 employees and recorded restructuring charges

related to these actions of $2.4 million for the nine months ended September 30, 2018, consisting principally of personnel severance and related costs. The Company expects the consolidation to be completed in the first quarter of 2019.

During the third quarter of 2018, the Company initiated additional restructuring activities to further reduce costs, including headcount reductions impacting approximately 35 employees and recorded restructuring charges related to these actions of $1.1 million, consisting principally of personnel severance and related costs. The Company expects this initiative to be completed by the end of 2018 and to provide approximately $5 million in annualized savings. Over the next few quarters, the Company expects to incur additional restructuring costs of $1 million to $2 million as it completes all of these restructuring initiatives.

	Personnel Severance and Related Costs	Facility Related Costs and Other	Total
	(in thousands)		
Balance - December 31, 2017	$ 1,520	$ —	$ 1,520
Provision	3,930	2,743	6,673
Payments	(2,898)	(2,394)	(5,292)
Balance - September 30, 2018	$ 2,552	$ 349	$ 2,901

Included within restructuring expense in the Consolidated Statements of Operations for the nine months ended September 30, 2018 is approximately $1.0 million of non-cash charges related to accelerated share-based compensation for employee terminations.

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Customer Deposits and Deferred Revenue

Customer deposits totaled $20.0 million and $41.5 million at September 30, 2018 and December 31, 2017, respectively. Deferred revenue represents amounts billed, other than deposits, in excess of the revenue that can be recognized on a particular contract at the balance sheet date. Changes in deferred revenue were as follows:

	(in thousands)
Balance - December 31, 2017	$ 70,536
Deferral of revenue	7,166
Recognition of previously deferred revenue	(33,224)
Balance - September 30, 2018	$ 44,478

As of September 30, 2018, the Company has approximately $63.0 million of remaining performance obligations on contracts with an original estimated duration of one year or more, of which approximately 64% is expected to be recognized within one year, with the remaining amounts expected to be recognized between one to three years. The Company has elected to exclude disclosures regarding remaining performance obligations that have an original expected duration of one year or less.

Convertible Senior Notes

On January 10, 2017, the Company issued $345.0 million of 2.70% convertible senior unsecured notes (the “Convertible Senior Notes”). The Company received net proceeds, after deducting underwriting discounts and fees and expenses payable by the Company, of approximately $335.8 million. The Convertible Senior Notes bear interest at a rate of 2.70% per year, payable semiannually in arrears on January 15 and July 15 of each year, commencing on July 15, 2017. The Convertible Senior Notes mature on January 15, 2023 (the “Maturity Date”), unless earlier purchased by the Company, redeemed, or converted.

The carrying value of the Convertible Senior Notes is as follows:

	September 30, 2018	December 31, 2017
	(in thousands)	
Principal amount	$ 345,000	$ 345,000
Unamortized debt discount	(55,082)	(63,022)
Unamortized transaction costs	(5,549)	(6,348)
Net carrying value	$ 284,369	$ 275,630

Total interest expense related to the Convertible Senior Notes is as follows:

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
Cash Interest Expense				
Coupon interest expense	$ 2,329	$ 2,329	$ 6,986	$ 6,573
Non-Cash Interest Expense				
Amortization of debt discount	2,697	2,502	7,940	6,942
Amortization of transaction costs	271	252	799	699
Total Interest Expense	$ 5,297	$ 5,083	$ 15,725	$ 14,214

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The Company determined the Convertible Senior Notes is a Level 2 liability in the fair value hierarchy and estimated its fair value as $292.0 million at September 30, 2018.

Other Liabilities

As part of the acquisition of Ultratech, the Company assumed an executive non-qualified deferred compensation plan that allowed qualifying executives to defer cash compensation. The plan was frozen at the time of acquisition and no further contributions have been made. At September 30, 2018 and December 31, 2017, plan assets approximated $3.6 million and $3.4 million, respectively, representing the cash surrender value of life insurance policies and is included within “Other assets” in the Consolidated Balance Sheets, while plan liabilities approximated $3.9 million and $4.7 million, respectively, and is included within “Other liabilities” in the Consolidated Balance Sheets. Other liabilities also include asset retirement obligations of $3.2 million and $3.3 million at September 30, 2018 and December 31, 2017, respectively, and medical and dental benefits of $2.1 million and $2.2 million, respectively.

Note 6 — Commitments and Contingencies

Minimum Lease Commitments

At September 30, 2018, the Company’s total future minimum lease payments under non-cancelable operating leases have not changed significantly from the disclosure in the 2017 Form 10-K.

Purchase Commitments

Veeco has purchase commitments of $114.0 million at September 30, 2018, substantially all of which become due within one year.

Bank Guarantees

Veeco has bank guarantees and letters of credit issued by a financial institution on its behalf as needed. At September 30, 2018, outstanding bank guarantees and letters of credit totaled $6.9 million, and unused bank guarantees and letters of credit of $64.0 million were available to be drawn upon.

Legal Proceedings

On June 8, 2018, an Ultratech shareholder who received Veeco stock as part of the consideration for the Ultratech acquisition filed a purported class action complaint in the Superior Court of the State of California, County of Santa Clara, captioned Wolther v. Maheshwari et al., Case No. 18CV329690, on behalf of himself and others who purchased or acquired shares of Veeco pursuant to the registration statement and prospectus which Veeco filed with the SEC in connection with the Ultratech acquisition (the “Wolther Action”). The complaint seeks to recover damages and fees under Sections 11, 12, and 15 of the Securities Act of 1933 for, among other things, alleged false/misleading statements in the registration statement and prospectus relating to the Ultratech acquisition, relating primarily to the alleged failure to disclose delays in the advanced packaging business, increased MOCVD competition in China, and an intellectual property dispute. On August 2 and August 8, 2018, two purported class action complaints substantially similar to the Wolther Action were filed on behalf of different plaintiffs in the same court as the Wolther Action. These three cases are expected to be consolidated. Veeco believes these lawsuits are without merit and intends to vigorously contest these matters.

The Company is involved in various other legal proceedings arising in the normal course of business. The Company does not believe that the ultimate resolution of these matters will have a material adverse effect on its consolidated financial position, results of operations, or cash flows.

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Receivable Purchase Agreement

In December 2017, the Company entered into a Receivable Purchase Agreement with a financial institution to sell certain of its trade receivables from customers without recourse, up to $23.0 million at any point in time for a term of one year. There were no sales of accounts receivable under the agreement for the nine months ended September 30, 2018, and as of September 30, 2018, the Company maintained $23.0 million available under the agreement for additional sales of trade receivables.

Note 7 — Derivative Financial Instruments

The Company is exposed to financial market risks arising from changes in currency exchange rates. Changes in currency exchange rates could affect the Company's foreign currency denominated monetary assets and liabilities and forecasted cash flows. The Company entered into monthly forward derivative contracts with the intent of mitigating a portion of this risk. The Company only used derivative financial instruments in the context of hedging and not for speculative purposes and had not designated its foreign exchange derivatives as hedges. Accordingly, changes in fair value from these contracts were recorded as "Other, net" in the Company's Consolidated Statements of Operations. The Company executed derivative transactions with highly rated financial institutions to mitigate counterparty risk.

