MKS INSTRUMENTS INC
Form 10-Q
November 06, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 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
For the transition period from _______________ to _______________

Commission file number 0-23621

MKS INSTRUMENTS, INC.

(Exact name of registrant as specified in its charter)

Massachusetts (State or other jurisdiction of incorporation or organization)	04-2277512 (I.R.S. Employer Identification No.)
2 Tech Drive, Suite 201, Andover, Massachusetts (Address of principal executive offices)	01810 (Zip Code)

Registrant’s telephone number, including area code (978) 645-5500

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 and post such files). Yes No

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

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

As of October 30, 2018 the registrant had 53,986,114 shares of common stock outstanding.

MKS INSTRUMENTS, INC.

FORM 10-Q

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

MKS INSTRUMENTS, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS

(in thousands, except share and per share data)

(Unaudited)

ASSETS	September 30, 2018	December 31, 2017
Current assets:		
Cash and cash equivalents, including restricted cash	$ 399,850	$ 333,887
Short-term investments	219,776	209,434
Trade accounts receivable, net of allowance for doubtful accounts of $4,761 and $4,135 at September 30, 2018 and December 31, 2017, respectively	318,470	300,308
Inventories, net	399,077	339,081
Other current assets	75,298	53,543
Total current assets	1,412,471	1,236,253
Property, plant and equipment, net	180,182	171,782
Goodwill	587,861	591,047
Intangible assets, net	331,288	366,398
Long-term investments	10,404	10,655
Other assets	42,390	37,883
Total assets	$ 2,564,596	$ 2,414,018
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term debt	$ 6,130	$ 2,972
Accounts payable	81,486	82,518
Accrued compensation	74,472	96,147
Income taxes payable	12,942	21,398
Deferred revenue	9,136	12,842
Other current liabilities	78,327	73,945
Total current liabilities	262,493	289,822
Long-term debt, net	342,970	389,993
Non-current deferred taxes	61,540	61,571
Non-current accrued compensation	56,888	51,700
Other liabilities	30,412	32,025

Total liabilities	$ 754,303	$ 825,111
Commitments and contingencies (Note 19)		
Stockholders' equity:		
Preferred Stock, $0.01 par value per share, 2,000,000 shares authorized; none issued and outstanding	—	—
Common Stock, no par value, 200,000,000 shares authorized; 53,984,623 and 54,355,535 shares issued and outstanding at September 30, 2018 and December 31, 2017, respectively	113	113
Additional paid-in capital	786,138	789,644
Retained earnings	1,023,959	795,698
Accumulated other comprehensive income	83	3,452
Total stockholders' equity	1,810,293	1,588,907
Total liabilities and stockholders' equity	$ 2,564,596	$ 2,414,018

The accompanying notes are an integral part of the unaudited condensed consolidated financial statements.

MKS INSTRUMENTS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

AND COMPREHENSIVE INCOME

(in thousands, except per share data)

(Unaudited)

	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2018	2017	2018	2017
Net revenues:				
Products	$426,255	$428,891	$1,432,931	$1,243,146
Services	60,897	57,376	181,636	161,031
Total net revenues	487,152	486,267	1,614,567	1,404,177
Cost of revenues:				
Cost of products	219,311	226,445	747,522	662,985
Cost of services	35,981	31,827	97,453	88,067
Total cost of revenues (exclusive of amortization shown separately below)	255,292	258,272	844,975	751,052
Gross profit	231,860	227,995	769,592	653,125
Research and development	31,898	32,548	103,259	99,510
Selling, general and administrative	70,822	71,347	229,952	217,546
Acquisition and integration costs	36	2,466	(1,132)	4,698
Restructuring	1,364	10	3,374	2,596
Environmental costs	—	—	1,000	—
Asset impairment	—	—	—	6,719
Fees and expenses related to repricing of term loan	—	492	378	492
Amortization of intangible assets	10,695	10,977	32,786	34,946
Income from operations	117,045	110,155	399,975	286,618
Interest income	1,516	873	4,077	1,896
Interest expense	3,719	7,172	13,071	23,001
Gain on sale of business	—	—	—	74,856
Other expense, net	326	2,485	1,179	3,741
Income before income taxes	114,516	101,371	389,802	336,628
Provision for income taxes	21,239	25,377	68,542	75,134
Net income	$93,277	$75,994	$321,260	$261,494
Other comprehensive income:				
Changes in value of financial instruments designated as cash flow hedges, net of tax expense (benefit)(1)	$163	$(908)	$8,053	$(3,578)
Foreign currency translation adjustments, net of tax of $0	(3,576)	8,088	(11,314)	30,352
Unrecognized pension gain (loss), net of tax expense (benefit)(2)	24	(565)	(13)	(204)
Unrealized gain (loss) on investments, net of tax expense (benefit)(3)	230	1,301	(95)	1,137
Total comprehensive income	$90,118	$83,910	$317,891	$289,201

