

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of Earliest Event Reported):

January 31, 2018

MKS Instruments, Inc.

(Exact name of registrant as specified in its charter)

Massachusetts

(State or other jurisdiction
of incorporation)

000-23621

(Commission
File Number)

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

Not Applicable

Former name or former address, if changed since last report

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

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. []

Item 2.02 Results of Operations and Financial Condition.

On January 31, 2018, MKS Instruments, Inc. announced its financial results for the quarter and year ended December 31, 2017. The full text of the press release is attached as Exhibit 99.1 to this Current Report on Form 8-K.

The information in this Form 8-K and the Exhibit attached hereto shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 (the "Exchange Act") or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

99.1 Press Release dated January 31, 2018

Exhibit Index

Exhibit No.	Description
99.1	Press Release dated January 31, 2018

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 hereunto duly authorized.

MKS Instruments, Inc.

January 31, 2018

By: */s/ Seth H. Bagshaw*

Name: Seth H. Bagshaw

Title: Senior Vice President, Chief Financial Officer and Treasurer

MKS Instruments Reports Fourth Quarter and Full Year 2017 Financial Results

2017 was a record year in revenue and GAAP and Non-GAAP EPS

- *Annual revenue increased 30% compared to pro-forma 2016 to a record \$1.9 billion*
- *Annual semiconductor revenue increased 45% on a pro-forma basis to a record \$1.1 billion*
- *Annual revenue in advanced markets increased 14% on a pro-forma basis to a record \$820 million*
- *Light and Motion set new quarterly and annual revenue records and in Q4'17 exceeded \$200 million in revenue for the first time*

Our 2018 January Operating Model shows a 33% increase in Non-GAAP EPS compared to the October 2017 Operating Model

Andover, Mass., January 31, 2018 — MKS Instruments, Inc. (NASDAQ: MKSI), a global provider of technologies that enable advanced processes and improve productivity, today reported fourth quarter and full year 2017 financial results.

GAAP Financial Results¹

	Q4		Full Year	
	2017	2016	2017	2016
Net revenues (\$ millions)	\$ 512	\$ 405	\$1,916	\$1,295
Operating margin	23.4%	15.4%	21.2%	12.1%
Net income (\$ millions)	\$77.6	\$45.5	\$339.1	\$104.8
Diluted EPS	\$1.41	\$0.83	\$ 6.16	\$ 1.94

Non-GAAP Financial Results¹

	Q4		Full Year	
	2017	2016	2017	2016
Net revenues (\$ millions)	\$ 512	\$ 405	\$1,916	\$1,295
Operating margin	25.9%	20.6%	24.6%	18.7%
Net earnings (\$ millions)	\$94.6	\$57.2	\$328.2	\$164.0
Diluted EPS	\$1.71	\$1.05	\$ 5.96	\$ 3.03

¹ The full year 2016 results include the results of Newport Corporation (now the Light and Motion segment) since its acquisition on April 29, 2016.

Fourth Quarter Financial Results

Sales were \$512 million, an increase of 5% from \$486 million in the third quarter of 2017, and an increase of 26% from \$405 million in the fourth quarter of 2016.

Fourth quarter net income was \$77.6 million, or \$1.41 per diluted share, compared to net income of \$76.0 million, or \$1.38 per diluted share in the third quarter of 2017, and \$45.5 million, or \$0.83 per diluted share in the fourth quarter of 2016.

Non-GAAP net earnings, which exclude special charges and credits, were \$94.6 million, or \$1.71 per diluted share, compared to \$85.9 million, or \$1.56 per diluted share in the third quarter of 2017, and \$57.2 million, or \$1.05 per diluted share in the fourth quarter of 2016.

Sales to semiconductor customers were \$284 million, an increase of 1% compared to a strong third quarter of 2017, and sales to advanced markets were \$228 million in the quarter, an increase of 11% sequentially driven largely by strong growth from our Light and Motion Division.

Sales in the Vacuum and Analysis segment, the historic MKS business, set a quarterly record of \$311 million, driven by very strong sales to semiconductor customers. Sales in the Light and Motion segment, the historic Newport business, also set a quarterly record of \$201 million.

Additional Financial Information

The Company had \$543 million in cash and short-term investments as of December 31, 2017 and \$398 million outstanding under its Term Loan. During the fourth quarter, the Company made another voluntary Term Loan repayment of \$50 million and paid a dividend of \$9.8 million or \$0.18 per diluted share.

Full Year Results

Sales were a record \$1.92 billion, an increase of 30% from \$1.47 billion in 2016 on a pro-forma basis (assuming the acquisition of Newport Corporation had occurred as of the beginning of 2016), driven by strong sales to both semiconductor customers as well as customers in thin film manufacturing, industrial manufacturing, and health and life sciences. Sales to semiconductor customers were \$1.1 billion, an increase of 45% compared to 2016, also on a pro-forma basis, while sales to advanced markets were \$820 million, an increase of 14%.

Sales in the Vacuum and Analysis segment were \$1.2 billion, an increase of 38% from \$872 million in 2016, driven by very strong sales to semiconductor customers, which increased nearly 50% from 2016.