A summary of the foreign exchange derivatives outstanding on September 30, 2018 and December 31, 2017 is as follows:

	September 30, 2018			December 31, 2017		
	Fair Value	Maturity Dates	Notional Amount	Fair Value	Maturity Dates	Notional Amou
	(in thousands)					
Foreign currency exchange forwards	$ (2)	October 2018	$ 4,584	$ —	January 2018	$ 622

The following table shows the gains and (losses) from currency exchange derivatives during the three and nine months ended September 30, 2018 and 2017, which are included in “Other, net” in the Consolidated Statements of Operations, as well as the weighted average notional amount of derivatives outstanding for each period:

	Three months ended September 30, 2018		Three months ended September 30, 2017	
	Gains (Losses)	Weighted average notional amount	Gains (Losses)	Weighted average notional amount
	(in thousands)			
Foreign currency exchange forwards	$ 132	$ 4,448	$ (10)	$ 361

	Nine months ended September 30, 2018		Nine months ended September 30, 2017	
	Gains (Losses)	Weighted average notional amount	Gains (Losses)	Weighted average notional amount
	(in thousands)			
Foreign currency exchange forwards	$ 348	$ 2,869	$ (9)	$ 317

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Note 8 — Equity

Accumulated Other Comprehensive Income (“AOCI”)

The following table presents the changes in the balances of each component of AOCI, net of tax:

	Foreign Currency Translation	Unrealized Gains (Losses) on Available for Sale Securities	Total
	(in thousands)		
Balance - December 31, 2017	$ 1,839	$ (27)	$ 1,812
Other comprehensive income (loss)	(4)	4	—
Balance - September 30, 2018	$ 1,835	$ (23)	$ 1,812

There were minimal reclassifications from AOCI into net income for the nine months ended September 30, 2018.

Note 9 — Share-based compensation

Restricted share awards are issued to employees that are subject to specified restrictions and a risk of forfeiture. The restrictions typically lapse over one to five years and may entitle holders to dividends and voting rights. Other types of share-based compensation include performance share awards, performance share units, and restricted share units (collectively with restricted share awards, “restricted shares”), as well as options to purchase common stock.

Share-based compensation expense was recognized in the following line items in the Consolidated Statements of Operations for the three and nine months ended September 30, 2018 and 2017:

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
Cost of sales	$ 513	$ 740	$ 1,603	$ 1,898
Research and development	709	849	2,728	1,986
Selling, general, and administrative	1,890	3,714	7,393	10,182
Restructuring	167	867	996	1,707
Acquisition costs	—	—	—	4,203
Total	$ 3,279	$ 6,170	$ 12,720	$ 19,976

For the nine months ended September 30, 2018, equity activity related to stock options was as follows:

	Number of Shares	Weighted Average Exercise Price
	(in thousands)	
Balance - December 31, 2017	1,394	$ 34.97
Expired or forfeited	(147)	36.50
Balance - September 30, 2018	1,247	34.79

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For the nine months ended September 30, 2018, equity activity related to non-vested restricted shares and performance shares was as follows:

	Number of Shares (in thousands)	Weighted Average Grant Date Fair Value
Balance - December 31, 2017	1,880	$ 25.41
Granted	835	19.31
Performance award adjustments	(5)	32.67
Vested	(508)	26.44
Forfeited	(253)	24.83
Balance - September 30, 2018	1,949	22.59

Note 10 - Income Taxes

Income taxes are estimated for each of the jurisdictions in which the Company operates. Deferred income taxes reflect the net tax effect of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, as well as the tax effect of carryforwards. Realization of net deferred tax assets is dependent on future taxable income. At September 30, 2018, the Company’s U.S. deferred tax assets are fully offset by a valuation allowance since the Company cannot conclude that it is more likely than not that these future benefits will be realized.

At the end of each interim reporting period, the effective tax rate is aligned with expectations for the full year. This estimate is used to determine the income tax provision on a year-to-date basis and may change in subsequent interim periods. If necessary, the year-to-date tax benefit for interim period losses is limited to the amount that could be recognizable at the end of the fiscal year.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act. The 2017 Tax Act makes broad and complex changes to the U.S. tax code that affects the Company's 2018 financial results, including, but not limited to; a reduction in the U.S. federal corporate income tax rate from 35 percent to 21 percent; current U.S. taxation of global intangible low-taxed income ("GILTI") of non-U.S. operations; additional limitations on the deductibility of executive compensation; and limitations on the deductibility of interest.

The Company recognized the income tax effects of the 2017 Tax Act in its 2017 financial statements in accordance with SAB 118, which provides SEC staff guidance for the application of ASC 740 in the reporting period in which the 2017 Tax Act was signed into law. As such, the Company's 2017 financial results reflect the income tax effects of the 2017 Tax Act, including provisional amounts for specific income tax effects of the 2017 Tax Act for which the accounting under ASC 740 is incomplete but for which a reasonable estimate could be determined. During the second quarter of 2018, the Company recognized an income tax benefit of $1.6 million related to the alternative minimum tax credits that became refundable in accordance with the 2017 Tax Act. The Company is still in the process of evaluating the impacts of the 2017 Tax Act and considers the amounts previously recorded to be provisional, except for the tax benefit of alternative minimum tax credits and the impact of the change in tax rate on the Company's deferred tax assets and liabilities as of December 31, 2017, for which the accounting is complete. The Company will complete its analysis and finalize the amounts by the end of the fourth quarter of 2018, which is within the measurement period as provided by SAB 118.

During the second quarter of 2018, the Company also recognized a tax benefit of $25.3 million primarily due to the intangible asset impairment charge of $252.3 million incurred during the quarter. See Note 4, "Assets" - Intangible Assets, for additional information.

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Veeco Instruments Inc. and Subsidiaries

Notes to the Consolidated Financial Statements - continued

(unaudited)

Loss before income taxes and income tax benefit for the three and nine months ended September 30, 2018 and 2017 were as follows:

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
Loss before income taxes	$ (8,652)	$ (26,206)	$ (290,368)	$ (69,252)
Income tax expense (benefit)	$ 301	$ (2,466)	$ (27,954)	$ (26,334)

The Company's tax expense for the three months ended September 30, 2018 was $0.3 million, compared to a tax benefit of $2.5 million for the comparable prior period. The 2018 tax expense is mainly related to the Company's non-U.S. operations, compared to 2017 when the benefit included a $2.8 million benefit related to domestic operations, offset by a $0.3 million expense related to the Company's non-U.S. operations. The prior period domestic tax benefit is primarily attributable to an income tax benefit for losses incurred during the three months ended September 30, 2017, as the deferred tax liability created by the issuance of the Convertible Senior Notes is treated as a source of income in fiscal 2017, offset by a deferred provision related to tax amortization on indefinite-lived intangible assets. The prior period non-U.S. tax expense is attributable to the profitable non-U.S. operations.