Net income per share:				
Basic	$1.71	$1.40	$5.89	$4.84
Diluted	$1.70	$1.38	$5.82	$4.75
Cash dividends per common share	$0.20	$0.175	$0.58	$0.525
Weighted average common shares outstanding:				
Basic	54,476	54,282	54,539	54,076
Diluted	54,954	55,101	55,171	55,020

(1) Tax expense was $49 and $688 for the three months ended September 30, 2018 and 2017, respectively. Tax expense (benefit) was $2,304 and $(884) for the nine months ended September 30, 2018 and 2017, respectively.

(2) Tax expense (benefit) was $7 and $(312) for the three months ended September 30, 2018 and 2017, respectively. Tax benefit was $(17) and $(315) for the nine months ended September 30, 2018 and 2017, respectively.

(3) Tax expense (benefit) was $17 and $(467) for the three months ended September 30, 2018 and 2017, respectively. Tax (benefit) expense was $(22) and $274 for the nine months ended September 30, 2018 and 2017, respectively.

The accompanying notes are an integral part of the unaudited condensed consolidated financial statements.

MKS INSTRUMENTS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in thousands, except per share data)

(Unaudited)

(in thousands, except share data)	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income/(Loss)	Total Stockholders' Equity
Balance at June 30, 2018	54,787,153	$ 113	$ 793,384	$ 1,004,698	$ 3,243	$ 1,801,438
Net issuance under stock-based plans	15,601		(589)			(589)
Stock-based compensation			5,213			5,213
Stock repurchase	(818,131)		(11,870)	(63,130)		(75,000)
Cash dividend				(10,859)		(10,859)
Accounting Standards Codification Topic 606 adjustment				(27)		(27)
Comprehensive income (net of tax):						
Net income				93,277		93,277
Other comprehensive loss					(3,160)	(3,160)
Balance at September 30, 2018	53,984,623	$ 113	$ 786,138	$ 1,023,959	$ 83	$ 1,810,293

(in thousands, except share data)	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income/(Loss)	Total Stockholders' Equity
Balance at December 31, 2017	54,355,535	$ 113	$ 789,644	$ 795,698	$ 3,452	$ 1,588,907
Net issuance under stock-based plans	447,219		(13,641)			(13,641)
Stock-based compensation			22,005			22,005
Stock repurchase	(818,131)		(11,870)	(63,130)		(75,000)
Cash dividend				(31,608)		(31,608)
Accounting Standards Codification Topic 606 adjustment				1,739		1,739
Comprehensive income (net of tax):						
Net income				321,260		321,260
Other comprehensive loss					(3,369)	(3,369)
Balance at September 30, 2018	53,984,623	$ 113	$ 786,138	$ 1,023,959	$ 83	$ 1,810,293

The accompanying notes are an integral part of the unaudited condensed consolidated financial statements.

MKS INSTRUMENTS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

(Unaudited)

	Nine Months Ended September 30, 2018	2017
Cash flows provided by operating activities:		
Net income	$321,260	$261,494
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	59,906	62,550
Amortization of debt issuance costs, original issue discount and soft call premium	3,784	6,385
Asset impairment	—	6,719
Gain on sale of business	—	(74,856)
Stock-based compensation	22,005	19,834
Provision for excess and obsolete inventory	15,575	15,349
Provision for bad debt	859	650
Deferred income taxes	(3,525)	6,641
Other	531	832
Changes in operating assets and liabilities:		
Trade accounts receivable	(23,125)	(26,489)
Inventories	(80,441)	(51,251)
Income taxes	(13,874)	15,646
Other current and non-current assets	(17,652)	(9,714)
Accrued compensation	(15,529)	11,058
Other current and non-current liabilities	8,934	22,517
Accounts payable	(385)	7,071
Net cash provided by operating activities	278,323	274,436
Cash flows (used in) provided by investing activities:		
Net proceeds from sale of business	—	72,509
Purchases of investments	(213,774)	(199,012)
Maturities of investments	135,339	116,779
Sales of investments	67,868	43,571
Purchases of property, plant and equipment	(36,885)	(17,857)
Net cash (used in) provided by investing activities	(47,452)	15,990
Cash flows used in financing activities:		
Repurchase of common stock	(75,000)	—
Proceeds from short and long-term borrowings	60,624	13,158
Payments on short-term borrowings	(57,865)	(13,277)
Payments on long-term borrowings	(50,002)	(178,141)
Net payments related to employee stock awards	(13,641)	(14,719)
Dividend payments to common stockholders	(31,608)	(28,403)
Net cash used in financing activities	(167,492)	(221,382)