Sales in the Light and Motion segment were \$709 million, an increase of 18% from \$602 million in 2016, on a pro-forma basis driven by both sales to semiconductor customers as well as industrial manufacturing customers.

“We are very pleased with our fourth quarter and full year 2017 results, which set new records for revenue and profitability, in both of our segments,” said Gerald Colella, Chief Executive Officer and President. Mr. Colella added, “This strong performance reflects our focused strategy of achieving sustainable and profitable growth by providing customers with innovative technology solutions, continuing to streamline all aspects of our operations, and investing in high-growth solutions and markets. Moreover, our ability to successfully grow and integrate Newport into the existing MKS business helped us deliver these strong results and positions us for future success.”

“The acquisition of Newport Corporation coupled with our organic growth has enabled us to nearly double non-GAAP EPS in 2017 compared to 2016,” said Seth Bagshaw, Senior Vice President and Chief Financial Officer. Mr. Bagshaw added “These achievements are reflected in our newly published January 2018 Operating Model, which demonstrates our continued and long standing efforts to drive improvements in our operating leverage. Furthermore, recently enacted U.S. Federal tax reform legislation is positive for MKS and is expected to result in a significant reduction in our effective tax rate while providing more long term flexibility in our use of cash.”

First Quarter 2018 Outlook

Based on current business levels, the Company expects that sales in the first quarter of 2018 may range from \$510 to \$550 million, and at these volumes, GAAP net income could range from \$1.68 to \$1.95 per diluted share and non-GAAP net earnings could range from \$1.86 to \$2.12 per diluted share. This financial guidance incorporates assumptions made based upon the Company’s current interpretation of the 2017 Tax Cut and Jobs Act, and may change as additional clarification and implementation guidance is issued.

January 2018 Operating Model

The Company also published an updated operating model, which reflects an illustrative revenue level of \$2.2 billion, improvements in gross margin, lower interest expense, and the expected impact of the 2017 Tax Cut and Jobs Act. As a result of these improvements, non-GAAP EPS in the model increased by 33% to \$8.55 compared to \$6.42 in the prior operating model, published in October of 2017, and represents an improvement in non-GAAP EPS of more than 80% compared to the model entering 2017.

A conference call with management will be held on Thursday, February 1, 2018 at 8:30 a.m. (Eastern Time). To participate in the conference call, please dial (877) 212-6076 for domestic callers and (707) 287-9331 for international callers, and an operator will connect you. Participants will need to provide the operator with the Conference ID of 5595206, which has been reserved for this call. A live and archived webcast of the call will be available on the Company’s website at www.mksinst.com.

About MKS Instruments

MKS Instruments, Inc. is a global provider of instruments, subsystems and process control solutions that measure, control, power, monitor, and analyze critical parameters of advanced manufacturing processes to improve process performance and productivity. The Company’s products are derived from core competencies in pressure measurement and control, flow measurement and control, gas and vapor delivery, gas composition analysis, residual gas analysis, leak detection, control technology, ozone generation and delivery, RF & DC power, reactive gas generation, vacuum technology, lasers, photonics, sub-micron positioning, vibration isolation, and optics. MKS’ primary markets include semiconductor capital equipment, general industrial, life sciences, and research. Additional information can be found at www.mksinst.com.

Use of Non-GAAP Financial Results

Non-GAAP amounts exclude amortization of acquired intangible assets, asset impairments, costs associated with completed and announced acquisitions, acquisition integration costs, restructuring charges, certain excess and obsolete inventory charges, fees and expenses related to re-pricing of the Company’s term loan, amortization of debt issuance costs, net proceeds from an insurance policy, costs associated with the sale of a business, the tax effects of the 2017 Tax Cut and Jobs Act, the tax effect of legal entity

restructurings, other discrete tax benefits and charges, and the related tax effect of these adjustments. These non-GAAP measures are not in accordance with generally accepted accounting principles in the United States of America (GAAP). MKS' management believes the presentation of these non-GAAP financial measures is useful to investors for comparing prior periods and analyzing ongoing business trends and operating results. Annualized GAAP interest expense based upon \$780 million principal outstanding and using the LIBOR based interest rate spread in effect on April 29, 2016, was \$44 million and included \$5 million in debt issuance cost. Annualized GAAP interest expense based upon \$398 million in principal currently outstanding and LIBOR plus 200 basis points would be \$17.5 million and includes \$4 million of debt issuance cost.

SAFE HARBOR FOR FORWARD-LOOKING STATEMENTS

This release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 regarding the future financial performance, business prospects and growth of MKS as well as expected synergies and cost savings from the acquisition of Newport Corporation. These statements are only predictions based on current assumptions and expectations. Actual events or results may differ materially from those in the forward-looking statements set forth herein. Among the important factors that could cause actual events to differ materially from those in the forward-looking statements are the conditions affecting the markets in which MKS operates, including the fluctuations in capital spending in the semiconductor industry and other advanced manufacturing markets, fluctuations in net sales to major customers, the Company's ability to successfully integrate Newport's operations and employees, unexpected risks, costs, charges or expenses resulting from the Newport acquisition or other acquisitions, the terms of the term loan financing, fluctuations in interest rates, the impact of the 2017 Tax Cut and Jobs Act as additional clarification and implementation guidance is issued with respect thereto, the Company's ability to successfully grow the business, potential fluctuations in quarterly results, dependence on new product development, rapid technological and market change, acquisition strategy, manufacturing and sourcing risks, volatility of stock price, international operations, financial risk management, and the other factors described in MKS' most recent Annual Report on Form 10-K for the year ended December 31, 2016 filed with SEC. MKS is under no obligation to, and expressly disclaims any obligation to, update or alter these forward-looking statements, whether as a result of new information, future events or otherwise after the date of this press release.