The Company's tax benefit for the nine months ended September 30, 2018 was $28.0 million, compared to $26.3 million for the comparable prior period. The 2018 tax benefit included a $1.1 million benefit related to the Company's domestic operations and a $26.9 million benefit related to the Company's non-U.S. operations, compared to 2017 when the benefit included a $22.7 million benefit related to domestic operations and a $3.6 million benefit related to non-U.S. operations. The current period domestic tax benefit is primarily attributable to refundable alternative minimum tax credits in accordance with 2017 Tax Act, offset by the tax amortization of indefinite-lived intangible assets that is not available to offset U.S. deferred tax assets. The current period foreign tax benefit is primarily attributable to the asset impairment charge incurred during the period. The prior period domestic tax benefit is primarily attributable to an income tax benefit for losses incurred during the nine months ended September 30, 2017, as the deferred tax liability created by the issuance of the Convertible Senior Notes is treated as a source of income in fiscal 2017, offset by a deferred provision related to tax amortization on indefinite-lived intangible assets. The prior period non-U.S. tax benefit is primarily attributable to the remeasurement of an uncertain tax position, which included the reversal of a previously established non-U.S. tax liability and the recognition of a deferred tax benefit related to certain foreign net operating losses generated in prior years that were determined to be realizable, offset by tax

expense attributed to the profitable non-U.S. operations.

Note 11 — Segment Reporting and Geographic Information

Veeco operates and measures its results in one operating segment and therefore has one reportable segment: the design, development, manufacture, and support of thin film process equipment primarily sold to make electronic devices.

Veeco categorizes its sales into the following four end-markets:

Advanced Packaging, MEMS & RF Filters

Advanced Packaging includes a portfolio of wafer-level assembly technologies that enable the miniaturization and performance improvement of electronic products, such as smartphones, smartwatches, tablets, and laptops. Micro-Electro Mechanical Systems ("MEMS") includes tiny mechanical devices such as sensors, switches, mirrors, and actuators embedded in semiconductor chips used in vehicles, smartphones, tablets, and games. RF Filters refers to RF filters used in smartphones, tablets, and mobile devices.

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Veeco Instruments Inc. and Subsidiaries

Notes to the Consolidated Financial Statements - continued

(unaudited)

LED Lighting, Display & Compound Semiconductor

LED Lighting refers to Light Emitting Diode ("LED") and semiconductor illumination sources used in various applications including, but not limited to, displays such as backlights, general lighting, automotive running lights, and headlamps. Display refers to LEDs used for displays and Organic Light Emitting Diode ("OLED") displays found in outdoor display/signage applications, TVs, smartphones, wearable devices, and tablets. Compound Semiconductor includes Photonics, Power Electronics, and Radio Frequency ("RF") Devices. Photonics refers to laser diodes, Vertical Cavity Surface Emitting Lasers ("VCSEL") in 3D sensing and communications, and various other optical devices. Power Electronics refers to semiconductor devices such as rectifiers, inverters, and converters for the control and conversion of electric power. RF devices refers to radio frequency emitting and receiving devices that enable wireless communications. Such devices include power amplifiers, switches, and transceivers for applications such as mobile (including handsets and base stations), defense, automobile, and the Internet of Things.

Front-End Semiconductor

Front-End Semiconductor refers to the early steps in the process of integrated circuit fabrication where the microchips are created but still remain on the silicon wafer. This category includes Laser Spike Anneal, Ion Beam etch for front-end semiconductor applications, and Ion Beam deposition for EUV mask blanks.

Scientific & Industrial

Scientific refers to advanced materials research at university research institutions, industry research institutions, industry consortiums, and government research agencies. Industrial refers to large-scale product manufacturing applications including data storage and optical coatings: thin layers of material deposited on a lens or mirror that alters how light reflects and transmits.

Sales by end-market and geographic region for the three and nine months ended September 30, 2018 and 2017 were as follows:

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in thousands)			
Sales by end-market				
Advanced Packaging, MEMS & RF Filters	$ 24,562	$ 21,478	$ 76,473	$ 54,216
LED Lighting, Display & Compound Semiconductor	58,864	57,647	236,597	167,105
Front-End Semiconductor	13,476	16,256	41,085	27,736
Scientific & Industrial	29,855	33,927	88,955	86,968
Total	$ 126,757	$ 129,308	$ 443,110	$ 336,025
Sales by geographic region				
United States	$ 28,861	$ 34,914	$ 85,555	$ 72,820
China	39,200	12,956	185,050	81,121
EMEA(1)	30,685	16,948	71,836	54,140
Rest of World	28,011	64,490	100,669	127,944
Total	$ 126,757	$ 129,308	$ 443,110	$ 336,025

(1) EMEA consists of Europe, the Middle East, and Africa

For geographic reporting, sales are attributed to the location in which the customer facility is located.

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Veeco Instruments Inc. and Subsidiaries

Notes to the Consolidated Financial Statements - continued

(unaudited)

Note 12 — Subsequent Events

The Company recently discovered an attack on its computer systems by what appears to be a highly-sophisticated actor. The Company has notified law enforcement of the attack and has retained forensic experts to assist with the investigation. At this time, the Company does not know if or when it will be able to determine the extent of the breach or the potential impact to the Company, whether it will be able to identify who is responsible for this attack or whether it will be able to pursue legal action or other remedies to protect any compromised information or recover damages related to the attack. This attack, including the expenses incurred to address it, may have an adverse effect on the Company’s results of operations and/or financial condition. In addition, this attack could result in the loss or misuse of confidential information of the Company or that of its customers or others, result in litigation and potential liability, damage the Company’s reputation and/or otherwise harm its business.

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

Cautionary Statement Regarding Forward Looking Statements

Our discussion below constitutes "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. When used in this Report, the words "believes," "anticipates," "expects," "estimates," "targets," "plans," "intends," "will," and similar expressions relatec future are intended to identify forward-looking statements. All forward-looking statements are subject to a number of risks and uncertainties that could cause actual results to differ materially from projected results. You should not place undue reliance on any forward-looking statements, which speak only as of the dates they are made.

Executive Summary

We are a technology company that develops, manufactures, sells, and supports semiconductor/compound semiconductor process equipment aligned to meet the demands of key global trends such as enhanced mobility, increased connectivity, and energy efficiency. Our primary technologies include metal organic chemical vapor deposition ("MOCVD"), advanced packaging lithography, wet etch and clean, laser annealing, ion beam deposition and etch, molecular beam epitaxy, 3D wafer inspection, and atomic layer deposition. These technologies play an integral role in producing LEDs for solid-state lighting and displays and in the fabrication and packaging of advanced semiconductor devices. With equipment designed to optimize performance, yield, and cost of ownership, we hold technology leadership positions in many of these served markets.

We categorize our revenue by the key markets into which we sell. Our four key markets are: Advanced Packaging, MEMS & RF Filters; LED Lighting, Display & Compound Semiconductor; Front-End Semiconductor; and Scientific & Industrial.

Sales in the Advanced Packaging, MEMS & RF Filters market were driven by shipments of lithography systems and upgrades to Outsourced Semiconductor Assembly & Test companies ("OSATs"), Independent Device Manufacturers ("IDMs") and foundry customers in support of advanced packaging processes such as Fan-Out Wafer Level Packaging ("FOWLP") and Copper Pillar. Additionally, we continue to ship Wet Etch and Clean systems to foundry customers and IDMs in support of advanced packaging and RF Filter applications. We anticipate OSATs will continue to add capacity in the future driven by broader technology trends such as artificial intelligence ("AI"), mobile connectivity, autonomous vehicles, big data processing, and 5G infrastructure deployment.