Effect of exchange rate changes on cash and cash equivalents	2,584	3,140
Increase in cash and cash equivalents and restricted cash	65,963	72,184
Cash and cash equivalents, including restricted cash, at beginning of period[(1)]	333,887	233,910
Cash and cash equivalents, including restricted cash, at end of period[(2)]	$399,850	$306,094

(1) Restricted cash at the beginning of the period was $119 and $5,287 for the nine months ended September 30, 2018 and 2017, respectively.

(2) Restricted cash at the end of the period was $114 and $117 for the nine months ended September 30, 2018 and 2017, respectively.

The accompanying notes are an integral part of the unaudited condensed consolidated financial statements.

MKS INSTRUMENTS, INC.

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data)

1) Basis of Presentation

The terms “MKS” and the “Company” refer to MKS Instruments, Inc. and its subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. The interim financial data as of September 30, 2018, and for the three and nine months ended September 30, 2018 are unaudited; however, in the opinion of MKS, the interim data includes all adjustments, consisting of normal recurring adjustments, necessary for a fair statement of the results for the interim periods. The condensed consolidated balance sheet presented as of December 31, 2017 has been derived from the consolidated audited financial statements as of that date. The unaudited condensed consolidated financial statements presented herein have been prepared in accordance with the instructions to Form 10-Q and do not include all of the information and note disclosures required by United States generally accepted accounting principles (“U.S. GAAP”). The unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in the MKS Annual Report on Form 10-K for the year ended December 31, 2017 filed with the Securities and Exchange Commission on February 28, 2018.

The preparation of these unaudited condensed consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent liabilities at the date of the unaudited condensed consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. On an on-going basis, management evaluates its estimates and judgments, including those related to revenue recognition, stock-based compensation, inventory, intangible assets, goodwill and other long-lived assets, warranty liabilities, pension liabilities, acquisition expenses, income taxes and investments. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Reclassification of certain line items in prior period financial statements

The Company has historically recorded the revenue and related cost of revenue for the sale of its spare parts within Products in its Statements of Operations for the Vacuum & Analysis segment. The Company has now determined that these items are better presented within revenue and related cost of revenue within Services for the Vacuum & Analysis segment in its Statements of Operations to align with the current manner in which the Company operates its services business, and has elected to reclassify these amounts in previously issued financial statements as shown below. This change in presentation has no impact on total revenue or total cost of revenue.

	Three Months Ended September 30, 2017		
	As previously reported	Adjustment	As reclassified
Net revenues:			
Products	$434,710	$ (5,819)	$ 428,891
Services	51,557	5,819	57,376

Total net revenues	486,267	—	486,267
Cost of revenues:			
Cost of products	225,174	1,271	226,445
Cost of services	33,098	(1,271)	31,827
Total cost of revenues	$258,272	$ —	$ 258,272

	Nine Months Ended September 30, 2017		
	As previously reported	Adjustment	As reclassified
Net revenues:			
Products	$1,259,582	$ (16,436)	$1,243,146
Services	144,595	16,436	161,031
Total net revenues	1,404,177	—	1,404,177
Cost of revenues:			
Cost of products	659,538	3,447	662,985
Cost of services	91,514	(3,447)	88,067
Total cost of revenues	$751,052	$ —	$751,052

MKS INSTRUMENTS, INC.