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MKS Instruments, Inc. Unaudited Consolidated Statements of Operations (In thousands, except per share data)

	Three Months Ended		
	December 31, 2017	December 31, 2016	September 30, 2017
Net revenues:			
Products	\$463,851	\$359,765	\$434,710
Services	47,949	45,375	51,557
Total net revenues	511,800	405,140	486,267
Cost of revenues:			
Products	242,008	194,716	225,174
Services	31,466	27,016	33,098
Total cost of revenues	273,474	221,732	258,272
Gross profit	238,326	183,408	227,995
Research and development	33,045	32,870	32,548
Selling, general and administrative	72,510	67,626	71,839
Acquisition and integration costs	634	2,089	2,466
Restructuring	1,324	618	10
Asset impairment	—	5,000	—
Amortization of intangible assets	10,797	12,691	10,977
Income from operations	120,016	62,514	110,155
Interest income	1,125	702	873
Interest expense	7,989	10,085	7,172
Other expense, net	2,155	3,575	2,485
Income from operations before income taxes	110,997	49,556	101,371
Provision for income taxes	33,359	4,069	25,377

Net income	\$ <u>77,638</u>	\$ <u>45,487</u>	\$ <u>75,994</u>
Net income per share:			
Basic	\$ 1.43	\$ 0.85	\$ 1.40
Diluted	\$ 1.41	\$ 0.83	\$ 1.38
Cash dividends per common share	\$ 0.18	\$ 0.17	\$ 0.175
Weighted average shares outstanding:			
Basic	54,318	53,617	54,282
Diluted	55,236	54,518	55,101

The following supplemental Non-GAAP earnings information is presented to aid in understanding MKS' operating results:

Net income	\$ 77,638	\$ 45,487	\$ 75,994
Adjustments:			
Acquisition and integration costs (Note 1)	634	2,089	2,466
Fees and expenses relating to re-pricing of term loan (Note 2)	—	526	492
Amortization of debt issuance costs (Note 3)	3,983	2,430	2,314
Restructuring (Note 4)	1,324	618	10
Asset impairment (Note 5)	—	5,000	—
Amortization of intangible assets	10,797	12,691	10,977
Windfall tax benefit on stock-based compensation (Note 6)	(658)	—	(594)
Withholding tax on dividends (Note 7)	—	1,362	—
Tax benefit from a legal entity restructuring (Note 8)	—	(6,570)	—
Deferred tax adjustment (Note 9)	(24,546)	—	—
Transition tax on accumulated foreign earnings (Note 10)	28,658	—	—
Tax adjustment related to the sale of a business (Note 11)	(12,131)	—	—
Accrued tax on MKS subsidiary distribution (Note 12)	14,000	—	—
Pro-forma tax adjustments	<u>(5,083)</u>	<u>(6,437)</u>	<u>(5,789)</u>
Non-GAAP net earnings	\$ <u>94,616</u>	\$ <u>57,196</u>	\$ <u>85,870</u>
Non-GAAP net earnings per share	\$ <u>1.71</u>	\$ <u>1.05</u>	\$ <u>1.56</u>
Weighted average shares outstanding	55,236	54,518	55,101
Income from operations	\$120,016	\$ 62,514	\$110,155
Adjustments:			
Acquisition and integration costs (Note 1)	634	2,089	2,466
Fees and expenses relating to re-pricing of term loan (Note 2)	—	526	492
Restructuring (Note 4)	1,324	618	10
Asset impairment (Note 5)	—	5,000	—
Amortization of intangible assets	10,797	12,691	10,977
Non-GAAP income from operations	\$ <u>132,771</u>	\$ <u>83,438</u>	\$ <u>124,100</u>
Non-GAAP operating margin percentage	<u>25.9%</u>	<u>20.6%</u>	<u>25.5%</u>
Interest expense	\$ 7,989	\$ 10,085	\$ 7,172
Amortization of debt issuance costs (Note 3)	3,983	2,430	2,314
Non-GAAP interest expense	\$ <u>4,006</u>	\$ <u>7,655</u>	\$ <u>4,858</u>
Net income	\$ 77,638	\$ 45,487	\$ 75,994
Interest expense, net	6,864	9,383	6,299
Provision for income taxes	33,359	4,069	25,377
Depreciation	9,208	9,478	9,153
Amortization	10,797	12,691	10,977
EBITDA	\$ <u>137,866</u>	\$ <u>81,108</u>	\$ <u>127,800</u>
Stock-based compensation	4,544	5,402	4,846
Acquisition and integration costs (Note 1)	634	2,089	2,466
Fees and expenses relating to re-pricing of term loan (Note 2)	—	526	492
Restructuring (Note 4)	1,324	618	10
Asset impairment (Note 5)	—	5,000	—
Other adjustments	839	817	836
Adjusted EBITDA	\$ <u>145,207</u>	\$ <u>95,560</u>	\$ <u>136,450</u>

Note 1: We recorded acquisition and integration costs related to the Newport Corporation acquisition, which closed during the second quarter of 2016.