Sales in the LED Lighting, Display & Compound Semiconductor market were primarily driven by the shipment of MOCVD systems into China for general lighting and backlighting. However, orders for LED systems remained soft this quarter as customers digest recently added capacity for general lighting and backlighting. In addition to overcapacity in this market, a more competitive landscape in China has emerged. It is unclear when orders will improve in the LED market for general lighting and backlighting. We also shipped MOCVD systems and Wet Etch and Clean Systems for Display, Photonics, and RF device applications. We expect growth in these markets to be driven by fine-pitch digital signage, automotive lighting, 3D sensing Vertical Cavity Surface Emitting Lasers (“VCSELs”) and laser diodes, 5G RF devices, and power electronics. We focus our R&D efforts accordingly and where our technology differentiation can provide a significant advantage for our customers. Our broad portfolio of MOCVD and Wet Etch and Clean technologies has been developed to support these applications.

We continue to build momentum in the Front-End Semiconductor market with two additional orders for our Low Defect Density Ion Beam Deposition (“LDD-IBD”) system for Extreme Ultraviolet (“EUV”) Mask Blank Production. We believe these system orders reflect the ongoing adoption of EUV Lithography for advanced node, front-end semiconductor manufacturing.

Sales in the Scientific & Industrial market were supported primarily by shipments of Ion Beam deposition systems for data storage applications as well as optical coatings. Demand for our Ion Beam products for Data Storage is being driven by the requirements to improve areal density of magnetic heads for hard disk drive manufacturers, as well as an overall projected volume increase of thin film magnetic heads. These two factors taken together are driving additional capacity

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and equipment upgrades. While equipment demand from each individual market may fluctuate quarter to quarter, the diverse customer base in this market segment has historically provided a relatively stable revenue stream for the Company.

During the third quarter of 2018, we initiated additional restructuring activities to further reduce costs, including headcount reductions impacting approximately 35 employees and recorded restructuring charges related to these actions of $1.1 million, consisting principally of personnel severance and related costs. We expect this initiative to be completed by the end of 2018 and to provide approximately $5 million in annualized savings.

Results of Operations

For the three months ended September 30, 2018 and 2017

The following table presents revenue and expense line items reported in our Consolidated Statements of Operations for 2018 and 2017 and the period-over-period dollar and percentage changes for those line items. Our results of operations are reported as one business segment, represented by our single operating segment.

	Three Months Ended September 30,						Change		
	2018			2017			Period to Period		
	(dollars in thousands)								
Net sales	$ 126,757	100	%	$ 129,308	100	%	$ (2,551)	(2)	%
Cost of sales	80,372	63	%	78,779	61	%	1,593	2	%
Gross profit	46,385	37	%	50,529	39	%	(4,144)	(8)	%
Operating expenses, net:									
Research and development	23,544	19	%	24,061	19	%	(517)	(2)	%
Selling, general, and administrative	20,186	16	%	29,771	23	%	(9,585)	(32)	%
Amortization of intangible assets	4,183	3	%	12,500	10	%	(8,317)	(67)	%
Restructuring	2,057	2	%	5,010	4	%	(2,953)	(59)	%
Acquisition costs	249	0	%	783	1	%	(534)	(68)	%
Asset impairment	—	0	%	2	0	%	(2)	*	
Other, net	39	0	%	(140)	0	%	179	*	
Total operating expenses, net	50,258	40	%	71,987	56	%	(21,729)	(30)	%
Operating income (loss)	(3,873)	(3)	%	(21,458)	(17)	%	17,585	(82)	%
Interest income (expense), net	(4,779)	(4)	%	(4,748)	(4)	%	(31)	1	%
Income (loss) before income taxes	(8,652)	(7)	%	(26,206)	(20)	%	17,554	(67)	%
Income tax expense (benefit)	301	0	%	(2,466)	(2)	%	2,767	*	
Net income (loss)	$ (8,953)	(7)	%	$ (23,740)	(18)	%	$ 14,787	(62)	%

*Not meaningful

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Net Sales

The following is an analysis of sales by market and by region:

	Three Months Ended September 30,						Change		
	2018			2017			Period to Period		
	(dollars in thousands)								
Sales by market									
Advanced Packaging, MEMS & RF Filters	$ 24,562	19	%	$ 21,478	17	%	$ 3,084	14	%
LED Lighting, Display & Compound Semiconductor	58,864	46	%	57,647	44	%	1,217	2	%
Front-End Semiconductor	13,476	11	%	16,256	13	%	(2,780)	(17)	%
Scientific & Industrial	29,855	24	%	33,927	26	%	(4,072)	(12)	%
Total	$ 126,757	100	%	$ 129,308	100	%	$ (2,551)	(2)	%
Sales by geographic region									
United States	$ 28,861	23	%	$ 34,914	27	%	$ (6,053)	(17)	%
China	39,200	31	%	12,956	10	%	26,244	203	%
EMEA	30,685	24	%	16,948	13	%	13,737	81	%
Rest of World	28,011	22	%	64,490	50	%	(36,479)	(57)	%
Total	$ 126,757	100	%	$ 129,308	100	%	$ (2,551)	(2)	%

Sales increased in the Advanced Packaging, MEMS & RF Filters and LED Lighting, Display & Compound Semiconductor markets for the three months ended September 30, 2018 against the comparable prior year period, offset by decreases in the Front-End Semiconductor and Scientific & Industrial markets. Pricing was not a significant driver of the change in total sales. By geography, sales increased in the China and EMEA regions, offset by decreases in the Rest of World and United States regions. The most significant increase occurred in the China region, which was largely attributable to the increased sales in the LED Lighting, Display & Compound Semiconductor market. However, we do not expect significant new orders for this market in this region in the near future. Sales decreased in Rest of World due to a reduction of sales in the LED lighting, Display & Compound Semiconductor market in Malaysia. We expect there will continue to be year-to-year variations in our future sales distribution across markets and geographies.

Orders decreased to $100.3 million for the three months ended September 30, 2018 from $161.9 million for the comparable prior year period. The decrease in orders was primarily attributable to a decrease in orders in the LED Lighting, Display & Compound Semiconductor market, offset by an increase in orders in the Front-End Semiconductor and Scientific & Industrial markets.

One of the performance measures we use as a leading indicator of the business is the book-to-bill ratio. The ratio is defined as orders recorded in a given period divided by revenue recognized in the same period. For the three months ended September 30, 2018, the ratio was 0.8, compared to 1.2 for the comparable prior period. Our backlog at

September 30, 2018 was $275.5 million, compared to $305.1 million at June 30, 2018. During the three months ended September 30, 2018, we recorded backlog adjustments of approximately $3.1 million relating to orders that no longer met our bookings criteria.

Gross Profit

In the third quarter of 2018, gross profit decreased compared to the third quarter of 2017 due to a decrease in sales volume, as well as decreased gross margins. Gross margins decreased principally due to product and region mix of sales in the periods.

Research and Development

The markets we serve are characterized by continuous technological development and product innovation, and we invest in various research and development initiatives to maintain our competitive advantage and achieve our growth objectives. Research and development expenses decreased for the three months ended September 30, 2018 against the

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comparable prior period primarily related to personnel-related expenses and professional fees as a result of our initiative to streamline operations, enhance efficiency, and reduce costs.