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data)

2) Recently Issued Accounting Pronouncements

In March 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2018-05, "Income Taxes (Topic 740)." This standard is an amendment that adopts the language of Securities and Exchange Commission Staff Accounting Bulletin No. 118 ("SAB 118") and aims to address certain circumstances that may arise for registrants in accounting for the income tax effects of the Tax Cuts and Jobs Act (the "Act") and to address any uncertainty or diversity of views in practice regarding the application of Topic 740 in situations where a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting under Topic 740 for certain income tax effects of the Act for the reporting period in which the Act was enacted. The provisions of this ASU were applied to the Company's December 31, 2017 financial statements. The Company recorded provisional amounts with respect to the Act under SAB 118 at December 31, 2017 and September 30, 2018 and needs to complete additional analysis and receive additional guidance from the U.S. Internal Revenue Service with respect to provisions of the Act that affect the Company before the provisional determinations become final. Until the Company completes its analysis and receives additional guidance, the Company is not able to determine if the impact of ASU 2018-05 is material to the Company's consolidated financial statements in any period.

In August 2017, the FASB issued ASU 2017-12, "Derivatives and Hedging (Topic 815)." This standard better aligns an entity's risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. The provisions of this ASU are effective for annual periods beginning after December 15, 2018, including interim periods within those fiscal years. The Company does not expect adoption of this ASU to have a material impact on the Company's consolidated financial statements.

In May 2017, the FASB issued ASU 2017-09, "Compensation-Stock Compensation (Topic 718)-Scope of Modification Accounting." This standard provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. The provisions of this ASU are effective for annual periods beginning after December 15, 2017, including interim periods within those fiscal years. The Company adopted this ASU during the three month period ended March 31, 2018. The adoption of this ASU did not have a material impact on the Company's consolidated financial statements.

In March 2017, the FASB issued ASU 2017-07, "Compensation-Retirement Benefits (Topic 715)-Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost." This standard requires that an employer disaggregate the service cost component from the other components of net benefit cost. This standard also provides explicit guidance on how to present the service cost component and the other components of the net benefit cost in the income statement and allows only the service cost component of net benefit cost to be eligible for capitalization. The provisions of this ASU are effective for annual periods beginning after December 31, 2017, including interim periods within those fiscal years. The Company adopted this ASU during the three month period ended March 31, 2018. The adoption of this ASU did not have a material impact on the Company's consolidated financial statements.

In January 2017, the FASB issued ASU 2017-01, "Business Combinations (Topic 805)-Clarifying the Definition of a Business." This standard clarifies the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses.

This standard also provides a more robust framework to use in determining when a set of assets and activities is a business. Because the current definition of a business is interpreted broadly and can be difficult to apply, stakeholders indicated that analyzing transactions is inefficient and costly and that the definition does not permit the use of reasonable judgment. The provisions of this ASU are effective for annual periods beginning after December 15, 2017, including interim periods within those fiscal years. The Company adopted this ASU during the three month period ended March 31, 2018. The adoption of this ASU did not have a material impact on the Company’s consolidated financial statements.

In November 2016, the FASB issued ASU 2016-18, “Statement of Cash Flows (Topic 230)-Restricted Cash,” an amendment to ASU 2016-15. This standard requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents and amounts generally described as restricted cash and restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The provisions of this ASU are effective for annual periods beginning after December 15, 2017, including interim periods within those fiscal years and should be applied at the time of adoption of ASU 2016-15. The Company adopted this ASU during the three month period ended March 31, 2018. The adoption of this ASU did not have a material impact on the Company’s consolidated financial statements.

MKS INSTRUMENTS, INC.

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data)

In October 2016, the FASB issued ASU 2016-16, “Income Taxes (Topic 740)-Intra-Entity Transfer of Assets Other Than Inventory.” This standard requires that an entity recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs as opposed to when the assets have been sold to an outside party. The provisions of this ASU are effective for annual periods beginning after December 15, 2017, including interim periods within those fiscal years. The Company adopted this ASU during the three month period ended March 31, 2018. The adoption of this ASU did not have a material impact on the Company’s consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, “Statement of Cash Flows (Topic 230)-Classification of Certain Cash Receipts and Cash Payments.” This standard addresses eight specific cash flow issues with the objective of addressing the diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows under Topic 230. The provisions of this ASU are effective for annual periods beginning after December 15, 2017, including interim periods within those fiscal years. The Company adopted this ASU during the three month period ended March 31, 2018. The adoption of this ASU did not have a material impact on the Company’s consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, “Leases (Topic 842).” This standard requires the recognition of lease assets and liabilities for all leases, with certain exceptions, on the balance sheet. In transition, lessees and lessors have the option to either apply the standard retrospectively through a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption or they can apply the new standard to comparative periods presented. This ASU is effective for annual periods beginning after December 15, 2018, including interim periods within those fiscal years. The FASB issued additional updates to the new standard in Topic 842 (Update 2018-01 in January 2018 – Land Easement Practical Expedient for Transition to Topic 842, Update 2018-10 – Codification Improvements to Topic 842 and Update 2018-11 in July 2018 – Targeted Improvements). The Company has reviewed the requirements of this standard and has formulated a plan for implementation. The management team has communicated its approach to the Audit Committee and will provide regular updates as appropriate. The Company is currently accumulating details on the population of leases and entering these details into a selected software database, which will be a repository and accounting solution for reporting and disclosure requirements required by the standard. The Company will continue to assess and disclose the impact that this ASU will have on its consolidated financial statements, disclosures and related controls, when known.