Note 2: We recorded fees and expenses related to the re-pricing of our Term Loan Credit Agreement during the three month periods ended September 30, 2017 and December 31, 2016.

Note 3: We recorded additional interest expense related to the amortization of debt issuance costs affiliated with our Term Loan Credit Agreement and ABL Facility.

Note 4: We recorded restructuring costs, primarily related to the consolidation of two manufacturing plants during the three months ended December 31, 2017. We recorded restructuring costs related to one of our international facilities during the three months ended December 31, 2016.

Note 5: We recorded an asset impairment charge related to a minority interest investment in a privately held company during the three months ended December 31, 2016.

Note 6: We recorded windfall tax benefits on the vesting of stock-based compensation during the three months ended December 31, 2017 and September 30, 2017, respectively, relating to the implementation of a new accounting standard issued by the Financial Statement Accounting Standards Board (Accounting Standards Update 2016-09).

Note 7: We recorded withholding tax on intercompany dividends during the three months ended December 31, 2016.

Note 8: We recorded a tax benefit related to a legal entity restructuring during the three months ended December 31, 2016.

Note 9: We recorded a deferred tax adjustment, which also includes the reversal of a tax accrual on a French dividend, related to U.S. tax reform legislation during the three months ended December 31, 2017.

Note 10*: We recorded a transition tax on accumulated foreign earnings related to the 2017 Tax Cut and Jobs Act during the three months ended December 31, 2017.

Note 11*: We recorded a tax adjustment resulting from the 2017 Tax Cut and Jobs Act, related to the sale of our Data Analytics Solutions business during the three months ended December 31, 2017.

Note 12*: We recorded an accrual for tax expense on a potential distribution to a subsidiary, related to the 2017 Tax Cut and Jobs Act during the three months ended December 31, 2017.

*The computation of the one-time tax on our offshore earnings pursuant to the 2017 Tax Cut and Jobs Act (the "Tax Act") as well as our net deferred tax liability is based on our current understanding and assumptions regarding the impact of the Tax Act, and may change as additional clarification and implementation guidance is issued and as the interpretation of the Tax Act evolves over time.

MKS Instruments, Inc.
Unaudited Consolidated Statements of Operations
(In thousands, except per share data)

	Twelve Months Ended December 31,	
	2017	2016
Net revenues:		
Products	\$1,723,433	\$1,134,013
Services	192,544	161,329
Total net revenues	1,915,977	1,295,342
Cost of revenues:		
Products	901,546	627,850
Services	122,980	101,873
Total cost of revenues	1,024,526	729,723
Gross profit	891,451	565,619
Research and development	132,555	110,579
Selling, general and administrative	290,548	229,171
Acquisition and integration costs	5,332	27,279
Restructuring	3,920	642
Asset impairment	6,719	5,000
Amortization of intangible assets	45,743	35,681
Income from operations	406,634	157,267
Interest income	3,021	2,560
Interest expense	30,990	30,611
Gain on sale of business	74,856	—
Other expense, net	5,896	1,239
Income from continuing operations before income taxes	447,625	127,977
Provision for income taxes	108,493	23,168
Net income	<u>\$ 339,132</u>	<u>\$ 104,809</u>
Net income per share:		
Basic	\$ 6.26	\$ 1.96
Diluted	\$ 6.16	\$ 1.94
Cash dividends per common share	\$ 0.71	\$ 0.68
Weighted average shares outstanding:		
Basic	54,137	53,472
Diluted	55,074	54,051
The following supplemental Non-GAAP earnings information is presented to aid in understanding MKS' operating results:		
Net income	\$ 339,132	\$ 104,809
Adjustments:		
Acquisition and integration costs (Note 1)	5,332	27,279
Acquisition inventory step-up (Note 2)	—	15,090
Expenses related to sale of a business (Note 3)	859	—
Excess and obsolete inventory charge (Note 4)	1,160	—
Fees and expenses relating to re-pricing of term loan (Note 5)	492	1,239
Amortization of debt issuance costs (Note 6)	9,405	6,897
Restructuring (Note 7)	3,920	642
Asset impairment (Note 8)	6,719	5,000
Gain on sale of business (Note 9)	(74,856)	—
Net proceeds from an insurance policy (Note 10)	—	(1,323)
Amortization of intangible assets	45,743	35,681
Taxes related to the sale of a business (Note 11)	2,876	—
Windfall tax benefit on stock-based compensation (Note 12)	(11,071)	—
Withholding tax on dividends (Note 13)	—	1,362
Tax benefit from a legal entity restructuring (Note 14)	—	(5,038)
Deferred tax adjustment (Note 15)	(24,546)	—
Transition tax on accumulated foreign earnings (Note 16)	28,658	—