Selling, General, and Administrative

Selling, general, and administrative expenses decreased primarily related to personnel-related expenses, including a reduction in incentive compensation, and professional fees as a result of our initiative to streamline operations, enhance efficiency, and reduce costs.

We recently discovered an attack on our computer systems by what appears to be a highly-sophisticated actor. We have notified law enforcement of the attack and have retained forensic experts to assist with the investigation. At this time, we do not know if or when we will be able to determine the extent of the breach or the potential impact to the Company, whether we will be able to identify who is responsible for this attack or whether we will be able to pursue legal action or other remedies to protect any compromised information or recover damages related to the attack. This attack, including the expenses incurred to address it, may have an adverse effect on our results of operations and/or financial condition. In addition, this attack could result in the loss or misuse of confidential information of the Company or that of our customers or others, result in litigation and potential liability, damage our reputation and/or otherwise harm our business.

Amortization Expense

The decrease in amortization expense is a result of the impairment of intangible assets during the second quarter of 2018.

Restructuring Expense

During 2017, we initiated certain restructuring activities related to our efforts to streamline operations, enhance efficiencies, and reduce costs, as well as reduced our investments in certain technology development. In addition, during 2017, we began the Ultratech acquisition integration process to enhance efficiencies, resulting in reductions in headcount and other facility costs. During the nine months ended September 30, 2018, payments against prior period accruals were made related to these restructuring initiatives.

During the second quarter of 2018, we initiated plans to further reduce excess capacity associated with the manufacture and support of our advanced packaging lithography and 3D wafer inspection systems by consolidating these operations into our San Jose, California facility. As a result of this and other cost saving initiatives, we announced headcount reductions of approximately 40 employees and recorded restructuring charges related to these actions of $0.7 million for the three months ended September 30, 2018, consisting principally of personnel severance and related costs. We expect the consolidation to be completed in the first quarter of 2019.

During the third quarter of 2018, we initiated additional restructuring activities to further reduce costs, including headcount reductions impacting approximately 35 employees and recorded restructuring charges related to these actions of $1.1 million, consisting principally of personnel severance and related costs. We expect this initiative to be completed by the end of 2018 and to provide approximately $5 million in annualized savings. Over the next few quarters, we expect to incur additional restructuring costs of $1 million to $2 million as we complete all of these restructuring initiatives.

Interest Income (Expense)

We recorded net interest expense of $4.8 million for the three months ended September 30, 2018, compared to $4.7 million for the comparable prior year period. Included in interest expense for the three months ended September 30, 2018 and 2017 were non-cash charges of $3.0 million and $2.8 million, respectively, related to the amortization of debt discount and transaction costs of the Convertible Senior Notes.

Income Taxes

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (“2017 Tax Act”), which makes broad and complex changes to the U.S. tax code. Certain income tax

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effects of the 2017 Tax Act are reflected in our financial results in accordance with Staff Accounting Bulletin No. 118 ("SAB 118"). SAB 118 provides SEC staff guidance regarding the application of ASC Topic 740, Income Taxes ("ASC 740"), and the disclosures required due to the enactment of the 2017 Tax Act. Refer to Note 10, "Income Taxes," in the Notes to the Consolidated Financial Statements for further information on the financial statement impact of the 2017 Tax Act.

At the end of each interim reporting period, we estimate the effective income tax rate expected to be applicable for the full year. This estimate is used to determine the income tax provision or benefit on a year-to-date basis and may change in subsequent interim periods.

Our tax expense for the three months ended September 30, 2018 was $0.3 million compared to a tax benefit of $2.5 million for the comparable prior period. The 2018 tax expense is mainly related to our non-U.S. operations, compared to 2017 when our benefit included a $2.8 million benefit related to domestic operations offset by $0.3 million expense related to our non-U.S. operations. The prior period domestic tax benefit is primarily attributable to an income tax benefit for losses incurred during the three months ended September 30, 2017, as the deferred tax liability created by the issuance of the Convertible Senior Notes is treated as a source of income in fiscal 2017, offset by a deferred provision related to tax amortization on indefinite-lived intangible assets. The prior period non-U.S. tax expense is attributable to the profitable non-U.S. operations.

For the nine months ended September 30, 2018 and 2017

The following table presents revenue and expense line items reported in our Consolidated Statements of Operations for 2018 and 2017 and the period-over-period dollar and percentage changes for those line items.

	Nine Months Ended September 30,						Change		
	2018			2017			Period to Period		
	(dollars in thousands)								
Net sales	$ 443,110	100	%	$ 336,025	100	%	$ 107,085	32	%
Cost of sales	284,651	64	%	215,150	64	%	69,501	32	%
Gross profit	158,459	36	%	120,875	36	%	37,584	31	%
Operating expenses, net:									
Research and development	72,793	16	%	57,669	17	%	15,124	26	%
Selling, general, and administrative	70,842	16	%	71,574	21	%	(732)	(1)	%
Amortization of intangible assets	28,102	6	%	21,722	6	%	6,380	29	%
Restructuring	7,669	2	%	9,605	3	%	(1,936)	(20)	%
Acquisition costs	2,906	1	%	16,277	5	%	(13,371)	(82)	%
Asset impairment	252,343	57	%	1,139	0	%	251,204	*	

Other, net	325	0	%	(228)	0	%	553	*	
Total operating expenses, net	434,980	98	%	177,758	53	%	257,222	145	%
Operating income (loss)	(276,521)	(62)	%	(56,883)	(17)	%	(219,638)	*	
Interest income (expense), net	(13,847)	(3)	%	(12,369)	(4)	%	(1,478)	12	%
Income (loss) before income taxes	(290,368)	(66)	%	(69,252)	(21)	%	(221,116)	*	
Income tax expense (benefit)	(27,954)	(6)	%	(26,334)	(8)	%	(1,620)	6	%
Net income (loss)	$ (262,414)	(59)	%	$ (42,918)	(13)	%	$ (219,496)	*	

*Not Meaningful

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Net Sales

The following is an analysis of sales by market and by region:

	Nine Months Ended September 30,						Change		
	2018			2017			Period to Period		
	(dollars in thousands)								
Sales by market									
Advanced Packaging, MEMS & RF Filters	$ 76,473	17	%	$ 54,216	16	%	$ 22,257	41	%
LED Lighting, Display & Compound Semiconductor	236,597	53	%	167,105	50	%	69,492	42	%
Front-End Semiconductor	41,085	10	%	27,736	8	%	13,349	48	%
Scientific & Industrial	88,955	20	%	86,968	26	%	1,987	2	%
Total	$ 443,110	100	%	$ 336,025	100	%	$ 107,085	32	%
Sales by geographic region									
United States	$ 85,555	19	%	$ 72,820	22	%	$ 12,735	17	%
China	185,050	42	%	81,121	24	%	103,929	128	%
EMEA	71,836	16	%	54,140	16	%	17,696	33	%
Rest of World	100,669	23	%	127,944	38	%	(27,275)	(21)	%
Total	$ 443,110	100	%	$ 336,025	100	%	$ 107,085	32	%

Total sales increased across all market categories for the nine months ended September 30, 2018 against the comparable prior year period, driven by increased sales to LED manufacturers, as well as additional sales from the Ultratech business acquired in May 2017, primarily in the Advanced Packaging, MEMS & RF Filters and Front-End Semiconductor markets. Pricing was not a significant driver of the change in total sales. By geography, sales increased in the United States, China, and EMEA regions, offset by a decrease in sales in the Rest of World region. The most significant increases occurred in the China region, which was largely attributable to the increased sales in the LED Lighting, Display & Compound Semiconductor market, as well as additional sales from the Ultratech business acquired. However, we do not expect significant new orders for this market in this region in the near future. We expect there will continue to be year-to-year variations in our future sales distribution across markets and geographies.

