MOOG INC.
Form 10-Q
July 28, 2017
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

(Mark One)
ý QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended July 1, 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: 1-05129

INC.
(Exact name of registrant as specified in its charter)

New York State	16-0757636
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
East Aurora, New York	14052-0018
(Address of principal executive offices)	(Zip Code)

(716) 652-2000
(Telephone number including area code)

Former name, former address and former fiscal year, if changed since last report.

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 ý 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 ý No ¨

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

Large accelerated filer ý Accelerated filer ¨ Non-accelerated filer ¨ (Do not check if smaller reporting company)
Smaller reporting company ¨ Emerging growth company ¨

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for the 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 ý

The number of shares outstanding of each class of common stock as of July 24, 2017 was:
Class A common stock, $1.00 par value, 32,299,502 shares
Class B common stock, $1.00 par value, 3,512,203 shares

Moog Inc.
QUARTERLY REPORT ON FORM 10-Q
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PART I FINANCIAL INFORMATION
Item 1. Financial Statements
Moog Inc.
Consolidated Condensed Statements of Earnings
(Unaudited)

(dollars in thousands, except per share data)	Three Months Ended July 1, 2017	Three Months Ended July 2, 2016	Nine Months Ended July 1, 2017	Nine Months Ended July 2, 2016
Net sales	$626,183	$613,260	$1,848,256	$1,792,859
Cost of sales	443,769	429,598	1,308,256	1,268,550
Gross profit	182,414	183,662	540,000	524,309
Research and development	36,314	36,006	107,828	110,535
Selling, general and administrative	89,144	88,553	261,271	254,318
Interest	8,654	8,662	25,789	25,919
Restructuring	—	(39)	—	8,303
Other	29	(1,082)	12,148	(2,600)
Earnings before income taxes	48,273	51,562	132,964	127,834
Income taxes	8,185	15,916	31,156	35,121
Net earnings attributable to Moog and noncontrolling interest	40,088	35,646	101,808	92,713
Net earnings (loss) attributable to noncontrolling interest	—	(665)	(870)	(889)
Net earnings attributable to Moog	$40,088	$36,311	$102,678	$93,602
Net earnings per share attributable to Moog				
Basic	$1.12	$1.01	$2.86	$2.57
Diluted	$1.11	$1.00	$2.83	$2.55
Average common shares outstanding				
Basic	35,847,842	36,038,340	35,868,315	36,411,428
Diluted	36,212,779	36,267,975	36,240,794	36,663,165

See accompanying Notes to Consolidated Condensed Financial Statements.

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Moog Inc.
Consolidated Condensed Statements of Comprehensive Income (Loss)
(Unaudited)

(dollars in thousands)	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Net earnings attributable to Moog and noncontrolling interest	$40,088	$35,646	$101,808	$92,713
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustment	32,805	(25,439)	3,991	(33,683)
Retirement liability adjustment	3,566	5,313	17,609	14,396
Change in accumulated income (loss) on derivatives	1,013	(2,327)	2,833	(1,396)
Other comprehensive income (loss), net of tax	37,384	(22,453)	24,433	(20,683)
Comprehensive income (loss)	77,472	13,193	126,241	72,030
Comprehensive income (loss) attributable to noncontrolling interest	—	(665)	(870)	(889)
Comprehensive income (loss) attributable to Moog	$77,472	$13,858	$127,111	$72,919

See accompanying Notes to Consolidated Condensed Financial Statements.

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Moog Inc.
Consolidated Condensed Balance Sheets
(Unaudited)

(dollars in thousands)	July 1, 2017	October 1, 2016
ASSETS		
Current assets		
Cash and cash equivalents	$344,541	$325,128
Receivables	677,918	688,388
Inventories	475,050	479,040
Prepaid expenses and other current assets	41,418	34,688
Total current assets	1,538,927	1,527,244
Property, plant and equipment, net of accumulated depreciation of $758,415 and $725,809, respectively	510,536	522,369
Goodwill	768,581	740,162
Intangible assets, net	111,900	113,560
Deferred income taxes	59,879	75,800
Other assets	29,994	25,839
Total assets	$3,019,817	$3,004,974
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities		
Short-term borrowings	$120,089	$1,379
Current installments of long-term debt	323	167
Accounts payable	155,492	144,450
Accrued salaries, wages and commissions	130,294	126,319
Customer advances	162,332	167,514
Contract loss reserves	37,093	32,543
Other accrued liabilities	100,486	116,577
Total current liabilities	706,109	588,949
Long-term debt, excluding current installments	836,101	1,004,847
Long-term pension and retirement obligations	352,361	401,747
Deferred income taxes	13,515	11,026
Other long-term liabilities	3,807	4,343
Total liabilities	1,911,893	2,010,912
Commitments and contingencies (Note 17)	—	—
Redeemable noncontrolling interest	—	5,651
Shareholders' equity		
Common stock - Class A	43,695	43,667
Common stock - Class B	7,585	7,613
Additional paid-in capital	479,712	465,762
Retained earnings	1,809,217	1,706,539
Treasury shares	(739,412)	(741,700)
Stock Employee Compensation Trust	(71,445)	(49,463)
Supplemental Retirement Plan Trust	(10,800)	(8,946)
Accumulated other comprehensive loss	(410,628)	(435,061)
Total Moog shareholders' equity	1,107,924	988,411
Total liabilities and shareholders' equity	$3,019,817	$3,004,974

See accompanying Notes to Consolidated Condensed Financial Statements.

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Moog Inc.
Consolidated Condensed Statements of Shareholders' Equity
(Unaudited)

(dollars in thousands, except per share data)	Amount	Number of Shares Class A Common Stock	Class B Common Stock
COMMON STOCK			
Beginning of period	$51,280	43,666,801	7,612,912
Conversion of Class B to Class A	—	28,317	(28,317)
End of period	51,280	43,695,118	7,584,595
ADDITIONAL PAID-IN CAPITAL			
Beginning of period	465,762		
Issuance of treasury shares	(5,867)		
Equity-based compensation expense	4,151		
Redemption of noncontrolling interest	3,125		
Adjustment to market - SECT, SERP and other	12,541		
End of period	479,712		
RETAINED EARNINGS			
Beginning of period	1,706,539		
Net earnings attributable to Moog	102,678		
End of period	1,809,217		
TREASURY SHARES AT COST			
Beginning of period	(741,700)	(11,110,087)	(3,323,926)
Class A and B shares issued related to equity awards	8,002	197,461	6,696
Class A and B shares purchased	(5,714)	(67,974)	(17,190)
End of period	(739,412)	(10,980,600)	(3,334,420)
STOCK EMPLOYEE COMPENSATION TRUST (SECT)			
Beginning of period	(49,463)	(425,148)	(404,919)
Issuance of shares	867	—	15,000
Purchase of shares	(12,162)	—	(178,882)
Adjustment to market	(10,687)	—	—
End of period	(71,445)	(425,148)	(568,801)
SUPPLEMENTAL RETIREMENT PLAN (SERP) TRUST			
Beginning of period	(8,946)		(150,000)
Adjustment to market	(1,854)		—
End of period	(10,800)		(150,000)
ACCUMULATED OTHER COMPREHENSIVE LOSS			
Beginning of period	(435,061)		
Other comprehensive income (loss)	24,433		
End of period	(410,628)		
TOTAL MOOG SHAREHOLDERS’ EQUITY	$1,107,924	32,289,370	3,531,374
REDEEMABLE NONCONTROLLING INTEREST			
Beginning of period	$5,651		
Net loss attributable to redeemable noncontrolling interest	(870)		
Acquisition of noncontrolling interest	(4,781)		
End of period	$—		

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Moog Inc.
Consolidated Condensed Statements of Cash Flows
(Unaudited)