Accrued tax on MKS subsidiary distribution (Note 17)	14,000	—
Pro-forma tax adjustments	(19,639)	(27,617)
Non-GAAP net earnings	<u>\$ 328,184</u>	<u>\$ 164,021</u>
Non-GAAP net earnings per share	<u>\$ 5.96</u>	<u>\$ 3.03</u>
Weighted average shares outstanding	55,074	54,051
Income from operations	\$ 406,634	\$ 157,267
Adjustments:		
Acquisition and integration costs (Note 1)	5,332	27,279
Acquisition inventory step-up (Note 2)	—	15,090
Expenses related to the sale of a business (Note 3)	859	—
Excess and obsolete inventory charge (Note 4)	1,160	—
Fees and expenses relating to re-pricing of term loan (Note 5)	492	1,239
Restructuring (Note 7)	3,920	642
Asset impairment (Note 8)	6,719	5,000
Amortization of intangible assets	45,743	35,681
Non-GAAP income from operations	<u>\$ 470,859</u>	<u>\$ 242,198</u>
Non-GAAP operating margin percentage	<u>24.6%</u>	<u>18.7%</u>
Gross profit	\$ 891,451	\$ 565,619
Acquisition inventory step-up (Note 2)	—	15,090
Excess and obsolete inventory charge (Note 4)	1,160	—
Non-GAAP gross profit	<u>\$ 892,611</u>	<u>\$ 580,709</u>
Non-GAAP gross profit percentage	<u>46.6%</u>	<u>44.8%</u>
Interest expense	\$ 30,990	\$ 30,611
Amortization of debt issuance costs (Note 6)	9,405	6,897
Non-GAAP interest expense	<u>\$ 21,585</u>	<u>\$ 23,714</u>
Net income	\$ 339,132	\$ 104,809
Interest expense, net	27,969	28,051
Provision for income taxes	108,493	23,168
Depreciation	36,813	30,245
Amortization	45,743	35,681
EBITDA	<u>\$ 558,150</u>	<u>\$ 221,954</u>
Stock-based compensation	24,378	25,228
Acquisition and integration costs (Note 1)	5,332	27,279
Acquisition inventory step-up (Note 2)	—	15,090
Expenses related to the sale of a business (Note 3)	859	—
Excess and obsolete inventory charge (Note 4)	1,160	—
Fees and expenses relating to re-pricing of term loan (Note 5)	492	1,239
Restructuring (Note 7)	3,920	642
Asset impairment (Note 8)	6,719	5,000
Gain on sale of business (Note 9)	(74,856)	—
Net proceeds from an insurance policy (Note 10)	—	(1,323)
Other adjustments	3,244	2,312
Adjusted EBITDA	<u>\$ 529,398</u>	<u>\$ 297,421</u>

Note 1: We recorded acquisition and integration costs related to the Newport Corporation acquisition, which closed during the second quarter of 2016.

Note 2: We recorded a charge in cost of sales related to the step-up of inventory to fair value as a result of the Newport Corporation acquisition during the twelve months ended December 31, 2016.

Note 3: We recorded legal, consulting and compensation related expenses related to the sale of a business, which was completed in April of 2017, during the twelve months ended December 31, 2017.

Note 4: We recorded excess and obsolete inventory charges in cost of sales related to the discontinuation of a product line in connection with the consolidation of two manufacturing plants during the twelve months ended December 31, 2017.

Note 5: We recorded fees and expenses related to re-pricings of our Term Loan Credit Agreement.

Note 6: We recorded additional interest expense related to the amortization of debt issuance costs affiliated with our Term Loan Credit Agreement and ABL Facility.

Note 7: We recorded restructuring costs related to the consolidation of two manufacturing plants, a restructuring of one of our international facilities and the consolidation of sales offices during the twelve months ended December 31, 2017. We recorded restructuring costs related to one of our international facilities during the twelve months ended December 31, 2016.

Note 8: We recorded an asset impairment charge, primarily related to the write-off of goodwill and intangible assets, in conjunction with the consolidation of two manufacturing plants during the twelve months ended December 31, 2017. We recorded an impairment charge related to a minority interest investment in a privately held company during the twelve months ended December 31, 2016.

Note 9: We recorded a gain on the sale of our Data Analytics Solutions business during the twelve months ended December 31, 2017.

Note 10: We recorded net proceeds from a Company owned life insurance policy during the twelve months ended December 31, 2016.

Note 11: We recorded taxes related to the sale of our Data Analytics Solutions business during the twelve months ended December 31, 2017.

Note 12: We recorded a windfall tax benefit on the vesting of stock-based compensation relating to the implementation of a new accounting standard issued by the Financial Statement Accounting Standards Board (Accounting Standards Update 2016-09) during the twelve months ended December 31, 2017.

Note 13: We recorded a withholding tax on intercompany dividends during the twelve months ended December 31, 2016.

Note 14: We recorded a tax benefit related to a legal entity restructuring during the twelve months ended December 31, 2016.

Note 15*: We recorded a deferred tax adjustment, which also includes the reversal of a tax accrual on a French dividend, related to the 2017 Tax Cut and Jobs Act during the twelve months ended December 31, 2017.

Note 16*: We recorded a transition tax on accumulated foreign earnings related to the 2017 Tax Cut and Jobs Act during the twelve months ended December 31, 2017.

Note 17*: We recorded an accrual for tax expense on a potential distribution to a subsidiary, related to the 2017 Tax Cut and Jobs Act during the twelve months ended December 31, 2017.