Orders decreased to $386.9 million for the nine months ended September 30, 2018 from $391.9 million for the comparable prior year period. The decrease in orders was primarily attributable to a decrease in orders in the LED, Lighting, Display & Compound Semiconductor market, partially offset by an increase in orders in all other market categories, including additional bookings from the Ultratech business.

For the nine months ended September 30, 2018, the book-to-bill ratio was 0.9, compared to 1.2 for the comparable prior period. Our backlog at September 30, 2018 was $275.5 million, compared to $334.3 million at December 31,

2017. During the nine months ended September 30, 2018, we increased backlog by approximately $2.9 million relating to the adoption of ASC Topic 606, Revenue from Contracts with Customers, while adjusting for a decrease in backlog of approximately $5.4 million relating to orders that no longer met our bookings criteria.

Gross Profit

In the nine months ended September 30, 2018, gross profit increased compared to 2017 due to an increase in sales volume, including from the acquisition of Ultratech, while gross margins remained consistent.

Research and Development

The markets we serve are characterized by continuous technological development and product innovation, and we invest in various research and development initiatives to maintain our competitive advantage and achieve our growth objectives. Research and development expenses increased for the nine months ended September 30, 2018 against the comparable prior period primarily as a result of the addition of the acquired Ultratech research and development related projects, offset by reductions in personnel-related expenses and professional fees as a result of our initiative to streamline operations, enhance efficiencies, and reduce costs.

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Selling, General, and Administrative

Selling, general, and administrative expenses remained consistent with prior period, as increases due to the addition of the acquired Ultratech related selling, general, and administrative costs were offset by reductions to personnel-related expenses, including a reduction in incentive compensation, and professional fees as a result of our initiative to streamline operations, enhance efficiency, and reduce costs.

We recently discovered an attack on our computer systems by what appears to be a highly-sophisticated actor. We have notified law enforcement of the attack and have retained forensic experts to assist with the investigation. At this time, we do not know if or when we will be able to determine the extent of the breach or the potential impact to the Company, whether we will be able to identify who is responsible for this attack or whether we will be able to pursue legal action or other remedies to protect any compromised information or recover damages related to the attack. This attack, including the expenses incurred to address it, may have an adverse effect on our results of operations and/or financial condition. In addition, this attack could result in the loss or misuse of confidential information of the Company or that of our customers or others, result in litigation and potential liability, damage our reputation and/or otherwise harm our business.

Amortization Expense

The increase in amortization expense is a result of the additional intangibles acquired as part of the acquisition of Ultratech. Amortization expense is expected to decrease in future quarters due to the impairment of intangible assets of $252.3 million during the second quarter of 2018.

Restructuring Expense

During 2017, we initiated certain restructuring activities related to our efforts to streamline operations, enhance efficiencies, and reduce costs, as well as reduced our investments in certain technology development. In addition, during 2017, we began the Ultratech acquisition integration process to enhance efficiencies, resulting in reductions in headcount and other facility costs. During the nine months ended September 30, 2018, payments against prior period accruals were made related to these restructuring initiatives.

During the second quarter of 2018, we initiated plans to further reduce excess capacity associated with the manufacture and support of our advanced packaging lithography and 3D wafer inspection systems by consolidating

these operations into our San Jose, California facility. As a result of this and other cost saving initiatives, we announced headcount reductions of approximately 40 employees and recorded restructuring charges related to these actions of $2.4 million for the nine months ended September 30, 2018, consisting principally of personnel severance and related costs. We expect the consolidation to be completed in the first quarter of 2019.

During the third quarter of 2018, we initiated additional restructuring activities to further reduce costs, including headcount reductions impacting approximately 35 employees and recorded restructuring charges related to these actions of $1.1 million, consisting principally of personnel severance and related costs. We expect this initiative to be completed by the end of 2018 and to provide approximately $5 million in annualized savings. Over the next few quarters, we expect to incur additional restructuring costs of $1 million to $2 million as we complete all of these restructuring initiatives.

Acquisition Costs

Acquisition costs are non-recurring charges incurred in connection with the acquisition of the Ultratech business, as well as legal and professional fees incurred in connection with certain integration activities.

Asset impairment

During the second quarter of 2018, we lowered our projected results for the Ultratech asset group, which were significantly below the projected results at the time of the acquisition. The reduced projections were based on lower than expected unit volume of certain smartphones, which incorporate advanced packaging methods such as Fan-Out Wafer

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Level Packaging ("FOWLP"), and a delay in the adoption of FOWLP advanced packaging by other electronics manufacturers, both of which slowed orders and reduced revenue projections for our advanced packaging lithography systems. In addition, there has been a delay in the build out of 28nm facilities by companies in China who were expected to purchase our LSA systems. Taken together, the reduced projections identified during the second quarter of 2018 required us to assess the Ultratech asset group for impairment. As a result of the analysis, during the second quarter of 2018 we recorded a $252.3 million non-cash intangible asset impairment charge.

Interest Income (Expense)

We recorded net interest expense of $13.8 million for the nine months ended September 30, 2018, compared to $12.4 million for the comparable prior period. The increase in net interest expense is primarily attributable to the Convertible Senior Notes issued in January 2017 that were outstanding for the full period in 2018, compared to a partial period in 2017. Included in interest expense for the nine months ended September 30, 2018 and 2017 were non-cash charges of $8.7 million and $7.6 million, respectively, related to the amortization of debt discount and transaction costs of the Convertible Senior Notes.

Income Taxes

Our tax benefit for the nine months ended September 30, 2018 was $28.0 million compared to $26.3 million for the comparable prior period. The 2018 tax benefit included a $1.1 million benefit related to our domestic operations and a $26.9 million benefit related to our non-U.S. operations, compared to 2017 when our benefit included a $22.7 million benefit related to our domestic operations and a $3.6 million benefit related to our non-U.S. operations. The current period domestic tax benefit is primarily attributable to refundable alternative minimum tax credits in accordance with the 2017 Tax Act, offset by the tax amortization of indefinite-lived intangible assets that is not available to offset U.S. deferred tax assets. The current period foreign tax benefit is primarily attributable to the intangible asset impairment charge incurred during the period. The prior period domestic tax benefit is primarily attributable to an income tax benefit for losses incurred during the nine months ended September 30, 2017, as the deferred tax liability created by the issuance of the Convertible Senior Notes is treated as a source of income in fiscal 2017, offset by a deferred provision related to tax amortization on indefinite-lived intangible assets. The prior period non-U.S. tax benefit is primarily attributable to the remeasurement of an uncertain tax position, which included the reversal of a previously established non-U.S. tax liability and the recognition of a deferred tax benefit related to certain foreign net operating losses generated in prior years that were determined to be realizable, offset by tax expense attributed to the profitable non-U.S. operations.