(dollars in thousands)	Nine Months Ended July 1, 2017	July 2, 2016
CASH FLOWS FROM OPERATING ACTIVITIES		
Net earnings attributable to Moog and noncontrolling interest	$101,808	$92,713
Adjustments to reconcile net earnings to net cash provided (used) by operating activities:		
Depreciation	53,027	58,674
Amortization	14,078	16,485
Deferred income taxes	2,968	7,765
Equity-based compensation expense	4,151	2,794
Other	15,493	6,967
Changes in assets and liabilities providing (using) cash:		
Receivables	176	43,214
Inventories	3,786	(9,959)
Accounts payable	11,312	(16,456)
Customer advances	(3,097)	9,689
Accrued expenses	(180)	(7,106)
Accrued income taxes	(2,767)	686
Net pension and post retirement liabilities	(25,982)	(38,828)
Other assets and liabilities	(5,449)	(5,858)
Net cash provided by operating activities	169,324	160,780
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisitions of businesses, net of cash acquired	(40,545)	(11,016)
Purchase of property, plant and equipment	(45,349)	(42,605)
Other investing transactions	3,031	1,164
Net cash (used) by investing activities	(82,863)	(52,457)
CASH FLOWS FROM FINANCING ACTIVITIES		
Net short-term repayments	(1,280)	—
Proceeds from revolving lines of credit	185,045	274,670
Payments on revolving lines of credit	(235,045)	(261,570)
Proceeds from long-term debt	—	20,000
Payments on long-term debt	(133)	(10,047)
Proceeds from sale of treasury stock	2,135	2,229
Purchase of outstanding shares for treasury	(5,714)	(42,203)
Proceeds from sale of stock held by SECT	867	2,897
Purchase of stock held by SECT	(12,162)	(1,634)
Purchase of stock held by SERP Trust	—	(2,300)
Excess tax benefits from equity-based payment arrangements	—	442
Other financing transactions	(1,656)	(1,909)
Net cash (used) by financing activities	(67,943)	(19,425)
Effect of exchange rate changes on cash	895	(4,322)
Increase in cash and cash equivalents	19,413	84,576
Cash and cash equivalents at beginning of period	325,128	309,853
Cash and cash equivalents at end of period	$344,541	$394,429

See accompanying Notes to Consolidated Condensed Financial Statements.

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Moog Inc.
Notes to Consolidated Condensed Financial Statements
Nine Months Ended July 1, 2017
(Unaudited)
(dollars in thousands, except per share data)

Note 1 - Basis of Presentation

The accompanying unaudited consolidated condensed financial statements have been prepared by management in accordance with U.S. generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. In the opinion of management, all adjustments consisting of normal recurring adjustments considered necessary for the fair presentation of results for the interim period have been included. The results of operations for the three and nine months ended July 1, 2017 are not necessarily indicative of the results expected for the full year. The accompanying unaudited consolidated condensed financial statements should be read in conjunction with the financial statements and notes thereto included in our Form 10-K for the fiscal year ended October 1, 2016. All references to years in these financial statements are to fiscal years.

Certain prior year amounts have been reclassified to conform to current year's presentation. Refer to the following table for a summary of ASUs we adopted during 2017 and the related financial statement impact. During 2016, we made a change to our segment reporting to include Medical Devices within our Components segment and Linear within Space and Defense Controls. The Segment footnote has been restated to reflect these changes.

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Recent Accounting Pronouncements Adopted

Standard	Description	Financial Statement Effect or Other Significant Matters
ASU no. 2015-03 Presentation of Debt Issuance Costs (And All Related ASUs)	This standard requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. The provisions of this standard and all subsequently issued guidance are effective for fiscal years beginning after December 15, 2015 and interim periods within those fiscal years. Early adoption is permitted and retrospective application is required.	We adopted this standard on a retrospective basis, resulting in the reclassification of $5,457 of debt issuance costs as of October 1, 2016 previously reported as Other Assets in our balance sheet to Long Term Debt, excluding current installments. Date adopted: Q1 2017
ASU no. 2015-17 Balance Sheet Classification of Deferred Taxes	The standard amends existing guidance to require presentation of deferred tax assets and liabilities as noncurrent within the balance sheet. The provisions of the standard are effective for fiscal years beginning after December 15, 2016 and interim periods within those fiscal years. Early adoption is permitted and may be applied either prospectively or retrospectively.	We adopted this standard on a retrospective basis, resulting in the reclassification of a net $92,620 of previously reported current deferred income tax assets and liabilities as of October 1, 2016 to the appropriate long term deferred income tax classification based upon the net tax position within each of our relevant taxing jurisdictions. Date early adopted: Q1 2017
ASU no. 2016-09 Improvements to Employee Share-Based Payment Accounting	This standard simplifies several aspects of the accounting for share-based payment transactions, including income tax consequences, statement of cash flows classifications, share repurchases relating to tax withholdings and forfeiture accounting. The provisions of this standard are effective for fiscal years beginning after December 15, 2016 and interim periods within those fiscal years.	We adopted this standard on a prospective basis and as a result prior periods have not been adjusted. Going forward, recognized excess tax benefits previously reported as part of additional paid-in capital in our balance sheet will be included as part of income tax expense in our income statement. Additionally, cash flow relating to these excess tax benefits previously reported as a financing activity will be included as an operating activity. Date early adopted: Q1 2017
ASU no. 2016-18 Statement of Cash Flows Restricted Cash	This standard amends existing guidance to require that the Statement of Cash Flows explain the change during the period in cash, cash equivalents and restricted cash. Amounts described as restricted cash are now included, along with cash and cash equivalents, when reconciling beginning-of-period and end-of-period amounts shown on the Statement of Cash Flows. The provisions of the standard are effective for fiscal years beginning after December	We adopted this standard on a retrospective basis, resulting in restricted cash of $37,366 as of April 1, 2017 being included, along with cash and cash equivalents, when reconciling beginning-of-period and end-of-period amounts shown on the Statement of Cash Flows. There were no changes required to prior periods. Restricted cash as of July 1, 2017 was not material.

15, 2017 and interim periods within those fiscal years. Early adoption is permitted, but requires retrospective application in the fiscal year adopted.	Date early adopted: Q2 2017

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Recent Accounting Pronouncements Not Yet Adopted

Standard	Description	Financial Statement Effect or Other Significant Matters
ASU no. 2014-09 Revenue from Contracts with Customers (And All Related ASUs)	The standard requires revenue recognition to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard also requires additional disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and assets recognized from costs incurred to obtain or fulfill a contract. The provisions of the standard, as well as all subsequently issued clarifications to the standard, are effective for fiscal years beginning after December 15, 2017 and interim periods within those fiscal years. The standard can be adopted using either a full retrospective or modified retrospective approach.	We are currently evaluating the alternative methods of adoption and the effect on our financial statements and related disclosures. Planned date of adoption: Q1 2019
ASU no. 2016-01 Recognition and Measurement of Financial Assets and Financial Liabilities	The standard requires most equity investments to be measured at fair value, with subsequent changes in fair value recognized in net income. The amendment also impacts the measurement of financial liabilities under the fair value option as well as certain presentation and disclosure requirements for financial instruments. The provisions of the standard are effective for fiscal years beginning after December 15, 2017 and interim periods within those fiscal years. Early adoption is permitted for some, but not all, provisions. The amendment requires certain provisions to be applied prospectively and others to be applied by means of a cumulative-effect adjustment.	We are currently evaluating the effect on our financial statements and related disclosures. Planned date of adoption: Q1 2019
ASU no. 2016-02 Leases (And All Related ASUs)	The standard requires most lease arrangements to be recognized in the balance sheet as lease assets and lease liabilities. The standard also requires additional disclosures about the leasing arrangements. The provisions of the standard are effective for fiscal years beginning after December 15, 2018 and interim periods within those years. Early adoption is permitted.	We are currently evaluating the effect on our financial statements and related disclosures. Planned date of adoption: Q1 2020
ASU no. 2017-07 Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost	The standard amends existing guidance on the presentation of net periodic benefit cost in the income statement and what qualifies for capitalization on the balance sheet. The provisions of the standard are effective for fiscal years beginning after December 15, 2017 and interim periods within those fiscal years. Early adoption is permitted as of the beginning of an annual period. The amendment requires income statement presentation provisions to be applied retrospectively and capitalization in assets provisions to be applied prospectively.	We are currently evaluating the effect on our financial statements and related disclosures. Planned date of adoption: Q1 2019

We consider the applicability and impact of all ASUs. ASUs not listed above were assessed and determined to be either not applicable, or had or are expected to have minimal impact on our financial statements and related

disclosures.

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Note 2 - Acquisitions, Divestitures and Assets Held for Sale

In 2016, we acquired a 70% ownership in Linear Mold and Engineering, a Livonia, Michigan-based company specializing in metal additive manufacturing that provides engineering, manufacturing and production consulting services to customers across a wide range of industries, including aerospace, defense, energy and industrial. The purchase price, net of acquired cash, was $22,765 consisting of $11,016 in cash, issuance of a $1,280 unsecured note and assumption of $10,469 of debt. This acquisition is included in our Space and Defense Controls segment. On January 25, 2017, we acquired the remaining 30% redeemable noncontrolling interest for $1,656 in cash, which is reflected in additional paid-in capital.