*The computation of the one-time tax on our offshore earnings pursuant to the 2017 Tax Cut and Jobs Act (the "Tax Act") as well as our net deferred tax liability is based on our current understanding and assumptions regarding the impact of the Tax Act, and may change as additional clarification and implementation guidance is issued and as the interpretation of the Tax Act evolves over time.

MKS Instruments, Inc.
Unaudited Consolidated Statements of Cash Flows
(In thousands, except per share data)

	Three Months Ended		
	December 31, 2017	December 31, 2016	September 30, 2017
Cash flows from operating activities:			
Net income	\$ 77,638	\$ 45,487	\$ 75,994
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	20,006	22,169	20,130
Amortization of debt issuance costs and original issue discount	4,314	2,812	2,643
Stock-based compensation	4,544	5,402	4,845
Provision for excess and obsolete inventory	4,864	4,994	4,347
Provision for doubtful accounts	175	943	139
Deferred income taxes	(16,528)	(29,255)	(1,157)
Excess tax benefit from stock-based compensation	—	(790)	—
Asset impairment	—	5,000	—
Other	(7)	131	36
Changes in operating assets and liabilities	(14,220)	(4,172)	(8,014)
Net cash provided by operating activities	<u>80,786</u>	<u>52,721</u>	<u>98,963</u>
Cash flows from investing activities:			
Purchases of investments	(30,545)	(152,383)	(129,430)
Sales of investments	9,993	1,404	18,252
Maturities of investments	40,563	12,311	31,545
Purchases of property, plant and equipment	(13,431)	(7,164)	(8,118)
Other	66	232	—
Net cash provided by (used in) investing activities	<u>6,646</u>	<u>(145,600)</u>	<u>(87,751)</u>
Cash flows from financing activities:			
Restricted cash	(177)	316	5,163
Payments of short-term borrowings	(16,435)	(3,453)	(4,020)
Proceeds from short and long-term borrowings	15,394	4,438	4,522
Payments of long-term borrowings	(50,000)	(41,570)	(125,000)
Dividend payments	(9,775)	(9,112)	(9,500)
Excess tax benefit from stock-based compensation	—	790	—
Net proceeds related to employee stock awards	2,504	1,186	(1,306)
Net cash used in financing activities	<u>(58,489)</u>	<u>(47,405)</u>	<u>(103,141)</u>
Effect of exchange rate changes on cash and cash equivalents	(1,152)	2,033	2,076
Increase (decrease) in cash and cash equivalents	27,791	(138,251)	(116,853)
Cash and cash equivalents at beginning of period	<u>305,977</u>	<u>366,874</u>	<u>422,830</u>
Cash and cash equivalents at end of period	<u>\$333,768</u>	<u>\$ 228,623</u>	<u>\$ 305,977</u>

MKS Instruments, Inc.
Unaudited Consolidated Statements of Cash Flows
(In thousands, except per share data)

	Twelve Months Ended	
	December 31, 2017	December 31, 2016
Cash flows from operating activities:		
Net income	\$ 339,132	\$ 104,809
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	82,556	65,926
Amortization of inventory step-up adjustment to fair value	—	15,090

Amortization of debt issuance costs and original issue discount	10,699	9,265
Stock-based compensation	24,378	25,228
Provision for excess and obsolete inventory	20,213	16,039
Provision for doubtful accounts	825	1,109
Deferred income taxes	(9,886)	(38,822)
Excess tax benefit from stock-based compensation	—	(1,468)
Asset impairment	6,719	5,000
Gain on sale of business	(74,856)	—
Other	824	256
Changes in operating assets and liabilities	(45,382)	(22,334)
Net cash provided by operating activities	<u>355,222</u>	<u>180,098</u>
Cash flows from investing activities:		
Net proceeds from the sale of business	72,509	—
Acquisition of businesses, net of cash acquired	—	(939,591)
Purchases of investments	(229,557)	(268,458)
Sales of investments	53,564	338,996
Maturities of investments	157,342	160,917
Purchases of property, plant and equipment	(31,287)	(19,123)
Other	66	273
Net cash provided by (used in) investing activities	<u>22,637</u>	<u>(726,986)</u>
Cash flows from financing activities:		
Restricted cash	4,835	(5,860)
Payments of short-term borrowings	(29,711)	(11,742)
Proceeds from short-term borrowings	28,360	18,964
Payments of long-term borrowings	(228,141)	(153,395)
Proceeds from long-term borrowings	191	744,653
Repurchases of common stock	—	(1,545)
Dividend payments	(38,178)	(36,361)
Excess tax benefit from stock-based compensation	—	1,468
Net proceeds related to employee stock awards	(12,215)	(1,922)
Net cash (used in) provided by financing activities	<u>(274,859)</u>	<u>554,260</u>
Effect of exchange rate changes on cash and cash equivalents	2,145	(6,323)
Increase in cash and cash equivalents	<u>105,145</u>	<u>1,049</u>
Cash and cash equivalents at beginning of year	<u>228,623</u>	<u>227,574</u>
Cash and cash equivalents at end of year	<u>\$ 333,768</u>	<u>\$ 228,623</u>