Liquidity and Capital Resources

Our cash and cash equivalents, restricted cash, and short-term investments are as follows:

	September 30, 2018	December 31, 2017
	(in thousands)	
Cash and cash equivalents	$ 213,506	$ 279,736
Restricted cash	828	847
Short-term investments	52,063	47,780
Total	$ 266,397	$ 328,363

At September 30, 2018 and December 31, 2017, cash and cash equivalents of $132.4 million and $214.3 million, respectively, were held outside the United States. As of September 30, 2018, we had $92.1 million of accumulated undistributed earnings generated by our non-U.S. subsidiaries for which the U.S. repatriation tax has been provided and did not require the use of cash due to the use of net operating loss carryforwards. Approximately $27.2 million of undistributed earnings would be subject to foreign withholding taxes of approximately $2.7 million if distributed back to the United States. We believe that our projected cash flow from operations, combined with our cash and short term investments, will be sufficient to meet our projected working capital requirements, contractual obligations, and other cash flow needs for the next twelve months, including scheduled interest payments on our Convertible Senior Notes due 2023.

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A summary of the cash flow activity for the nine months ended September 30, 2018 and 2017 is as follows:

Cash Flows from Operating Activities

	Nine Months Ended September 30,	
	2018	2017
	(in thousands)	
Net income (loss)	$ (262,414)	$ (42,918)
Non-cash items:		
Depreciation and amortization	41,110	32,295
Non-cash interest expense	8,739	7,641
Deferred income taxes	(28,872)	(22,600)
Share-based compensation expense	12,720	19,976
Asset impairment	252,343	1,139
Provision for bad debts	—	99
Changes in operating assets and liabilities	(63,004)	19,644
Net cash provided by (used in) operating activities	$ (39,378)	$ 15,276

Net cash used in operating activities was $39.4 million for the nine months ended September 30, 2018 and was due to the net loss of $262.4 million plus adjustments for non-cash items of $286.0 million, offset by a decrease in cash flow from changes in operating assets and liabilities of $63.0 million. The changes in operating assets and liabilities were largely attributable to an increase in inventory and a decrease in customer deposits and deferred revenue.

Cash Flows from Investing Activities

	Nine Months Ended September 30,	
	2018	2017
	(in thousands)	
Acquisitions of businesses, net of cash acquired	$ (2,662)	$ (399,478)
Capital expenditures	(5,788)	(17,403)
Changes in investments, net	(6,938)	27,812
Proceeds from held for sale assets	—	2,284
Net cash provided by (used in) investing activities	$ (15,388)	$ (386,785)

The cash used in investing activities during the nine months ended September 30, 2018 was attributable to net changes in investments as well as capital expenditures. The net cash used in investing activities during the nine months ended September 30, 2017 was primarily attributable to the net cash used in the acquisition of Ultratech as well as capital expenditures. In 2017, as part of our efforts to streamline operations, enhance efficiency, and reduce costs, we made certain investments in our facilities to support the consolidation activities. These activities were substantially completed in 2017.

Cash Flows from Financing Activities

	Nine Months Ended September 30,	
	2018	2017
	(in thousands)	
Settlement of equity awards, net of withholding taxes	$ (22)	$ (5,251)
Purchases of common stock	(11,457)	—
Proceeds from long-term debt borrowings	—	335,752
Repayments of long-term debt	—	(1,193)
Net cash provided by (used in) financing activities	$ (11,479)	$ 329,308

The cash used in financing activities for the nine months ended September 30, 2018 was related to purchases of common stock and the net cash used to settle taxes related to employee equity programs. The cash provided by financing activities

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for the nine months ended September 30, 2017 was primarily related to the net cash proceeds received from the issuance of the Convertible Senior Notes in January 2017.

Convertible Senior Notes

On January 10, 2017, we issued $345.0 million of 2.70% convertible senior unsecured notes (the “Convertible Senior Notes”). We received net proceeds, after deducting underwriting discounts and fees and expenses payable by us, of approximately $335.8 million. The Convertible Senior Notes bear interest at a rate of 2.70% per year, payable semiannually in arrears on January 15 and July 15 of each year, commencing on July 15, 2017. The Convertible Senior Notes mature on January 15, 2023, unless earlier purchased by the Company, redeemed, or converted. We believe that we have sufficient capital resources and cash flows from operations to support scheduled interest payments on this debt.

Contractual Obligations and Commitments

We have commitments under certain contractual arrangements to make future payments for goods and services. These contractual arrangements secure the rights to various assets and services to be used in the future in the normal course of business. We expect to fund these contractual arrangements with cash generated from operations in the normal course of business.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements that have, or are reasonably likely to have, a current or future material effect on our financial condition, changes in financial condition, expenses, and results of operations, liquidity, capital expenditures or capital resources other than operating leases, bank guarantees, and purchase commitments disclosed in the preceding footnotes.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

Our exposure to market rate risk for changes in interest rates primarily relates to our investment portfolio. We centrally manage our investment portfolios considering investment opportunities and risks, tax consequences, and overall financing strategies. Our investment portfolio includes fixed-income securities with a fair value of approximately $52.1 million at September 30, 2018. These securities are subject to interest rate risk and, based on our investment portfolio at September 30, 2018, a 100 basis point increase in interest rates would result in a decrease in the fair value of the portfolio of $0.2 million. While an increase in interest rates may reduce the fair value of the investment portfolio, we will not realize the losses in the Consolidated Statements of Operations unless the individual fixed-income securities are sold prior to recovery or the loss is determined to be other-than-temporary.

Currency Exchange Risk

We conduct business on a worldwide basis and, as such, a portion of our revenues, earnings, and net investments in foreign affiliates is exposed to changes in currency exchange rates. The economic impact of currency exchange rate movements is complex because such changes are often linked to variability in real growth, inflation, interest rates, governmental actions, and other factors. These changes, if material, could cause us to adjust our financing and operating strategies. Consequently, isolating the effect of changes in currency does not incorporate these other important economic factors.

Changes in currency exchange rates could affect our foreign currency denominated monetary assets and liabilities and forecasted cash flows. We entered into monthly forward derivative contracts with the intent of mitigating a portion of this risk. We only used derivative financial instruments in the context of hedging and not for speculative purposes and had not designated our foreign exchange derivatives as hedges. Accordingly, changes in fair value from these contracts were recorded as “Other, net” in our Consolidated Statements of Operations. We executed derivative transactions with highly rated financial institutions to mitigate counterparty risk.

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Our net sales to customers located outside of the United States represented approximately 77% and 81% of our total net sales for the three and nine months ended September 30, 2018, respectively, and 73% and 78% for the comparable 2017 periods. We expect that net sales to customers outside the United States will continue to represent a large percentage of our total net sales. Our sales denominated in currencies other than the U.S. dollar represented 2% and 1% of total net sales in the three and nine months ended September 30, 2018, and 1% and 2% for the comparable 2017 periods.