In 2017, we recorded losses in other expense of $13,496 related to selling non-core businesses of our Space and Defense Controls segment. We received $4,498 in cash and recorded a receivable of $1,152 for a working capital adjustment. We also reclassified $4,750 in other current assets and $509 in other current liabilities as held for sale. We completed the sale of the held for sale portion of these businesses on July 19, 2017.

On April 2, 2017, we acquired Rotary Transfer Systems, a manufacturer of electromechanical systems, located in Germany and France for a purchase price, net of acquired cash, of $42,593, consisting of $40,545 in cash and $2,048 in assumed pension obligations. This operation is included in our Components segment. The purchase price allocation is subject to adjustments as we obtain additional information for our estimates during the measurement period.

Note 3 - Receivables

Receivables consist of:

	July 1, 2017	October 1, 2016
Accounts receivable	$298,423	$306,469
Long-term contract receivables:		
Amounts billed	110,068	130,429
Unbilled recoverable costs and accrued profits	258,442	245,376
Total long-term contract receivables	368,510	375,805
Other	15,374	10,652
Total receivables	682,307	692,926
Less allowance for doubtful accounts	(4,389)	(4,538)
Receivables	$677,918	$688,388

We securitize certain trade receivables in transactions that are accounted for as secured borrowings (Securitization Program). We maintain a subordinated interest in a portion of the pool of trade receivables that are securitized. The retained interest, which is included in Receivables in the consolidated condensed balance sheets, is recorded at fair value, which approximates the total amount of the designated pool of accounts receivable. Refer to Note 6, Indebtedness, for additional disclosures related to the Securitization Program.

Note 4 - Inventories

Inventories, net of reserves, consist of:

	July 1, 2017	October 1, 2016
Raw materials and purchased parts	$177,344	$174,331
Work in progress	225,898	235,258
Finished goods	71,808	69,451
Inventories	$475,050	$479,040

There are no material inventoried costs relating to long-term contracts where revenue is accounted for using the percentage of completion, cost-to-cost method of accounting as of July 1, 2017 or October 1, 2016.

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Note 5 - Goodwill and Intangible Assets

The changes in the carrying amount of goodwill are as follows:

	Aircraft Controls	Space and Defense Controls	Industrial Systems	Components	Total
Balance at October 1, 2016	$179,694	$174,514	$106,318	$279,636	$740,162
Acquisitions	—	—	—	27,429	27,429
Divestitures and held for sale	—	(1,914)	—	—	(1,914)
Foreign currency translation	189	(180)	434	2,461	2,904
Balance at July 1, 2017	$179,883	$172,420	$106,752	$309,526	$768,581

Goodwill in our Space and Defense Controls segment is net of a $4,800 accumulated impairment loss at July 1, 2017. Goodwill in our Medical Devices reporting unit, included in our Components segment, is net of a $38,200 accumulated impairment loss at July 1, 2017.

The components of intangible assets are as follows:

		July 1, 2017		October 1, 2016	
	Weighted-Average Life (years)	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Customer-related	11	$173,812	$(123,934)	$165,445	$(117,434)
Technology-related	9	71,235	(53,868)	70,277	(52,060)
Program-related	19	64,964	(28,962)	64,774	(26,018)
Marketing-related	9	26,306	(18,716)	25,031	(17,649)
Other	10	4,371	(3,308)	4,269	(3,075)
Intangible assets	12	$340,688	$(228,788)	$329,796	$(216,236)

Substantially all acquired intangible assets other than goodwill are being amortized. Customer-related intangible assets primarily consist of customer relationships. Technology-related intangible assets primarily consist of technology, patents, intellectual property and software. Program-related intangible assets consist of long-term programs represented by current contracts and probable follow on work. Marketing-related intangible assets primarily consist of trademarks, trade names and non-compete agreements.

Amortization of acquired intangible assets was $4,680 and $13,880 for the three and nine months ended July 1, 2017 and $4,989 and $16,285 for the three and nine months ended July 2, 2016. Based on acquired intangible assets recorded at July 1, 2017, amortization is expected to be approximately $18,800 in 2017, $18,300 in 2018, $16,900 in 2019, $14,600 in 2020 and $9,200 in 2021.

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Note 6 - Indebtedness

Short-term borrowings consist of:

	July 1, 2017	October 1, 2016
Securitization program	$120,000	$ —
Lines of credit	89	99
Other short-term debt	—	1,280
Short-term borrowings	$120,089	$ 1,379

The Securitization Program matures on April 13, 2018 and effectively increases our borrowing capacity by up to $120,000. Under the Securitization Program, we sell certain trade receivables and related rights to an affiliate, which in turn sells an undivided variable percentage ownership interest in the trade receivables to a financial institution, while maintaining a subordinated interest in a portion of the pool of trade receivables. Interest for the Securitization Program is based on 30-day LIBOR plus an applicable margin. A commitment fee is also charged based on a percentage of the unused amounts available and is not material. The agreement governing the Securitization Program contains restrictions and covenants which include limitations on the making of certain restricted payments, creation of certain liens, and certain corporate acts such as mergers, consolidations and sale of substantially all assets. The Securitization Program has a minimum borrowing requirement equal to the lesser of either 80% of our borrowing capacity or 100% of our borrowing base, which is a subset of the trade receivables sold under this agreement. As of July 1, 2017, our minimum borrowing requirement was $96,000.

In addition to the Securitization Program, we maintain short-term line of credit facilities with banks throughout the world that are principally demand lines subject to revision by the banks.

Long-term debt consists of:

	July 1, 2017	October 1, 2016
U.S. revolving credit facility	$540,000	$590,000
Senior notes	300,000	300,000
Securitization program	—	120,000
Obligations under capital leases	340	471
Senior debt	840,340	1,010,471
Less deferred debt issuance cost	(3,916)	(5,457)
Less current installments	(323)	(167)
Long-term debt	$836,101	$1,004,847

Our U.S. revolving credit facility matures on June 28, 2021. Our U.S. revolving credit facility has a capacity of $1,100,000 and provides an expansion option, which permits us to request an increase of up to $200,000 to the credit facility upon satisfaction of certain conditions. The credit facility is secured by substantially all of our U.S. assets. The loan agreement contains various covenants which, among others, specify interest coverage and maximum leverage and capital expenditures. We are in compliance with all covenants.

At July 1, 2017, we had $300,000 aggregate principal amount of 5.25% senior notes due December 1, 2022 with interest paid semiannually on June 1 and December 1 of each year. The senior notes are unsecured obligations, guaranteed on a senior unsecured basis by certain subsidiaries and contain normal incurrence-based covenants and limitations such as the ability to incur additional indebtedness, pay dividends, make other restricted payments and investments, create liens and certain corporate acts such as mergers and consolidations.

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Note 7 - Product Warranties

In the ordinary course of business, we warrant our products against defects in design, materials and workmanship typically over periods ranging from twelve to sixty months. We determine warranty reserves needed by product line based on historical experience and current facts and circumstances. Activity in the warranty accrual is summarized as follows:

	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Warranty accrual at beginning of period	$23,272	$20,398	$21,363	$18,660
Additions from acquisitions	433	—	433	—
Warranties issued during current year	4,030	2,609	12,185	7,952
Adjustments to pre-existing warranties	(124)	(878)	(495)	(1,227)
Reductions for settling warranties	(4,046)	(1,898)	(9,509)	(4,946)
Foreign currency translation	420	(351)	8	(559)
Warranty accrual at end of period	$23,985	$19,880	$23,985	$19,880

Note 8 - Derivative Financial Instruments

We principally use derivative financial instruments to manage interest rate risk associated with long-term debt and foreign exchange risk related to foreign operations and foreign currency transactions. We enter into derivative financial instruments with a number of major financial institutions to minimize counterparty credit risk.

Derivatives designated as hedging instruments

Interest rate swaps are used to adjust the proportion of total debt that is subject to variable and fixed interest rates. The interest rate swaps are designated as hedges of the amount of future cash flows related to interest payments on variable-rate debt that, in combination with the interest payments on the debt, convert a portion of the variable-rate debt to fixed-rate debt. At July 1, 2017, we had interest rate swaps with notional amounts totaling $150,000. The interest rate swaps effectively convert this amount of variable-rate debt to fixed-rate debt at 2.62%, including the applicable margin of 1.38% as of July 1, 2017. The interest will revert back to variable rates based on LIBOR plus the applicable margin upon the maturity of the interest rate swaps. These interest rate swaps mature at various times through June 23, 2020.

