

MKS INSTRUMENTS INC  
Form 10-Q  
August 03, 2017  
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**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 June 30, 2017**

**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)**

**2 Tech Drive, Suite 201, Andover, Massachusetts**  
**(Address of principal executive offices)**

**04-2277512**  
**(I.R.S. Employer**

**Identification No.)**

**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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 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, smaller reporting company, or an emerging growth company. See the definitions of large accelerated filer, accelerated filer, smaller reporting company, and emerging growth company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller reporting company

Emerging growth company

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

As of July 27, 2017, the registrant had 54,275,561 shares of common stock outstanding.

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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)

	June 30, 2017	December 31, 2016
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 422,830	\$ 228,623
Restricted cash	5,282	5,287
Short-term investments	149,016	189,463
Trade accounts receivable, net	268,544	248,757
Inventories, net	304,707	275,869
Other current assets	51,721	50,770
<b>Total current assets</b>	<b>1,202,100</b>	<b>998,769</b>
Property, plant and equipment, net	167,212	174,559
Goodwill	586,865	588,585
Intangible assets, net	386,075	408,004
Long-term investments	10,329	9,858
Other assets	32,102	32,467
<b>Total assets</b>	<b>\$ 2,384,683</b>	<b>\$ 2,212,242</b>
<b>LIABILITIES AND STOCKHOLDERS EQUITY</b>		
Current liabilities:		
Short-term borrowings and current portion of long-term debt	\$ 9,810	\$ 10,993
Accounts payable	73,291	69,337
Accrued compensation	65,243	67,728
Income taxes payable	42,142	22,794
Deferred revenue	9,975	14,463
Other current liabilities	57,795	51,985
<b>Total current liabilities</b>	<b>258,256</b>	<b>237,300</b>
Long-term debt	551,846	601,229
Non-current deferred taxes	71,895	66,446
Non-current accrued compensation	48,560	44,714
Other liabilities	24,370	20,761

Total liabilities	954,927	970,450
Commitments and contingencies (Note 18)		
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; 54,273,154 and 53,672,861 shares issued and outstanding at June 30, 2017 and December 31, 2016, respectively	113	113
Additional paid-in capital	779,058	777,482
Retained earnings	661,341	494,744
Accumulated other comprehensive loss	(10,756)	(30,547)
Total stockholders' equity	1,429,756	1,241,792
Total liabilities and stockholders' equity	\$ 2,384,683	\$ 2,212,242

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

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## MKS INSTRUMENTS, INC.

## CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

## AND COMPREHENSIVE INCOME

(in thousands, except per share data)

(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Net revenues:				
Products	\$ 431,950	\$ 285,471	\$ 824,872	\$ 439,092
Services	48,807	40,390	93,038	70,450
Total net revenues	480,757	325,861	917,910	509,542
Cost of revenues:				
Cost of products	229,304	163,993	434,364	249,345
Cost of services	31,870	25,955	58,416	46,371
Total cost of revenues (exclusive of amortization shown separately below)	261,174	189,948	492,780	295,716
Gross profit	219,583	135,913	425,130	213,826
Research and development	33,680	28,214	66,962	45,441
Selling, general and administrative	71,979	59,579	146,199	93,529
Acquisition and integration costs	790	20,055	2,232	22,549
Restructuring	2,064	24	2,586	24
Asset impairment	6,719		6,719	
Amortization of intangible assets	11,468	8,855	23,969	10,538
Income from operations	92,883	19,186	176,463	41,745
Interest income	507	530	1,023	1,454
Interest expense	6,997	8,474	15,829	8,519
Gain on sale of business	74,856		74,856	
Other (expense) income, net	(3,277)	1,126	(1,256)	1,493
Income before income taxes	157,972	12,368	235,257	36,173
Provision for income taxes	37,532	3,158	49,757	9,400
Net income	\$ 120,440	\$ 9,210	\$ 185,500	\$ 26,773
Other comprehensive income:				
Changes in value of financial instruments designated as	\$ 23	\$ (319)	\$ (2,429)	\$ (1,865)