A 10% change in foreign exchange rates would have an immaterial impact on the consolidated results of operations since most of our sales outside the United States are denominated in U.S. dollars.

Item 4. Controls and Procedures

Management’s Report on Internal Control Over Financial Reporting

Our principal executive and financial officers have evaluated and concluded that our disclosure controls and procedures are effective as of September 30, 2018. The disclosure controls and procedures are designed to ensure that the information required to be disclosed in this report filed under the Securities Exchange Act of 1934 is recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission’s rules and forms and is accumulated and communicated to our principal executive and financial officers as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control Over Financial Reporting

During the quarter ended September 30, 2018, there were no changes in internal control that have materially affected or are reasonably likely to materially affect internal control over financial reporting.

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PART II—OTHER INFORMATION

Item 1. Legal Proceedings

On June 8, 2018, an Ultratech shareholder who received Veeco stock as part of the consideration for the Ultratech acquisition filed a purported class action complaint in the Superior Court of the State of California, County of Santa Clara, captioned Wolther v. Maheshwari et al., Case No. 18CV329690, on behalf of himself and others who purchased or acquired shares of Veeco pursuant to the registration statement and prospectus which Veeco filed with the SEC in connection with the Ultratech acquisition (the "Wolther Action"). The complaint seeks to recover damages and fees under Sections 11, 12, and 15 of the Securities Act of 1933 for, among other things, alleged false/misleading statements in the registration statement and prospectus relating to the Ultratech acquisition, relating primarily to the alleged failure to disclose delays in the advanced packaging business, increased MOCVD competition in China, and an intellectual property dispute. On August 2 and August 8, 2018, two purported class action complaints substantially similar to the Wolther Action were filed on behalf of different plaintiffs in the same court as the Wolther Action. These three cases are expected to be consolidated. Veeco believes these lawsuits are without merit and intends to vigorously contest these matters.

The Company is involved in various other legal proceedings arising in the normal course of business. The Company does not believe that the ultimate resolution of these matters will have a material adverse effect on its consolidated financial position, results of operations, or cash flowscontest this matter.

Item 1A. Risk Factors

Information regarding risk factors appears in the Safe Harbor Statement at the beginning of this quarterly report on Form 10 Q and in Part I — Item 1A of our 2017 Form 10 K. There have been no material changes from the risk factors previously disclosed in our 2017 Form 10 K, other than the additional risk factors described below.

- Our goodwill is sensitive to changes in our stock price and other factors, and we may be required to take additional impairment charges on goodwill.

We are required to assess goodwill annually for impairment, which we do at the beginning of the fourth quarter, or on an interim basis whenever certain events occur or circumstances change, such as an adverse change in business climate, if there is a decline in the adjusted market capitalization of the Company below the book value of the Company's equity for an extended period of time, or other events that would more likely than not indicate that the fair value of the Company's single goodwill reporting unit is less than its carrying amount. There were no changes to goodwill during the nine months ended September 30, 2018.

As the Company maintains a single goodwill reporting unit, we determine the fair value of the reporting unit based upon the Company's adjusted market capitalization. We calculate the adjusted market capitalization by multiplying the average closing share price of our common stock for the last ten trading days prior to the measurement date by the number of outstanding common shares and adding a control premium.

Based on the most recent annual impairment test as of October 1, 2018, we determined that the fair value of the Company's single goodwill reporting unit exceeded its carrying amount by approximately $60 million. However, this analysis is sensitive to changes in our stock price and absent other qualitative factors, we may be required to record a goodwill impairment charge in future periods if the stock price declines subsequent to our annual measurement date and remains depressed for an extended period of time. Any such goodwill, or other impairment charge, could have a material adverse effect on our results of operations.

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- We recently discovered an attack on our computer systems that could result in the loss or misuse of confidential information of the Company or that of our customers or others, result in litigiation and potential liability, and damage our reputation.

We recently discovered an attack on our computer systems by what appears to be a highly-sophisticated actor. We have notified law enforcement of the attack and have retained forensic experts to assist with the investigation. At this time, we do not know if or when we will be able to determine the extent of the breach or the potential impact to the Company, whether we will be able to identify who is responsible for this attack or whether we will be able to pursue legal action or other remedies to protect any compromised information or recover damages related to the attack. This attack, including the expenses incurred to address it, may have an adverse effect on our results of operations and/or financial condition. In addition, this attack could result in the loss or misuse of confidential information of the Company or that of our customers or others, result in litigation and potential liability, damage our reputation and/or otherwise harm our business.

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

Share repurchase activity during the third quarter of 2018 is as follows:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs
	(in thousands, except average price paid per share)			
July 2, 2018 - July 29, 2018	36	$ 14.75	36	$ 95,140
July 30, 2018 - September 2, 2018	763	11.39	763	86,437
September 3, 2018 - September 30, 2018	64	11.86	64	85,673

On December 11, 2017, Veeco’s Board of Directors authorized a program to repurchase up to $100 million of the Company’s outstanding common stock to be completed through December 11, 2019. At September 30, 2018, $14.3 million of the $100 million had been utilized. Repurchases may be made from time to time on the open market or in privately negotiated transactions in accordance with applicable federal securities laws. The timing and amount of future repurchases, if any, will depend upon market conditions, SEC regulations, and other factors. The repurchases would be funded using available cash balances and cash generated from operations. The program does not obligate us

to acquire any particular amount of common stock and may be modified or suspended at any time at our discretion.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not Applicable.

Item 5. Other Information

None.

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Item 6. Exhibits

Unless otherwise indicated, each of the following exhibits has been filed with the Securities and Exchange Commission by Veeco under File No. 0 16244.

Exhibit Number	Exhibit Description	Incorporated by Reference Form	Exhibit	Filing Date	Filed or Furnished Herewith
10.1	Amendment dated August 29, 2018 to Employment Agreement between the Company and John R. Peeler.	8-K	10.1	9/4/2018	
10.2	Letter Agreement dated August 29, 2018 between the Company and William J. Miller, Ph.D.	8-K	10.2	9/4/2018	
10.3	Letter Agreement dated August 29, 2018 between the Company and Shubham Maheshwari.	8-K	10.3	9/4/2018	
31.1	Certification of Chief Executive Officer pursuant to Rule 13a—14(a) or Rule 15d—14(a) of the Securities and Exchange Act of 1934.				*
31.2	Certification of Chief Financial Officer pursuant to Rule 13a—14(a) or Rule 15d—14(a) of the Securities and Exchange Act of 1934.				*
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes - Oxley Act of 2002.				*
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes - Oxley Act of 2002.				*
101.INS	XBRL Instance.				**
101.XSD	XBRL Schema.				**
101.PRE	XBRL Presentation.				**
101.CAL	XBRL Calculation.				**
101.DEF	XBRL Definition.				**
101.LAB	XBRL Label.				**

* Filed herewith

** Filed herewith electronically

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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, on November 1, 2018.

Veeco Instruments Inc.

By:	/S/ WILLIAM J. MILLER, Ph.D William J. Miller, Ph.D Chief Executive Officer
By:	/s/ SHUBHAM MAHESHWARI Shubham Maheshwari Executive Vice President, Chief Financial Officer, and Chief Operating Officer