We use foreign currency contracts as cash flow hedges to effectively fix the exchange rates on future payments and revenue. To mitigate exposure in movements between various currencies, including the Philippine peso and the British pound, we had outstanding foreign currency forwards with notional amounts of $53,438 at July 1, 2017. These contracts mature at various times through May 31, 2019.

These interest rate swaps and foreign currency contracts are recorded in the consolidated condensed balance sheets at fair value and the related gains or losses are deferred in shareholders' equity as a component of Accumulated Other Comprehensive Income (Loss) (AOCIL). These deferred gains and losses are reclassified into the consolidated condensed statements of earnings during the periods in which the related payments or receipts affect earnings. However, to the extent the interest rate swaps and foreign currency contracts are not perfectly effective in offsetting the change in the value of the payments and revenue being hedged, the ineffective portion of these contracts is recognized in earnings immediately. Ineffectiveness was not material in the first nine months of 2017 or 2016.

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Derivatives not designated as hedging instruments

We also have foreign currency exposure on balances, primarily intercompany, that are denominated in foreign currencies and are adjusted to current values using period-end exchange rates. The resulting gains or losses are recorded in the consolidated condensed statements of earnings. To minimize foreign currency exposure, we had foreign currency contracts with notional amounts of $114,827 at July 1, 2017. The foreign currency contracts are recorded in the consolidated condensed balance sheets at fair value and resulting gains or losses are recorded in the consolidated condensed statements of earnings. We recorded the following gains or losses on foreign currency contracts which are included in other income or expense and generally offset the gains or losses from the foreign currency adjustments on the intercompany balances that are also included in other income or expense:

	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Net gain (loss)	$(1,440)	$1,942	$(539)	$5,901

Summary of derivatives

The fair value and classification of derivatives is summarized as follows:

		July 1, 2017	October 1, 2016
Derivatives designated as hedging instruments:			
Foreign currency contracts	Other current assets	$460	$ 379
Foreign currency contracts	Other assets	22	56
Interest rate swaps	Other current assets	544	52
Interest rate swaps	Other assets	307	69
	Total asset derivatives	$1,333	$ 556
Foreign currency contracts	Other accrued liabilities	$1,455	$ 4,080
Foreign currency contracts	Other long-term liabilities	267	448
Interest rate swaps	Other accrued liabilities	39	201
Interest rate swaps	Other long-term liabilities	37	—
	Total liability derivatives	$1,798	$ 4,729
Derivatives not designated as hedging instruments:			
Foreign currency contracts	Other current assets	$954	$ 422
Foreign currency contracts	Other accrued liabilities	$282	$ 76

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Note 9 - Fair Value
Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Depending on the nature of the asset or liability, various techniques and assumptions can be used to estimate fair value. The definition of the fair value hierarchy is as follows:
Level 1 – Quoted prices in active markets for identical assets and liabilities.
Level 2 – Observable inputs other than quoted prices in active markets for similar assets and liabilities.
Level 3 – Inputs for which significant valuation assumptions are unobservable in a market and therefore value is based on the best available data, some of which is internally developed and considers risk premiums that a market participant would require.
Our derivatives are valued using various pricing models or discounted cash flow analyses that incorporate observable market data, such as interest rate yield curves and currency rates, and are classified as Level 2 within the valuation hierarchy.
The following table presents the fair values and classification of our financial assets and liabilities measured on a recurring basis, all of which are classified as Level 2.

	Classification	July 1, 2017	October 1, 2016
Foreign currency contracts	Other current assets	$1,414	$ 801
Foreign currency contracts	Other assets	22	56
Interest rate swaps	Other current assets	544	52
Interest rate swaps	Other assets	307	69
	Total assets	$2,287	$ 978
Foreign currency contracts	Other accrued liabilities	$1,737	$ 4,156
Foreign currency contracts	Other long-term liabilities	267	448
Interest rate swaps	Other accrued liabilities	39	201
Interest rate swaps	Other long-term liabilities	37	—
	Total liabilities	$2,080	$ 4,805

The carrying value of our financial instruments approximate their fair value, with the exception of our outstanding senior notes included in long-term debt. At July 1, 2017, the fair value of long-term debt was $851,567 compared to its carrying value of $840,339. The fair value of long-term debt is classified as Level 2 within the fair value hierarchy and was estimated based on quoted market prices.

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Note 10 - Employee Benefit Plans

Net periodic benefit costs for our defined benefit pension plans are as follows:

	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
U.S. Plans				
Service cost	$6,044	$5,909	$18,087	$17,728
Interest cost	7,659	9,415	22,930	28,244
Expected return on plan assets	(13,627)	(12,595)	(40,882)	(37,787)
Amortization of prior service cost (credit)	46	46	140	140
Amortization of actuarial loss	8,465	6,542	25,303	19,626
Pension expense for U.S. defined benefit plans	$8,587	$9,317	$25,578	$27,951
Non-U.S. Plans				
Service cost	$1,499	$1,357	$4,545	$3,995
Interest cost	794	1,245	2,291	3,711
Expected return on plan assets	(1,180)	(1,229)	(3,433)	(3,669)
Amortization of prior service cost (credit)	(26)	(20)	(80)	(58)
Amortization of actuarial loss	1,145	660	3,374	1,957
Curtailment gain	(150)	—	(150)	—
Pension expense for non-U.S. defined benefit plans	$2,082	$2,013	$6,547	$5,936

Pension expense for the defined contribution plans consists of:

	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
U.S. defined contribution plans	$3,926	$3,832	$11,182	$10,632
Non-U.S. defined contribution plans	1,534	1,496	4,366	4,605
Total pension expense for defined contribution plans	$5,460	$5,328	$15,548	$15,237

Actual contributions for the nine months ended July 1, 2017 and anticipated additional 2017 contributions to our defined benefit pension plans are as follows:

	U.S. Plans	Non-U.S. Plans	Total
Actual	$52,511	$ 5,595	$58,106
Anticipated	11,016	1,602	12,618
Total expected contributions	$63,527	$ 7,197	$70,724

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Note 11 - Restructuring

In 2016, we initiated restructuring actions in conjunction with exiting a product line within Aircraft Controls in the U.S. and a facility in the U.K. We have also taken actions as a result of the business outlook in specific markets and locations in Components and Industrial Systems. Those actions have resulted in workforce reductions in Canada, Europe and the U.S. for Components and will result in workforce reductions primarily in Europe for Industrial Systems.

Restructuring activity for severance and other costs by segment and reconciliation to consolidated amounts is as follows:

	Aircraft Controls	Space and Defense Controls	Industrial Systems	Components	Corporate	Total
Balance at October 1, 2016	$ 1,474	$ 665	$ 3,611	$ 369	$ 1,727	$ 7,846
Adjustments to provision	(832)	(47)	(732)	(3)	—	(1,614)
Cash payments - 2014 plan	(116)	(375)	—	—	—	(491)
Cash payments - 2015 plan	(210)	(176)	(20)	—	—	(406)
Cash payments - 2016 plan	(162)	—	(2,693)	(346)	(539)	(3,740)
Foreign currency translation	(28)	—	(6)	—	—	(34)
Balance at July 1, 2017	$ 126	$ 67	$ 160	$ 20	$ 1,188	$ 1,561

As of July 1, 2017, the restructuring accrual consists of $67 for the 2014 plan, $20 for the 2015 plan and $1,474 for the 2016 plan. Restructuring for all plans is expected to be paid by September 30, 2017, except portions classified as long-term liabilities based on payment arrangements.

Note 12 - Income Taxes

The effective tax rates for the three and nine months ended July 1, 2017 were 17.0% and 23.4%, respectively. The effective tax rate for these periods are lower than would be expected by applying the U.S. federal statutory tax rate to earnings before income taxes primarily from the tax benefits associated with divesting non-core businesses in Space and Defense Controls and the recognition and timing of U.S. tax incentives.

The effective tax rates for the three and nine months ended July 2, 2016 were 30.9% and 27.5%, respectively. The effective tax rate for these periods are lower than would be expected by applying the U.S. federal statutory tax rate to earnings before income taxes primarily due to a significant portion of our earnings that come from foreign operations with lower tax rates and the recognition and timing of U.S. research and development credits. In addition, we also benefited from the reversal of accruals for certain tax exposures outside the U.S. whose statues of limitations expired during these periods.