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cash flow hedges, net of tax expense (benefit) <sup>(1)</sup>				
Foreign currency translation adjustments, net of tax of \$0	17,729	(8,886)	22,264	(6,233)
Unrecognized pension gain, net of tax expense <sup>(2)</sup>	123		205	
Unrealized (loss) gain on investments, net of tax (benefit) expense <sup>(3)</sup>	(168)	68	(249)	445
<b>Total comprehensive income</b>	<b>\$ 138,147</b>	<b>\$ 73</b>	<b>\$ 205,291</b>	<b>\$ 19,120</b>
Net income per share:				
Basic	\$ 2.22	\$ 0.17	\$ 3.44	\$ 0.50
Diluted	\$ 2.19	\$ 0.17	\$ 3.37	\$ 0.50
Cash dividends per common share	\$ 0.175	\$ 0.17	\$ 0.35	\$ 0.34
Weighted average common shares outstanding:				
Basic	54,178	53,461	53,973	53,348
Diluted	55,001	53,806	54,979	53,685

(1) Tax expense (benefit) was \$6 and \$(209) for the three months ended June 30, 2017 and 2016, respectively. Tax (benefit) was \$(1,813) and \$(1,250) for the six months ended June 30, 2017 and 2016, respectively.

(2) Tax expense was \$34 and \$153 for the three and six months ended June 30, 2017, respectively.

(3) Tax (benefit) expense was \$(46) and \$44 for the three months ended June 30, 2017 and 2016, respectively. Tax (benefit) expense was \$(185) and \$299 for the six months ended June 30, 2017 and 2016, respectively.

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

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## MKS INSTRUMENTS, INC.

## CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

(Unaudited)

	Six Months Ended June 30,	
	2017	2016
<b>Cash flows provided by operating activities:</b>		
Net income	\$ 185,500	\$ 26,773
<b>Adjustments to reconcile net income to net cash provided by operating activities:</b>		
Depreciation and amortization	42,421	21,708
Amortization of debt issuance costs, original issue discount and soft call premium	3,742	2,408
Amortization of inventory step-up adjustment to fair value		10,119
Asset impairment	6,719	
Gain on sale of business	(74,856)	
Stock-based compensation	14,989	14,668
Provision for excess and obsolete inventory	11,002	6,737
Provision for bad debt	511	85
Deferred income taxes	7,798	1,381
Excess tax benefits from stock-based compensation		(452)
Other	796	72
<b>Changes in operating assets and liabilities:</b>		
Trade accounts receivable	(15,901)	(35,874)
Inventories	(34,056)	3,868
Income taxes	21,918	6,420
Other current and non-current assets	(2,779)	(12,998)
Accrued compensation	(161)	391
Other current and non-current liabilities	4,970	(993)
Accounts payable	2,860	7,457
<b>Net cash provided by operating activities</b>	<b>175,473</b>	<b>51,770</b>
<b>Cash flows provided by investing activities:</b>		
Acquisition of businesses, net of cash acquired		(939,591)
Net proceeds from sale of business	72,509	
Purchases of investments	(69,582)	(99,261)
Maturities of investments	85,234	114,256
Sales of investments	25,319	336,276
Purchases of property, plant and equipment	(9,739)	(7,264)
<b>Net cash provided by (used in) investing activities</b>	<b>103,741</b>	<b>(595,584)</b>



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Cash flows used in financing activities:		
Restricted cash	(152)	(5,559)
Proceeds from short-term borrowings	8,453	10,597
Proceeds from long-term borrowings	184	743,913
Payments on short-term borrowings	(9,257)	(2,239)
Payments on long-term borrowings	(53,141)	(50,000)
Repurchase of common stock		(1,545)
Net payments related to employee stock awards	(13,413)	(2,921)
Dividend payments to common stockholders	(18,903)	(18,141)
Excess tax benefits from stock-based compensation		452
Net cash (used in) provided by financing activities	(86,229)	674,557
Effect of exchange rate changes on cash and cash equivalents	1,222	(4,042)
Increase in cash and cash equivalents	194,207	126,701
Cash and cash equivalents at beginning of period	228,623	227,574
Cash and cash equivalents at end of period	\$ 422,830	\$ 354,275

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

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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 June 30, 2017, and for the three and six months ended June 30, 2017 and 2016 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, 2016 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, 2016 filed with the Securities and Exchange Commission on March 1, 2017.

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.