In January 2016, the FASB issued ASU 2016-01, “Financial Instruments-Overall (Subtopic 825-10)-Recognition and Measurement of Financial Assets and Financial Liabilities.” This ASU provides guidance for the recognition, measurement, presentation, and disclosure of financial instruments. The new standard revises accounting related to equity investments and the presentation of certain fair value changes for financial assets and liabilities measured at fair value. Among other things, it amends the presentation and disclosure requirements of equity securities that do not result in consolidation and are not accounted for under the equity method. Changes in the fair value of these equity securities will be recognized directly in net income. This standard is effective for annual periods beginning after December 15, 2017, including interim periods within those fiscal years. The Company adopted this ASU during the three month period ended March 31, 2018. The adoption of this ASU did not have a material impact on the Company’s consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09, “Revenue from Contracts with Customers (Topic 606)” (“ASC 606”). This ASU provides for a single comprehensive model to use in accounting for revenue arising from contracts with customers and has replaced most existing revenue recognition guidance in GAAP. This ASU is effective for fiscal years and interim periods within those years beginning after December 15, 2017. The two permitted transition methods under the new standard are the full retrospective method, in which case the standard would be applied to each prior reporting period presented, or the modified retrospective method, in which case the cumulative effect of applying the standard would be recognized at the date of initial application. The Company used the modified retrospective method upon adoption in the first quarter of 2018. The FASB issued additional updates to the new revenue standard in Topic 606 relating to reporting revenue on a gross versus net basis (Update 2016-08 in March 2016), identifying performance obligations and licensing arrangements (Update 2016-10 in April 2016), narrow-scope improvements and practical expedients (Update 2016-12 in May 2016), technical corrections and improvements (Update 2016-20 in December 2016), and SEC Updates (Update 2017-13 in September 2017 and Update 2017-14 in November 2017). The adoption of this ASU did not have a material impact on the Company’s consolidated financial statements as described further in Note 3.

MKS INSTRUMENTS, INC.

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(in thousands, except share and per share data)

3) Revenue from Contracts with Customers

The Company adopted Accounting Standards Codification ASC 606 (“ASC 606”) on January 1, 2018 using the modified retrospective method for all contracts not completed as of the date of adoption. The reported results for the nine months ended September 30, 2018 reflect the application of ASC 606 guidance while the reported results for 2017 were prepared under the guidance of Accounting Standards Codification 605, Revenue Recognition.

The Company has recorded a net increase to opening retained earnings of $1,809 as of January 1, 2018 due to the cumulative impact of adopting ASC 606, with the impact primarily related to its service business and certain custom products. The impact to revenue for the quarter ended September 30, 2018 as a result of applying ASC 606 was immaterial.

The adoption of ASC 606 represents a change in accounting principle that will more closely align revenue recognition with the delivery of the Company's goods or services and will provide financial statement readers with enhanced disclosures. To achieve this core principle, the Company applies the following five steps:

- Identify the contract with a customer
- Identify the performance obligations in the contract
- Determine the transaction price
- Allocate the transaction price to performance obligations in the contract
- Recognize revenue when or as the Company satisfies a performance obligation

Revenue under ASC 606 is recognized when or as obligations under the terms of a contract with the Company’s customer has been satisfied and control has transferred to the customer. The majority of the Company's performance obligations, and associated revenue, are transferred to customers at a point in time, generally upon shipment of a product to the customer or receipt of the product by the customer and without significant judgments. Installation services are not significant and are usually completed in a short period of time (normally less than two weeks) and therefore, recorded at a point in time when the installation services are completed, rather than over time as they are not material. Extended warranty, service contracts, and repair services, which are transferred to the customer over time, are recorded as revenue as the services are performed. For repair services, the Company makes an accrual at quarter end based upon historical repair times within its product groups to record revenue based upon the estimated number of days completed to date, which is consistent with ratable recognition. Customized products with no alternative future use to the Company, and that have an enforceable right to payment for performance completed to date, are also recorded over time. The Company considers this to be a faithful depiction of the transfer to the customer of revenue over time as the work is performed or service is delivered, ratably over time.

Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring goods or providing services. Performance obligations promised in a contract are identified based on the products or services that will be transferred to the customer that are both capable of being distinct, whereby the customer can benefit from the product or service either on its own or together with other resources that are readily available from third parties or from the Company, and are distinct in the context of the contract, whereby the transfer of the product or service is separately identifiable from other promises in the contract. Sales, value add, and other taxes the Company collects concurrent with revenue-producing activities are excluded from revenue. The Company’s normal payment terms are 30 to 60 days but vary by the type and location of its customers and the products or services offered. The time between invoicing and when payment is due is not significant. For certain products and services and customer types, the Company requires payment before the products or services are delivered to, or performed for, the customer. None of the Company’s contracts as of September 30, 2018 contained a significant financing component. Contract assets as of January 1 and September 30, 2018 were $3,065 and $3,951, respectively, and included in other current assets.

Contracts with Multiple Performance Obligations

The Company periodically enters into contracts with its customers in which a customer may purchase a combination of goods and or services, such as products with installation services or extended warranty obligations. These contracts include multiple promises that the Company evaluates to determine if the promises are separate performance obligations. Once the Company determines the performance obligations, the Company then determines the transaction price, which includes estimating the amount of variable consideration to be included in the transaction price, if any. To the extent the transaction price includes variable consideration, the Company estimates the amount of variable consideration that should be included in the transaction price utilizing either the expected value method or the most likely amount method depending on the method the Company expects to better predict the amount of consideration to which it will be entitled. There are no constraints on the variable

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consideration recorded. The Company then allocates the transaction price to each performance obligation in the contract based on a relative stand-alone selling price charged separately to customers or using an expected cost plus margin method. The corresponding revenues are recognized when or as the related performance obligations are satisfied, which are noted above. The impact of variable consideration was immaterial during the three and nine months ended September 30, 2018.

Deferred Revenues

The Company's standard assurance warranty period is normally 12 to 24 months. The Company sells separately-priced service contracts and extended warranty contracts related to certain of its products, especially its laser products. The separately priced contracts generally range from 12 to 60 months. The Company normally receives payment at the inception of the contract and recognizes revenue over the term of the agreement in proportion to the costs expected to be incurred in satisfying the obligations under the contract. The Company has elected to use the practical expedient related to disclosing the remaining performance obligations as of September 30, 2018, as the majority have a duration of less than one year.

A rollforward of the Company's deferred revenue is as follows:

	Nine Months Ended September 30, 2018
Beginning balance, January 1[1]	$ 14,448
Amount of deferred revenue recognized in income	(15,846)
Additions to deferred revenue	13,869
Ending balance, September 30[2]	$ 12,471

(1) Beginning deferred revenue as of January 1, 2018 included $11,322 of current deferred revenue and $3,126 of long-term deferred revenue.

(2) Ending deferred revenue as of September 30, 2018 included $9,136 of current deferred revenue and $3,335 of long-term deferred revenue.

Costs to Obtain and Fulfill a Contract

Under ASC 606, the Company expenses sales commissions when incurred because the amortization period would have been one year or less. These costs are recorded within selling, general and administration expenses. The Company has elected to recognize the costs for freight and shipping when control over products has transferred to the customer as an expense in cost of sales.

The Company monitors and tracks the amount of product returns and reduces revenue at the time of shipment for the estimated amount of future returns, based on historical experience. The Company makes estimates evaluating its allowance for doubtful accounts. The Company continuously monitors collections and payments from its customers and maintains a provision for estimated credit losses based upon its historical experience and any specific customer collection issues that it has identified.