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Note 13 - Accumulated Other Comprehensive Income (Loss)

The changes in AOCIL, net of tax, by component for the nine months ended July 1, 2017 are as follows:

	Accumulated foreign currency translation	Accumulated retirement liability	Accumulated gain (loss) on derivatives	Total
AOCIL at October 1, 2016	$(110,626)	$(321,094)	$(3,341)	$(435,061)
Other comprehensive income (loss) before reclassifications	4,832	(312)	(976)	3,544
Amounts reclassified from AOCIL	(841)	17,921	3,809	20,889
Other comprehensive income (loss)	3,991	17,609	2,833	24,433
AOCIL at July 1, 2017	$(106,635)	$(303,485)	$(508)	$(410,628)

The amounts reclassified from AOCIL into earnings are as follows:

	Statement of earnings classification	Three Months Ended		Nine Months Ended	
		July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Retirement liability:					
Prior service cost		$22	$26	$61	$82
Actuarial losses		9,488	7,098	28,311	21,154
Curtailment		(150)	—	(150)	—
Reclassification from AOCIL into earnings		9,360	7,124	28,222	21,236
Tax effect		(3,450)	(2,610)	(10,301)	(7,798)
Net reclassification from AOCIL into earnings		$5,910	$4,514	$17,921	$13,438
Derivatives:					
Foreign currency contracts	Sales	$801	$206	$3,255	$480
Foreign currency contracts	Cost of sales	582	323	1,713	1,393
Interest rate swaps	Interest	20	154	198	624
Reclassification from AOCIL into earnings		1,403	683	5,166	2,497
Tax effect		(384)	(181)	(1,357)	(763)
Net reclassification from AOCIL into earnings		$1,019	$502	$3,809	$1,734

The amounts deferred in AOCIL are as follows:

	Statement of earnings classification	Net deferral in AOCIL - effective portion			
		Three Months Ended		Nine Months Ended	
		July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Foreign currency contracts	Sales	$246	$(2,946)	$(404)	$(3,461)
Foreign currency contracts	Cost of sales	(178)	(664)	(1,637)	(407)
Interest rate swaps	Interest	(151)	(140)	612	(52)
Net loss		(83)	(3,750)	(1,429)	(3,920)
Tax effect		77	921	453	790
Net deferral in AOCIL of derivatives		$(6)	$(2,829)	$(976)	$(3,130)

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Note 14 - Stock Employee Compensation Trust and Supplemental Retirement Plan Trust

The Stock Employee Compensation Trust (SECT) assists in administering and provides funding for equity-based compensation plans and benefit programs, including the Moog Inc. Retirement Savings Plan (RSP). The Supplemental Retirement Plan (SERP) Trust provides funding for benefits under the Moog Inc. SERP. Both the SECT and the SERP Trust hold shares as investments. The shares in the SECT and SERP Trust are not considered outstanding for purposes of calculating earnings per share. However, in accordance with the trust agreements governing the SECT and SERP Trust, the trustees vote all shares held by the SECT and SERP Trust on all matters submitted to shareholders.

Note 15 - Earnings per Share

Basic and diluted weighted-average shares outstanding are as follows:

	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Basic weighted-average shares outstanding	35,847,842	36,038,340	35,868,315	36,411,428
Dilutive effect of equity-based awards	364,937	229,635	372,479	251,737
Diluted weighted-average shares outstanding	36,212,779	36,267,975	36,240,794	36,663,165

For the three and nine months ended July 1, 2017, there were 67,597 and 94,273 common shares subject to equity-based awards, respectively, excluded from the calculation of diluted earning per share as they would be anti-dilutive. For the three and nine months ended July 2, 2016, there were 91,175 and 72,293 common shares subject to equity-based awards, respectively, excluded from the calculation of diluted earning per share as they would be anti-dilutive.

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Note 16 - Segment Information

During 2016, we made changes to our segment reporting. Components now includes the Medical Devices product lines, which we previously reported as a separate segment. Space and Defense Controls now includes Linear, which we previously included in the Aircraft Controls segment. All amounts have been restated to present Medical Devices within Components, and Linear within Space and Defense Controls.

Below are sales and operating profit by segment for the three and nine months ended July 1, 2017 and July 2, 2016 and a reconciliation of segment operating profit to earnings before income taxes. Operating profit is net sales less cost of sales and other operating expenses, excluding interest expense, equity-based compensation expense and other corporate expenses. Cost of sales and other operating expenses are directly identifiable to the respective segment or allocated on the basis of sales, number of employees or profit.

	Three Months Ended		Nine Months Ended	
	July 1, 2017	July 2, 2016	July 1, 2017	July 2, 2016
Net sales:				
Aircraft Controls	$282,555	$272,564	$840,666	$798,594
Space and Defense Controls	94,518	92,375	293,296	268,764
Industrial Systems	122,490	130,103	350,320	383,526
Components	126,620	118,218	363,974	341,975
Net sales	$626,183	$613,260	$1,848,256	$1,792,859
Operating profit:				
Aircraft Controls	$29,080	$33,024	$83,372	$71,198
Space and Defense Controls	10,005	11,255	27,589	35,427
Industrial Systems	12,471	11,534	35,490	38,437
Components	12,039	12,936	34,333	31,854
Total operating profit	63,595	68,749	180,784	176,916
Deductions from operating profit:				
Interest expense	8,654	8,662	25,789	25,919
Equity-based compensation expense	997	875	4,151	2,794
Corporate and other expenses, net	5,671	7,650	17,880	20,369
Earnings before income taxes	$48,273	$51,562	$132,964	$127,834

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Note 17 - Commitments and Contingencies

From time to time, we are involved in legal proceedings. We are not a party to any pending legal proceedings which management believes will result in a material adverse effect on our financial condition, results of operations or cash flows.

We are engaged in administrative proceedings with governmental agencies and legal proceedings with governmental agencies and other third parties in the normal course of our business, including litigation under Superfund laws, regarding environmental matters. We believe that adequate reserves have been established for our share of the estimated cost for all currently pending environmental administrative or legal proceedings and do not expect that these environmental matters will have a material adverse effect on our financial condition, results of operations or cash flows.

In the ordinary course of business we could be subject to ongoing claims or disputes from our customers, the ultimate settlement of which could have a material adverse impact on our consolidated results of operations. While the receivables and any loss provisions recorded to date reflect management's best estimate of the projected costs to complete a given project, there may still be significant effort required to complete the ultimate deliverable. Future variability in internal cost as well as future profitability is dependent upon a number of factors including deliveries, performance and government budgetary pressures. The inability to achieve a satisfactory contractual solution, further unplanned delays, additional developmental cost growth or variations in any of the estimates used in the existing contract analysis could lead to further loss provisions. Additional losses could have a material adverse impact on our financial condition, results of operations or cash flows in the period in which the loss may be recognized.

We are contingently liable for $24,656 of standby letters of credit issued by a bank to third parties on our behalf at July 1, 2017.

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

The following should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations contained in the Company's Annual Report filed on Form 10-K for the fiscal year ended October 1, 2016. All references to years in this Management's Discussion and Analysis of Financial Condition and Results of Operations are to fiscal years and amounts may differ from reported values due to rounding.

OVERVIEW

We are a worldwide designer, manufacturer and systems integrator of high performance precision motion and fluid controls and control systems for a broad range of applications in aerospace and defense and industrial markets.

Within the aerospace and defense market, our products and systems include:

- Defense market - primary and secondary flight controls for military aircraft, stabilization and automatic ammunition loading controls for armored combat vehicles, tactical and strategic missile steering controls and gun aiming controls.
- Commercial aircraft market - primary and secondary flight controls for commercial aircraft.
- Commercial space market - satellite positioning controls and thrust vector controls for space launch vehicles.

In the industrial market, our products are used in a wide range of applications including:

- Industrial automation market - injection molding, metal forming, heavy industry, material and automotive testing and pilot training simulators.
- Energy market - wind energy, power generation and oil and gas exploration.
- Medical market - enteral clinical nutrition and infusion therapy pumps, CT scanners and ultrasonic sensors and surgical handpieces.

We operate under four segments, Aircraft Controls, Space and Defense Controls, Industrial Systems and Components. Our principal manufacturing facilities are located in the United States, Philippines, United Kingdom, Germany, India, Costa Rica, China, Japan, Italy, Netherlands, Canada, Ireland and Luxembourg.