2) **Recently Issued Accounting Pronouncements**

In May 2017, the Financial Accounting Standards Board ( FASB ) issued Accounting Standards Update ( ASU ) 2018-09, 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. Early adoption is permitted for any interim period for which financial statements have not yet been issued. The Company does not expect adoption of this ASU to 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. Early adoption is permitted as of the beginning of an annual period for which financial statements (interim or annual) have not been issued or made available for issuance. The Company does not expect adoption of this ASU to have a material impact on the Company's consolidated financial statements.

In January 2017, the FASB issued ASU 2017-04, Intangibles-Goodwill and Other (Topic 350). This standard simplifies how an entity is required to test goodwill for impairment by eliminating Step 2 from the goodwill impairment test. Step 2 measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of goodwill. The provisions of this ASU are effective for annual or any interim goodwill impairment tests in fiscal years beginning after December 15, 2019. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company expects to adopt this new standard in 2017 when it performs its annual goodwill impairment test in the fourth quarter. The Company does not expect adoption of this ASU to 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

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MKS INSTRUMENTS, INC.

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (continued)

(in thousands, except share and per share data)

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. Early adoption is applicable under certain circumstances. The Company does not expect adoption of this ASU to 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. Early adoption is permitted. 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 does not expect adoption of this ASU to have a material impact on the Company's consolidated financial statements.

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 and early adoption is permitted. The Company is currently evaluating the requirements of this ASU and has not yet determined its 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 is currently evaluating the requirements of this ASU and has not yet determined its 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 are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. This ASU is effective for annual periods beginning after December 15, 2018, including interim periods within those fiscal years. The Company is currently evaluating the requirements of this ASU and has not yet determined its impact on the Company's consolidated financial statements.

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 pronouncement 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 pronouncement is effective for annual periods beginning after December 15, 2017, 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 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers (Topic 606). ASU 2014-09 provides for a single comprehensive model to use in accounting for revenue arising from contracts with customers and will replace most existing revenue recognition guidance in GAAP when it becomes effective. ASU 2014-09 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 does not plan to early adopt the standard, but has concluded that it will use the modified retrospective method upon adoption in the first quarter of 2018.

In March, April, May and December 2016, the FASB issued additional updates to the new revenue standard relating to reporting revenue on a gross versus net basis, identifying performance obligations and licensing arrangements, narrow-scope improvements and practical expedients, and technical corrections and improvements, respectively. The Company has reviewed its plan for the

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## MKS INSTRUMENTS, INC.

## NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (continued)

(in thousands, except share and per share data)

implementation and will continue to report the status against that plan with the Company's Audit Committee. The Company has established a cross functional project steering committee and implementation team to identify potential differences that would result from applying the requirements of the new standard to the Company's revenue contracts and related expense line items. The Company has identified the various revenue streams, including product revenues, service revenues, installation and training, that could be impacted by Topic 606 and has started to review individual customer contracts related to these revenue streams to determine if any material differences exist between the current revenue standard, Accounting Standards Codification Topic 605 and Topic 606. In the second quarter of 2017, the Company began reviewing the additional disclosure requirements of the new standard and the potential impact on its internal control structure and revenue recognition policy. The Company has not completed its assessment of the new revenue recognition standard and has not yet determined the impact on its consolidated financial statements. The Company anticipates that it will complete its assessment of the new standard and its potential financial impact by the end of the third quarter of 2017.

3) Investments

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

	June 30, 2017	December 31, 2016
Available-for-sale investments:		
Time deposits and certificates of deposit	\$ 13,530	\$ 23,818
Bankers' acceptance drafts	1,934	1,439
Asset-backed securities	32,632	36,809
Commercial paper	11,629	24,381
Corporate obligations	46,990	46,707
Municipal bonds	250	591
Promissory note	675	675
U.S. treasury obligations	16,928	25,414
U.S. agency obligations	24,448	29,629
	\$ 149,016	\$ 189,463

Investments classified as long-term consists of the following:

	June 30, 2017	December 31, 2016
Available-for-sale investments:		

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Group insurance contracts	\$	6,029	\$	5,558
Cost method investments:				
Minority interest in a private company <sup>(1)</sup>		4,300		4,300
	\$	10,329	\$	9,858

- <sup>(1)</sup> In April 2016, the Company invested \$9,300 for a minority interest in a private company. For the year ended December 31, 2016, the Company recognized \$5,000 of impairment charges related to this cost method investment.