Disaggregation of Revenue

The following table summarizes revenue from contracts with customers:

	Three Months Ended September 30, 2018		
	Vacuum & Analysis	Light & Motion	Total
Net revenues:			
Products	$239,924	$186,331	$426,255
Services	46,114	14,783	60,897
Total net revenues	$286,038	$201,114	$487,152

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	Three Months Ended September 30, 2017		
	Vacuum & Analysis	Light & Motion	Total
Net revenues:			
Products	$265,136	$163,755	$428,891
Services	43,133	14,243	57,376
Total net revenues	$308,269	$177,998	$486,267

	Nine Months Ended September 30, 2018		
	Vacuum & Analysis	Light & Motion	Total
Net revenues:			
Products	$865,714	$567,217	$1,432,931
Services	136,996	44,640	181,636
Total net revenues	$1,002,710	$611,857	$1,614,567

	Nine Months Ended September 30, 2017		
	Vacuum & Analysis	Light & Motion	Total
Net revenues:			
Products	$776,256	466,890	$1,243,146
Services	119,958	41,073	161,031
Total net revenues	$896,214	$507,963	$1,404,177

Product revenue, excluding revenue from certain custom products, is recorded at a point in time, while the majority of the service revenue and revenue from certain custom products is recorded over time.

Refer to Note 17 in the financial statements for revenue by reportable segment, geography and groupings of similar products.

4) Investments

The fair value of investments classified as short-term consists of the following:

	September 30, 2018	December 31, 2017
Available-for-sale investments:		
Time deposits and certificates of deposit	$ 14,552	$ 9,757
Bankers' acceptance drafts	2,107	5,330
Asset-backed securities	38,947	36,990
Commercial paper	32,057	13,750
Corporate obligations	71,971	77,821
Municipal bonds	1,288	1,970
U.S. treasury obligations	28,208	28,078
U.S. agency obligations	30,646	35,738
	$ 219,776	$ 209,434

Investments classified as long-term consist of the following:

	September 30, 2018	December 31, 2017
Available-for-sale investments:		
Group insurance contracts	$ 6,004	$ 6,255
Cost method investments:		
Minority interest in a private company	4,400	4,400
	$ 10,404	$ 10,655

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The following tables show the gross unrealized gains and (losses) aggregated by investment category for available-for-sale investments:

As of September 30, 2018:	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
Short-term investments:				
Available-for-sale investments:				
Time deposits and certificates of deposit	$14,552	$ —	$ —	$14,552
Bankers' acceptance drafts	2,107	—	—	2,107
Asset-backed securities	38,961	11	(25)	38,947
Commercial paper	32,238	—	(181)	32,057
Corporate obligations	71,931	59	(19)	71,971
Municipal bonds	1,290	—	(2)	1,288
U.S. treasury obligations	28,200	10	(2)	28,208
U.S. agency obligations	30,649	4	(7)	30,646
	$219,928	$ 84	$ (236)	$219,776

As of September 30, 2018:	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
Long-term investments:				
Available-for-sale investments:				
Group insurance contracts	$6,010	$ —	$ (6)	$ 6,004

As of December 31, 2017:	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
Short-term investments:				
Available-for-sale investments:				
Time deposits and certificates of deposit	$9,756	$ 1	$ —	$9,757
Bankers acceptance drafts	5,330	—	—	5,330
Asset-backed securities	37,017	15	(42)	36,990

Commercial paper	13,810	—	(60)	13,750
Corporate obligations	77,788	58	(25)	77,821
Municipal bonds	1,970	—	—	1,970
U.S. treasury obligations	28,054	24	—	28,078
U.S. agency obligations	35,728	10	—	35,738
	$209,453	$ 108	$ (127)	$209,434

As of December 31, 2017:	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
Long-term investments:				
Available-for-sale investments:				
Group insurance contracts	$6,006	$ 249	$ —	$ 6,255

The tables above, which show the gross unrealized gains and (losses) aggregated by investment category for available-for-sale investments as of September 30, 2018 and December 31, 2017, reflect the inclusion within short-term investments of investments with contractual maturities greater than one year from the date of purchase. Management has the ability, if necessary, to liquidate any of its investments in order to meet the Company's liquidity needs in the next 12 months. Accordingly, those investments with contractual maturities greater than one year from the date of purchase are classified as short-term on the accompanying balance sheets.

The Company reviews and evaluates its investments for any indication of possible impairment. Based on this review, the Company has determined that the unrealized losses related to these investments at September 30, 2018 and December 31, 2017 were temporary.

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Interest income is accrued as earned. Dividend income is recognized as income on the date the stock trades "ex-dividend." The cost of marketable securities sold is determined by the specific identification method. Realized gains or losses are reflected in income and were not material for the nine months ended September 30, 2018 and 2017.

5) Fair Value Measurements

In accordance with the provisions of fair value accounting, a fair value measurement assumes that the transaction to sell an asset or transfer a liability occurs in the principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability and defines fair value based upon an exit price model.