MKS Instruments, Inc.
Reconciliation of GAAP Income Tax Rate to Non-GAAP Income Tax Rate
(In thousands)

	Three Months Ended December 31, 2017			Three Months Ended September 30, 2017		
	Income Before Income Taxes	Provision (benefit) for Income Taxes	Effective Tax Rate	Income Before Income Taxes	Provision (benefit) for Income Taxes	Effective Tax Rate
GAAP	\$ 110,997	\$ 33,359	30.1%	\$ 101,371	\$ 25,377	25.0%
Adjustments:						
Acquisition and integration costs (Note 1)	634	—		2,466	—	
Fees and expenses relating to re-pricing of term loan (Note 5)	—	—		492	—	
Amortization of debt issuance costs (Note 6)	3,983	—		2,314	—	
Restructuring (Note 7)	1,324	—		10	—	
Amortization of intangible assets	10,797	—		10,977	—	
Windfall tax benefit on stock-based compensation (Note 10)	—	658		—	594	
Deferred tax adjustment (Note 15)	—	24,546		—	—	
Transition tax on accumulated foreign earnings (Note 16)	—	(28,658)		—	—	
Accrued tax on MKS subsidiary distribution (Note 17)	—	(14,000)		—	—	
Tax adjustment related to the sale	—	12,131		—	—	

of a business (Note 11)						
Tax effect of pro-forma adjustments	—	5,083		—	5,789	
Non-GAAP	<u>\$ 127,735</u>	<u>\$ 33,119</u>	25.9%	<u>\$ 117,630</u>	<u>\$ 31,760</u>	27.0%

Three Months Ended December 31, 2016

	Income Before Income Taxes	Provision (benefit) for Income Taxes	Effective Tax Rate
GAAP	\$ 49,556	\$ 4,069	8.2%
Adjustments:			
Acquisition and integration costs (Note 1)	2,089	—	
Fees and expenses relating to re-pricing of term loan (Note 5)	526	—	
Amortization of debt issuance costs (Note 6)	2,430	—	
Restructuring (Note 7)	618	—	
Asset impairment (Note 8)	5,000	—	
Amortization of intangible assets	12,691	—	
Taxes related to a legal entity restructuring (Note 13)	—	6,570	
Withholding tax on dividends (Note 14)	—	(1,362)	
Tax effect of pro-forma adjustments	—	6,437	
Non-GAAP	<u>\$ 72,910</u>	<u>\$ 15,714</u>	21.6%

Twelve Months Ended December 31, 2017

Twelve Months Ended December 31, 2016

	Income Before Income Taxes	Provision (benefit) for Income Taxes	Effective Tax Rate	Income Before Income Taxes	Provision (benefit) for Income Taxes	Effective Tax Rate
GAAP	\$ 447,625	\$ 108,493	24.2%	\$ 127,977	\$ 23,168	18.1%
Adjustments:						
Acquisition and integration costs (Note 1)	5,332	—		27,279	—	
Acquisition inventory step-up (Note 2)	—	—		15,090	—	
Expenses related to the sale of a business (Note 3)	859	—		—	—	
Excess and obsolete inventory charge (Note 4)	1,160	—		—	—	
Fees and expenses relating to re-pricing of term loan (Note 5)	492	—		1,239	—	
Amortization of debt issuance costs (Note 6)	9,405	—		6,897	—	
Restructuring (Note 7)	3,920	—		642	—	
Asset impairment (Note 8)	6,719	—		5,000	—	
Gain on sale of business (Note 9)	(74,856)	—		—	—	
Amortization of intangible assets	45,743	—		35,681	—	
Windfall tax benefit on stock-based compensation (Note 10)	—	11,071		—	—	
Taxes related to the sale of a business (Note 11)	—	(2,876)		—	—	
Net proceeds from an insurance policy (Note 12)	—	—		(1,323)	—	
Taxes related to a legal entity restructuring (Note 13)	—	—		—	5,038	
Withholding tax on dividends (Note 14)	—	—		—	(1,362)	
Deferred tax adjustment (Note 15)	—	24,546		—	—	
Transition tax on accumulated foreign	—	(28,658)		—	—	

earnings (Note 16)						
Accrued tax on MKS subsidiary distribution (Note 17)	—	(14,000)		—	—	
Tax effect of pro-forma adjustments	—	19,639		—	27,617	
Non-GAAP	<u>\$ 446,399</u>	<u>\$ 118,215</u>	26.5%	<u>\$ 218,482</u>	<u>\$ 54,461</u>	24.9%

Note 1: Acquisition and integration costs during the three and twelve months ended December 31, 2017 and 2016 relate to the Newport Corporation acquisition, which closed during the second quarter of 2016.

Note 2: We recorded a charge in cost of sales related to the step-up of inventory to fair value as a result of the Newport Corporation acquisition, during the twelve months ended December 31, 2016.

Note 3: We recorded expenses related to the sale of a business, which was completed in April of 2017, during the twelve months ended December 31, 2017.

Note 4: We recorded excess and obsolete inventory charges in cost of sales related to the discontinuation of a product line in connection with the consolidation of two manufacturing plants, during the twelve months ended December 31, 2017.