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## MKS INSTRUMENTS, INC.

## NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (continued)

(in thousands, except share and per share data)

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

	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
As of June 30, 2017:				
Short-term investments:				
Available-for-sale investments:				
Time deposits and certificates of deposit	\$ 13,530	\$	\$	\$ 13,530
Bankers' acceptance drafts	1,934			1,934
Asset-backed securities	32,655	13	(36)	32,632
Commercial paper	11,664		(35)	11,629
Corporate obligations	46,915	81	(6)	46,990
Municipal bonds	250			250
Promissory note	675			675
U.S. treasury obligations	16,905	23		16,928
U.S. agency obligations	24,437	14	(3)	24,448
	\$ 148,965	\$ 131	\$ (80)	\$ 149,016

	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
As of June 30, 2017:				
Long-term investments:				
Available-for-sale investments:				
Group insurance contracts	\$ 6,888	\$	\$ (859)	\$ 6,029

	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
As of December 31, 2016:				
Short-term investments:				
Available-for-sale investments:				
Time deposits and certificates of deposit	\$ 23,818	\$	\$	\$ 23,818



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Bankers acceptance drafts	1,439			1,439
Asset-backed securities	36,847	6	(44)	36,809
Commercial paper	24,423		(42)	24,381
Corporate obligations	46,700	21	(14)	46,707
Municipal bonds	591			591
Promissory note	675			675
U.S. treasury obligations	25,414			25,414
U.S. agency obligations	29,631	8	(10)	29,629
	\$ 189,538	\$ 35	\$ (110)	\$ 189,463

	Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
As of December 31, 2016:				
Long-term investments:				
Available-for-sale investments:				
Group insurance contracts	\$ 6,276	\$	\$ (718)	\$ 5,558

The tables above, which show the gross unrealized gains and (losses) aggregated by investment category for available-for-sale investments as of June 30, 2017 and December 31, 2016, 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.

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MKS INSTRUMENTS, INC.

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (continued)

(in thousands, except share and per share data)

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 six months ended June 30, 2017 and 2016.

4) 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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## MKS INSTRUMENTS, INC.

## NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (continued)

(in thousands, except share and per share data)

Assets and liabilities of the Company are measured at fair value on a recurring basis as of June 30, 2017 and are summarized as follows:

Description	June 30, 2017	Fair Value Measurements at Reporting Date Using		
		Quoted Prices in Active Markets for Identical Assets or Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Assets:</b>				
<b>Cash equivalents:</b>				
Money market funds	\$ 51,652	\$ 51,652	\$	\$
Time deposits and certificates of deposit	2,750		2,750	
Bankers acceptance drafts	493		493	
Commercial paper	25,118		25,118	
Corporate obligations	525		525	
U.S. agency obligations	12,793		12,793	
Restricted cash money market funds	5,282	5,282		
<b>Available-for-sale investments:</b>				
Time deposits and certificates of deposit	13,530		13,530	
Bankers acceptance drafts	1,934		1,934	
Asset-backed securities	32,632		32,632	
Commercial paper	11,629		11,629	
Corporate obligations	46,990		46,990	
Municipal bonds	250		250	
Promissory note	675		675	
U.S. treasury obligations	16,928		16,928	
U.S. agency obligations	24,448		24,448	
Group insurance contracts	6,029		6,029	
Derivatives currency forward contracts	609		609	
<b>Funds in investments and other assets:</b>				
Israeli pension assets	14,194		14,194	
Derivatives interest rate hedge non-current	4,294		4,294	
Restricted cash non-current	793	793		
<b>Total assets</b>	<b>\$ 273,548</b>	<b>\$ 57,727</b>	<b>\$ 215,821</b>	<b>\$</b>

Liabilities:

Derivatives	currency forward contracts	\$	2,357	\$		\$	2,357	\$
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Reported as follows:

Assets:

Cash and cash equivalents <sup>(1)</sup>		\$	93,331	\$	51,652	\$	41,679	\$
Restricted cash			5,282		5,282			
Short-term investments			149,016				149,016	