The fair value measurement guidance establishes a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The guidance describes three levels of inputs that may be used to measure fair value:

Level 1	Quoted prices in active markets for identical assets or liabilities assessed as of the reporting date. Active markets are those in which transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis.
Level 2	Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Level 2 assets and liabilities include debt securities with quoted prices that are traded less frequently than exchange-traded instruments or securities or derivative contracts that are valued using a pricing model with inputs that are observable in the market or can be derived principally from or corroborated by observable market data.
Level 3	Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. Level 3 assets and liabilities include financial instruments whose value is determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant management judgment or estimation.

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the Company categorizes such assets and liabilities based on the lowest level input that is significant to the fair value measurement in its entirety. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the asset or liability.

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Assets and liabilities of the Company are measured at fair value on a recurring basis as of September 30, 2018 and are summarized as follows:

		Fair Value Measurements at Reporting Date Using		
Description	September 30, 2018	Quoted Prices in Active Markets for Identical Assets or Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents:				
Money market funds	$ 17,584	$17,584	$ —	$ —
Commercial paper	13,283	—	13,283	—
Corporate obligations	4,373	—	4,373	—
U.S. agency obligations	2,244	—	2,244	—
Restricted cash – money market funds	114	114	—	—
Available-for-sale investments:				
Time deposits and certificates of deposit	14,552	—	14,552	—
Bankers acceptance drafts	2,107	—	2,107	—
Asset-backed securities	38,947	—	38,947	—
Commercial paper	32,057	—	32,057	—
Corporate obligations	71,971	—	71,971	—
Municipal bonds	1,288	—	1,288	—
U.S. treasury obligations	28,208	—	28,208	—
U.S. agency obligations	30,646	—	30,646	—
Group insurance contracts	6,004	—	6,004	—
Derivatives – foreign exchange contracts	3,434	—	3,434	—
Funds in investments and other assets:				
Israeli pension assets	15,815	—	15,815	—
Derivatives – interest rate hedge – non-current	8,539	—	8,539	—
Total assets	$ 291,166	$17,698	$ 273,468	$ —
Liabilities:				
Derivatives – foreign exchange contracts	$ 343	$—	$ 343	$ —

Reported as follows:

Assets:				
Cash and cash equivalents, including restricted cash[1]	$ 37,598	$17,698	$ 19,900	$ —
Short-term investments	219,776	—	219,776	—
Other current assets	3,434	—	3,434	—
Total current assets	$ 260,808	$17,698	$ 243,110	$ —
Long-term investments[2]	$ 6,004	$—	$ 6,004	$ —
Other assets	24,354	—	24,354	—
Total long-term assets	$ 30,358	$—	$ 30,358	$ —
Liabilities:				
Other current liabilities	$ 343	$—	$ 343	$ —

(1) The cash and cash equivalent amounts presented in the table above do not include cash of $362,252 as of September 30, 2018.

(2) The long-term investments presented in the table above do not include the Company’s minority interest investment in a private company, which is accounted for under the cost method.

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Assets and liabilities of the Company are measured at fair value on a recurring basis as of December 31, 2017 and are summarized as follows:

		Fair Value Measurements at Reporting Date Using		
Description	December 31, 2017	Quoted Prices in Active Markets for Identical Assets or Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents:				
Money market funds	$ 4,987	$4,987	$ —	$ —
Time deposits and certificates of deposit	2,100	—	2,100	—
Commercial paper	30,475	—	30,475	—
Restricted cash – money market funds	119	119	—	—
Available-for-sale investments:				
Time deposits and certificates of deposit	9,757	—	9,757	—
Bankers acceptance drafts	5,330	—	5,330	—
Asset-backed securities	36,990	—	36,990	—
Commercial paper	13,750	—	13,750	—
Corporate obligations	77,821	—	77,821	—
Municipal bonds	1,970	—	1,970	—
U.S. treasury obligations	28,078	—	28,078	—
U.S. agency obligations	35,738	—	35,738	—
Group insurance contracts	6,255	—	6,255	—
Derivatives – foreign exchange contracts	168	—	168	—
Funds in investments and other assets:				
Israeli pension assets	15,048	—	15,048	—
Derivatives – interest rate hedge – non-current	6,179	—	6,179	—
Total assets	$ 274,765	$5,106	$ 269,659	$ —
Liabilities:				
Derivatives – foreign exchange contracts	$ 6,198	$—	$ 6,198	$ —