Note 5: We recorded fees and expenses related to the re-pricing of our Term Loan Credit Agreement, during the three months ended September 30, 2017 and December 31, 2016 and the twelve months ended December 31, 2017 and 2016.

Note 6: Amortization of debt issuance costs are affiliated with our Term Loan Credit Agreement and ABL Facility.

Note 7: We recorded restructuring costs primarily related to the consolidation of two manufacturing plants and costs related to a restructuring of one of our international facilities and the consolidation of sales offices during the three and twelve months ended December 31, 2017. We recorded restructuring costs related to the restructuring of one of our international facilities during the twelve months ended December 31, 2016.

Note 8: We recorded an asset impairment charge, during the twelve months ended December 31, 2017, primarily related to the write-off of goodwill and intangible assets, in conjunction with the consolidation of two manufacturing plants. We recorded an impairment charge during the three and twelve months ended December 31, 2016, related to a minority interest investment in a privately held company.

Note 9: We recorded a gain on the sale of our Data Analytics Solutions business during the twelve months ended December 31, 2017.

Note 10: We recorded a windfall tax benefit on the vesting of stock-based compensation, relating to the implementation of a new accounting standard issued by the Financial Statement Accounting Standards Board (Accounting Standards Update 2016-09).

Note 11: We recorded taxes related to the sale of our Data Analytics Solutions business during the twelve months ended December 31, 2017. The three months ended December 31, 2017 includes a tax adjustment related to the sale of our Data Analytics Solutions business resulting from U.S. tax reform legislation.

Note 12: We recorded net proceeds from a Company owned life insurance policy during the twelve months ended December 31, 2016.

Note 13: We recorded a tax expense related to a legal entity restructuring during the twelve months ended December 31, 2016.

Note 14: We recorded withholding tax on intercompany dividends during the three and twelve months ended December 31, 2016.

Note 15*: We recorded a deferred tax adjustment, which also includes the reversal of a tax accrual on a French dividend, related to the 2017 Tax Cut and Jobs Act during the three and twelve months ended December 31, 2017.

Note 16*: We recorded a transition tax on accumulated foreign earnings related to the 2017 Tax Cut and Jobs Act during the three and twelve months ended December 31, 2017.

Note 17*: We recorded an accrual for tax expense on a potential distribution to a subsidiary, related to the 2017 Tax Cut and Jobs Act during the three and twelve months ended December 31, 2017.

*The computation of the one-time tax on our offshore earnings pursuant to the 2017 Tax Cut and Jobs Act (the "Tax Act") as well as our net deferred tax liability is based on our current understanding and assumptions regarding the impact of the Tax Act, and may change as additional clarification and implementation guidance is issued and as the interpretation of the Tax Act evolves over time.

MKS Instruments, Inc.
Reconciliation of Q1-18 Guidance — GAAP Net Income to Non-GAAP Net Earnings
(In thousands, except per share data)

	Three Months Ended March 31, 2018			
	Low Guidance		High Guidance	
	\$ Amount	\$ Per Share	\$ Amount	\$ Per Share
GAAP net income	\$ 93,200	\$ 1.68	\$ 108,100	\$ 1.95
Amortization	11,000	0.20	11,000	0.20
Deferred financing costs	900	0.02	900	0.02
Tax effect of adjustments (Note 1)	(2,200)	(0.04)	(2,300)	(0.04)
Non-GAAP net earnings	<u>\$ 102,900</u>	<u>\$ 1.86</u>	<u>\$ 117,700</u>	<u>\$ 2.12</u>
Q1 – 18 forecasted shares		55,400		55,400

Note 1: The Non-GAAP adjustments are tax effected at the applicable statutory rates and the difference between the GAAP and Non-GAAP tax rates.

MKS Instruments, Inc.
Unaudited Consolidated Balance Sheet
(In thousands)

	December 31, 2017	December 31, 2016
ASSETS		
Cash and cash equivalents	\$ 333,768	\$ 228,623
Restricted cash	119	5,287
Short-term investments	209,434	189,463
Trade accounts receivable, net	300,308	248,757
Inventories	339,081	275,869
Other current assets	53,543	50,770
Total current assets	1,236,253	998,769
Property, plant and equipment, net	171,782	174,559
Goodwill	591,047	588,585
Intangible assets, net	366,398	408,004
Long-term investments	10,655	9,858
Other assets	37,883	32,467
Total assets	\$2,414,018	\$2,212,242
LIABILITIES AND STOCKHOLDERS' EQUITY		
Short-term debt	\$ 2,972	\$ 10,993
Accounts payable	82,518	69,337
Accrued compensation	96,147	67,728
Income taxes payable	25,106	22,794
Deferred revenue	12,842	14,463
Other current liabilities	73,945	51,985
Total current liabilities	293,530	237,300
Long-term debt, net	389,993	601,229
Non-current deferred taxes	56,516	66,446
Non-current accrued compensation	51,700	44,714
Other liabilities	33,372	20,761
Total liabilities	825,111	970,450
Stockholders' equity:		
Common stock	113	113
Additional paid-in capital	789,644	777,482
Retained earnings	795,698	494,744
Accumulated other comprehensive loss	3,452	(30,547)
Total stockholders' equity	1,588,907	1,241,792
Total liabilities and stockholders' equity	\$2,414,018	\$2,212,242