We have long-term contracts with some of our customers. These contracts are predominantly within Aircraft Controls and Space and Defense Controls and represent 34%, 33% and 34% of our sales in 2016, 2015 and 2014, respectively. We recognize revenue on these contracts using the percentage of completion, cost-to-cost method of accounting as work progresses toward completion. The remainder of our sales are recognized when the risks and rewards of ownership and title to the product are transferred to the customer, principally as units are delivered or as service obligations are satisfied. This method of revenue recognition is predominantly used within the Industrial Systems and Components segments, as well as with aftermarket activity.

We concentrate on providing our customers with products designed and manufactured to the highest quality standards. Our products are applied in demanding applications, "When Performance Really Matters®." We believe we have achieved a leadership position in the high performance, precision controls market, by capitalizing on our strengths, which include:

- superior technical competence in delivering mission-critical solutions,
- a focused customer-intimacy approach,
- a diverse base of customers and end markets served by a broad product portfolio, and
- a well-established international presence serving customers worldwide.

These strengths afford us the ability to innovate our current solutions into new, complementary technologies. They also provide us the opportunity to expand our control product franchise from one market to another, as well as enabling us to increase our scope of content from a high-performance components supplier to a high-performance systems supplier. In addition, we continually strive to achieve substantial content positions on the platforms on which we currently participate, seeking to be the dominant supplier in the current niche markets we serve. We also look for innovation in all aspects of our business, employing new technologies to improve productivity and to develop new business models.

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These activities will help us achieve our financial objectives of increasing our revenue base and improving our long term profitability and cash flow from operations. In doing so, we expect to maintain a balanced, diversified portfolio in terms of markets served, product applications, customer bases and geographic presence. Our fundamental strategies to achieve our goals center around talent, lean and innovation and include:

- maintaining our technological excellence by building upon our systems integration capabilities while solving our customers' most demanding technical problems in applications "When Performance Really Matters®,"
- utilizing our global capabilities and strong engineering heritage to expand our product offerings,
- maximizing customer value by implementing lean enterprise principles, and
- investing in talent development to strengthen our leadership capability and employee performance.

We focus on improving shareholder value through strategic revenue growth, both organic and acquired, through improving operating efficiencies and manufacturing initiatives and through utilizing low cost manufacturing facilities without compromising quality. Additionally, we take a balanced approach to capital deployment, which may include strategic acquisitions or further share buyback activity in order to maximize shareholder returns over the long-term.

We face numerous operating challenges including, but not limited to, adjusting to dynamic global economic conditions that are influenced by governmental, industrial and commercial factors, pricing pressures from customers, strong competition, foreign currency fluctuations and increases in employee benefit costs. We may also engage in restructuring and divesting activities, including reducing overhead, consolidating facilities and exiting some product lines if we deem the operations as non-strategic or underperforming.

Acquisitions and Divestitures

All of our acquisitions are accounted for under the purchase method and, accordingly, the operating results for the acquired companies are included in the consolidated statements of earnings from the respective dates of acquisition. Under purchase accounting, we record assets and liabilities at fair value and such amounts are reflected in the respective captions on the consolidated balance sheets. The purchase price described for each acquisition below is net of any cash acquired, includes debt issued or assumed and the fair value of contingent consideration.

In 2016, we acquired a 70% ownership in Linear Mold and Engineering ("Linear"), a Livonia, Michigan-based company specializing in metal additive manufacturing that provides engineering, manufacturing and production consulting services to customers across a wide range of industries, including aerospace, defense, energy and industrial. We acquired our share in Linear Mold and Engineering for $23 million. The acquisition also included a redeemable noncontrolling interest in the remaining 30%. This acquisition is included in our Space and Defense Controls segment. On January 25, 2017, we acquired the remaining 30% redeemable noncontrolling interest for $2 million in cash, which is reflected in additional paid-in capital.

In 2017, we recorded losses in other expense of $13 million related to selling non-core businesses in our Space and Defense Controls segment. We received $4 million in cash and recorded a receivable of $1 million for a working capital adjustment. We reclassified $5 million in other current assets and $1 million in other current liabilities as held for sale. We completed the sale of the held for sale portion of these businesses on July 19, 2017.

On April 2, 2017, we acquired Rotary Transfer Systems, a manufacturer of electromechanical systems, located in Germany and France for a purchase price, net of acquired cash, of $43 million, consisting of $41 million in cash and $2 million in assumed pension obligations. This operation is included in our Components segment.

CRITICAL ACCOUNTING POLICIES

On a regular basis, we evaluate the critical accounting policies used to prepare our consolidated financial statements, including, but not limited to, revenue recognition on long-term contracts, contract loss reserves, reserves for inventory valuation, reviews for impairment of goodwill, purchase price allocations for business combinations, pension assumptions and deferred tax asset valuation allowances.

There have been no material changes in critical accounting policies in the current year from those disclosed in our 2016 Annual Report on Form 10-K.

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RECENT ACCOUNTING PRONOUNCEMENTS

See Note 1 of the Consolidated Condensed Financial Statements included in Item 1, Financial Statements of this report for further information regarding Financial Accounting Standards Board issued Accounting Standards Updates ("ASU").

CONSOLIDATED RESULTS OF OPERATIONS AND OUTLOOK

(dollars and shares in millions, except per share data)	Three Months Ended July 1, 2017	Three Months Ended July 2, 2016	$ Variance	% Variance	Nine Months Ended July 1, 2017	Nine Months Ended July 2, 2016	$ Variance	% Variance
Net sales	$626	$613	$ 13	2 %	$1,848	$1,793	$ 55	3 %
Gross margin	29.1 %	29.9 %			29.2 %	29.2 %		
Research and development expenses	$36	$36	$ —	1 %	$108	$111	$ (3)	(2 %)
Selling, general and administrative expenses as a percentage of sales	14.2 %	14.4 %			14.1 %	14.2 %		
Interest expense	$9	$9	$ —	— %	$26	$26	$ —	(1 %)
Restructuring expense	$—	$—	$ —	n/a	$—	$8	$ (8)	(100 %)
Other	$—	$(1)	$ 1	(103 %)	$12	$(3)	$ 15	n/a
Effective tax rate	17.0 %	30.9 %			23.4 %	27.5 %		
Net earnings attributable to Moog	$40	$36	$ 4	10 %	$103	$94	$ 9	10 %
Diluted average common shares outstanding	36	36	—	— %	36	37	—	(1 %)
Diluted earnings per share attributable to Moog	$1.11	$1.00	$ 0.11	11 %	$2.83	$2.55	$ 0.28	11 %

Net sales increased in the third quarter and in the first three quarters of 2017 compared to the same periods of 2016. In both periods, sales increased in Aircraft Controls, Space and Defense Controls and Components, and decreased in Industrial Systems. In the third quarter and the first three quarters of 2017, weaker foreign currencies, primarily the British Pound relative to the U.S. Dollar, decreased sales $6 million and $21 million, respectively.

Gross margin decreased in the third quarter of 2017 compared to the third quarter of 2016, driven by a less favorable sales mix in Aircraft Controls.

Research and development expenses decreased in the first three quarters of 2017 compared to the same periods of 2016. Within Aircraft Controls, research and development expenses decreased $8 million, as development activities declined on the Embraer E-2 and the Airbus A350 programs. The reduced spend in Aircraft Controls was partially offset by increases in research and development investments across our other segments.

Other expense in the first three quarters of 2017 includes $13 million of losses associated with divesting non-core businesses in Space and Defense Controls.

Our effective tax rate in the third quarter 2017 is lower than the effective tax rate in the third quarter of 2016, due to benefits associated with divesting non-core businesses in Space and Defense Controls. Also, our effective tax rate benefited from the recognition and timing of U.S. tax incentives.

Our effective tax rates in the first three quarters of 2017 and 2016 are lower than the U.S. statutory tax rate. In 2017, our effective tax rate includes the benefits associated with divesting non-core businesses in Space and Defense Controls and the recognition and timing of U.S. tax incentives. In 2016, our effective tax rate included the beneficial timing of the enactment of the U.S. research and development tax credit.

Other comprehensive income in the third quarter of 2017 includes $33 million of foreign currency translation income. In the third quarter of 2016, other comprehensive loss included $25 million of foreign currency translation loss. Foreign currency translation adjustments increased $58 million during these periods, primarily attributable the changes in the British Pound and the Euro.

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Other comprehensive income in the first three quarters of 2017 includes $4 million of foreign currency translation income. In the first three quarters of 2016, other comprehensive loss included $34 million of foreign currency translation loss. Foreign currency translation adjustments increased $38 million during these periods, primarily attributable to changes in the British Pound.

2017 Outlook – We expect sales in 2017 to increase 2% from fiscal 2016 to $2.5 billion, driven primarily by higher OEM sales for the Airbus A350 program in Aircraft Controls. We also expect sales in Space and Defense Controls will increase based on strong defense program sales, while sales in Components will increase due to higher medical pump sales. Partially offsetting the sales growth is an expected decline in Industrial Systems across our major markets. We expect our operating margin will rise to 10.1% in 2017 compared with 9.9% in 2016. The absence of the 2016 restructuring expense and goodwill impairment charge, as well as the associated restructuring benefits, will contribute to margin expansion. These will be partially offset by the losses associated with divesting non-core businesses in Space and Defense Controls. We expect net earnings will increase 7% from 2016 to $136 million. Average diluted shares outstanding will decrease 1% to 36 million due to shares already repurchased under our current share buyback program. We expect diluted earnings per share will range between $3.65 and $3.85, with a midpoint of $3.75, an increase of 8% compared to 2016.

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SEGMENT RESULTS OF OPERATIONS AND OUTLOOK

During 2016, we made changes to our segment reporting. Components now includes the Medical Devices product lines, which we previously reported as a separate segment. Space and Defense Controls now includes Linear, which we previously included in the Aircraft Controls segment. All amounts have been restated to present Medical Devices within Components, and Linear within Space and Defense Controls.

Operating profit, as presented below, is net sales less cost of sales and other operating expenses, excluding interest expense, equity-based compensation expense and other corporate expenses. Cost of sales and other operating expenses are directly identifiable to the respective segment or allocated on the basis of sales, manpower or profit. Operating profit is reconciled to earnings before income taxes in Note 16 of the Notes to Consolidated Condensed Financial Statements included in this report.

Aircraft Controls

(dollars in millions)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	$ Variance	% Variance	July 1, 2017	July 2, 2016	$ Variance	% Variance
Net sales - military aircraft	$130	$134	$ (4)	(3 %)	$394	$386	$ 8	2 %
Net sales - commercial aircraft	153	139	14	10 %	447	413	34	8 %
	$283	$273	$ 10	4 %	$841	$799	$ 42	5 %
Operating profit	$29	$33	$ (4)	(12 %)	$83	$71	$ 12	17 %
Operating margin	10.3 %	12.1 %			9.9 %	8.9 %		
Backlog					$543	$587	$ (44)	(7 %)

Aircraft Controls' net sales increased in commercial programs and decreased in military programs in the third quarter of 2017 compared to the third quarter of 2016. In the first three quarters of 2017 compared to the same period of 2016, both commercial and military aircraft sales increased. Weaker foreign currencies, primarily the British Pound relative to the U.S. Dollar, decreased sales $10 million in the first three quarters of 2017 compared to the first three quarters of 2016.

In the third quarter of 2017 compared to the third quarter of 2016, commercial OEM and aftermarket sales increased $10 million and $4 million, respectively. Sales for the Airbus A350 program increased $12 million due to the production ramp up. Sales for Boeing programs decreased $4 million as we had lower 777 activity. Also in the third quarter of 2017, military aftermarket sales decreased $7 million; however, military OEM sales increased $3 million. Military aftermarket sales declined $4 million due to the absence of last year's activity at an F-35 repair depot at a customer's location. Additionally, sales declined $3 million due to a technical issue on the V-22 program which slowed production. Partially offsetting these declines was a $2 million increase due to higher production on the F-35 program.

In the first three quarters of 2017 compared to the first three quarters of 2016, commercial OEM sales increased $32 million, driven by the Airbus A350 program, which increased $35 million. Additionally in the first three quarters of 2017, military OEM sales increased $19 million; however, military aftermarket sales decreased $11 million. Military OEM sales for the F-35 program increased $13 million. Also, higher levels of classified military funded development jobs offset lower foreign military sales. The decreased military aftermarket sales was driven by lower repair activity for the B1-B and C-5 programs.

Operating margin decreased in the third quarter of 2017 compared to the third quarter of 2016 due to a less favorable sales mix from lower foreign military sales and lower military aftermarket sales.

Operating margin increased in the first three quarters of 2017 compared to the first three quarters of 2016. Research and development expenses decreased $8 million due to lower development activities on the Embraer E-2 and the Airbus A350 programs. Operating margin also benefited $6 million due to the absence of last year's restructuring expense and $5 million from the associated restructuring benefits, which are in line with our expectations. Partially offsetting these benefits is an unfavorable sales mix, due in part to lower foreign military sales and lower military aftermarket sales.

The decrease in twelve-month backlog at July 1, 2017 compared to July 2, 2016 is in part due to the timing of military aftermarket orders. Also declining production rates on legacy commercial programs contributed to the decrease in backlog.

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2017 Outlook for Aircraft Controls – We expect sales in Aircraft Controls to increase 5% from 2016. We expect commercial sales will increase 7% from 2016, due to the continued ramp up of the Airbus A350 program. Partially offsetting the growth is expected lower commercial OEM sales on legacy Boeing programs. We expect military sales will increase 2% from 2016, driven by higher F-35 production sales. We expect operating margin will increase to 9.7% in 2017 from 9.3% in 2016. We expect that research and development costs will decrease $10 million, our restructuring expenses will not repeat and we will continue to realize the benefits of cost saving activities. However, partially offsetting these positive effects on operating margin is an expected negative sales mix. Sales from our newer military cost plus development jobs and higher sales on newer, lower margin commercial OEM platforms are replacing sales from higher-margin foreign military programs.

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Space and Defense Controls

(dollars in millions)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	$ Variance	% Variance	July 1, 2017	July 2, 2016	$ Variance	% Variance
Net sales	$95	$92	$ 2	2 %	$293	$269	$ 25	9 %
Operating profit	$10	$11	$ (1)	(11 %)	$28	$35	$ (8)	(22 %)
Operating margin	10.6%	12.2%			9.4 %	13.2 %		
Backlog					$284	$241	$ 42	18 %

Space and Defense Controls' net sales increased in the third quarter of 2017 compared to the third quarter of 2016, driven by growth in our defense market. In the first three quarters of 2017 compared to the same period of 2016, sales increased in our defense market, as well as our space market.

Sales in our defense market increased $20 million in the first three quarters of 2017, compared to the first three quarters of 2016, driven by higher sales of controls for domestic and European defense vehicles, as well as higher naval sales. Additionally in the first three quarters of 2017, sales for satellite components increased $7 million, as higher orders for satellite avionics and controls were partially offset by lost sales associated with the divestiture of one of our European space business in the first quarter of 2017.

Operating margin decreased in the third quarter of 2017 compared to the third quarter of 2016, due to an increase in research and development expenses of $1 million. Operating margin decreased in the first three quarters of 2017 due to $13 million of charges associated with selling non-core businesses. Also, operating margin was affected by $4 million of higher research and development expenses and by a $3 million charge on a satellite program related to an engineering issue. Partly offsetting these margin pressures was a favorable sales mix in our defense markets.

The higher level of twelve-month backlog for Space and Defense Controls at July 1, 2017 compared to July 2, 2016 is due to higher satellite orders as well as higher orders for domestic and foreign defense vehicle programs.

2017 Outlook for Space and Defense Controls – We expect sales in Space and Defense Controls to increase 6% from 2016. The increase is due to a $20 million increase in defense sales, primarily in our defense vehicle programs. We expect sales in our space market will remain flat as higher satellite component sales are offset by lower launch vehicle sales. We expect operating margin will decrease to 10.7% in 2017 from 11.3% in 2016, due to the impact of losses associated with divesting non-core businesses.

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Industrial Systems

(dollars in millions)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	$ Variance	% Variance	July 1, 2017	July 2, 2016	$ Variance	% Variance
Net sales	$122	$130	$ (8)	(6%)	$350	$384	$ (33)	(9%)
Operating profit	$12	$12	$ 1	8%	$35	$38	$ (3)	(8%)
Operating margin	10.2%	8.9%			10.1%	10.0%		
Backlog					$155	$155	$ —	—%

Industrial Systems' net sales in the third quarter of 2017 compared to the third quarter of 2016 decreased in our industrial and our energy markets, while sales increased in our simulation and test market. Sales decreased across our three markets in the first nine months of 2017 compared to the same periods of 2016.

Weaker foreign currencies, in particular the Euro and British Pound, relative to the U.S. Dollar, decreased sales $2 million in the third quarter of 2017 compared to the third quarter of 2016. Excluding currency effects in the third quarter of 2017, sales in our industrial market decreased $8 million due to lower sales volumes across our non-core industrial businesses. Also sales, excluding currency effects, in our energy market decreased $6 million, due to lost sales to a key customer in Brazil who was acquired, lower demand for our legacy wind business and order timing for our non-renewable gas and steam customers. However, sales in our simulation and test market increased $8 million, excluding currency effects, due to higher auto test as well as simulation deliveries.

In the first nine months of 2017 compared to the first nine months of 2016, sales decreased $20 million in our industrial automation market across our non-core industrial businesses. Additionally, sales in our energy market decreased $13 million, driven in part by lost sales to a key customer in Brazil who was acquired and in part by lower sales from other wind customers.

Operating margin increased in the third quarter of 2017 compared to the third quarter of 2016. The benefits associated with our restructuring activities from the fourth quarter of 2016 increased operating profit by $1 million, and were in line with our expectations. Operating profit also increased $1 million due to lower research and development expenses, as we had lower activity on our next generation wind products.

Operating margin was relatively unchanged in the first nine months of 2017 compared to the first nine months of 2016. Lower sales volumes across our three markets contributed to a decline in operating margin. Partially offsetting the decline was $5 million of benefits associated with our restructuring activities in 2016, in line with our expectations, and the absence of last year's $1 million restructuring expense.

The level of twelve-month backlog in Industrial Systems at July 1, 2017 compared to July 2, 2016 is comparable as both higher non-renewable energy and simulation and test orders were offset by lower wind energy orders.

2017 Outlook for Industrial Systems – We expect sales in Industrial Systems to decline 9% from 2016 across all of our major markets. Specifically, we expect $24 million of lower industrial automation sales, as the global economic conditions continue to impact our sales. Additionally, we expect $19 million of lower wind energy sales as a result of lost sales to a key customer who was acquired, as well as a result of lower legacy wind sales. We expect simulation and test sales to decrease $2 million as well. We expect operating margin will increase to 10.4% in 2017 from 9.4% in 2016, as we will benefit from both our restructuring actions in 2016 and our continued cost containment actions.

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Components

(dollars in millions)	Three Months Ended				Nine Months Ended			
	July 1, 2017	July 2, 2016	$ Variance	% Variance	July 1, 2017	July 2, 2016	$ Variance	% Variance
Net sales	$127	$118	$ 8	7 %	$364	$342	$ 22	6 %
Operating profit	$12	$13	$ (1)	(7 %)	$34	$32	$ 2	8 %
Operating margin	9.5 %	10.9 %			9.4 %	9.3 %		
Backlog					$193	$173	$ 20	11 %

Components' net sales increased in the third quarter of 2017 compared to the third quarter of 2016, driven by the recent acquisition of Rotary Transfer Systems. Through the first three quarters of 2017 compared to the same period of 2016, sales increased across all of our markets.

Sales in the third quarter of 2017 increased $6 million due to the recent acquisition of Rotary Transfer Systems. Additionally, sales in other industrial products increased $2 million due to increased demand for cooling equipment.

Sales in the first three quarters of 2017 compared to the same period of 2016 increased $9 million in our medical market, as we had higher sales on medical pumps, sets and sensors and handpieces. Additionally, sales increased $8 million in our industrial market due to the strength in the third quarter. Also, sales increased $4 million in our aerospace and defense market, primarily related to higher shipments on the Guardian program as well as various space components programs.

Operating margin decreased in the third quarter of 2017 compared to the third quarter of 2016 due to a less favorable sales mix from lower defense sales, as well as higher research and development investments.

Operating margin increased slightly in the first three quarters of 2017 compared to the first three quarters of 2016. Operating profit increased $3 million from restructuring benefits associated with the 2016 restructuring activities, as well from the absence of last year's $1 million restructuring expense. The benefits are in line with our expectations. We also benefited from an improved sales mix, primarily in our medical market. Partially offsetting the improvement is $3 million of higher research and development investments.

The twelve-month backlog at July 1, 2017 compared to July 2, 2016 increased due to the Guardian program in aerospace and defense products, and Rotary Transfer Systems in industrial products.

2017 Outlook for Components – We expect sales in Components to increase 5% from 2016. We expect that sales in our medical market will increase $11 million due to higher sales volumes of pumps and sets. In addition, we expect our industrial market will increase $9 million, due mostly to the newly acquired Rotary Transfer Systems. We expect operating margin will decrease to 10.0% in 2017 from 10.7% in 2016, as we continue to be affected by the adverse sales mix in our aerospace and defense markets, due to lower aftermarket sales, as well as higher investments in research and development.

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FINANCIAL CONDITION AND LIQUIDITY

(dollars in millions)	Nine Months Ended			
	July 1, 2017	July 2, 2016	$ Variance	% Variance
Net cash provided (used) by:				
Operating activities	$169	$161	$ 9	5 %
Investing activities	(83)	(52)	(30)	58 %
Financing activities	(68)	(19)	(49)	n/a

Our available borrowing capacity and our cash flow from operations provide us with the financial resources needed to run our operations, reinvest in our business and make strategic acquisitions.

At July 1, 2017, our cash balances were $345 million, and were primarily held outside of the U.S. Cash flow from our U.S. operations, together with borrowings on our credit facility, fund on-going activities, debt service requirements and future growth investments. We reinvest the cash generated from foreign operations locally and such international balances are not available to pay down debt in the U.S. unless we decide to repatriate such amounts. During 2016, we repatriated $91 million of earnings from various foreign subsidiaries and used the funds to pay down our U.S. revolving credit facility. If we determine further repatriation of foreign funds is necessary, we would then be required to pay U.S. income taxes on those funds.

Operating activities

Net cash provided by operating activities increased in the first three quarters of 2017 compared to the same period of 2016. Cash provided by accounts payable increased $28 million due to favorable timing across all of our segments. In addition, cash provided by inventory increased $14 million, primarily in Aircraft Controls, across a variety of programs, and in Components. Also, we contributed an additional $13 million in pension contributions in the first three quarters of 2016 compared to the first three quarters of 2017. However, net cash provided by accounts receivable across all of our segments provided $43 million less cash in 2017 as compared to 2016.

Investing activities

Net cash used by investing activities in the first three quarters of 2017 included $45 million for capital expenditures, similar to the $43 million included in the first three quarters of 2016. Net cash used by investing activities in the first three quarters of 2017 also included $41 million for the acquisition of Rotary Transfer Systems. Net cash used by investing activities in the first three quarters of 2016 included $11 million as partial payment for the Linear acquisition.

We expect our 2017 capital expenditures to be approximately $70 million, as we support growth related investments in Space and Defense Controls and in Aircraft Controls.

Financing activities

Cash used by financing activities in the first three quarters of 2017 includes net payments on our credit facility. In the first three quarters of 2016, we repurchased approximately 850,000 shares through our stock repurchase program for $39 million, averaging $46 per share, which was funded by our credit facility.

Off Balance Sheet Arrangements

We do not have any material off balance sheet arrangements that have or are reasonably likely to have a material future effect on our results of operations or financial condition.

Contractual Obligations and Commercial Commitments

Our contractual obligations and commercial commitments have not changed materially from the disclosures in our 2016 Annual Report on Form 10-K.

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CAPITAL STRUCTURE AND RESOURCES

We maintain bank credit facilities to fund our short and long-term capital requirements, including for acquisitions. From time to time, we also sell debt and equity securities to fund acquisitions or take advantage of favorable market conditions.

Our U.S. revolving credit facility matures on June 28, 2021. The U.S. revolving credit facility has a capacity of $1.1 billion and also provides an expansion option, which permits us to request an increase of up to $200 million to the credit facility upon satisfaction of certain conditions. The U.S. revolving credit facility had an outstanding balance of $540 million at July 1, 2017. The weighted-average interest rate on all of the outstanding credit facility borrowings was 2.54% and is based on LIBOR plus the applicable margin, which was 1.38% at July 1, 2017. The credit facility is secured by substantially all of our U.S. assets.

The U.S. revolving credit facility contains various covenants. The covenant for minimum interest coverage ratio, defined as the ratio of EBITDA to interest expense for the most recent four quarters, is 3.0. The covenant for the maximum leverage ratio, defined as the ratio of net debt, including letters of credit, to EBITDA for the most recent four quarters, is 3.5. We are in compliance with all covenants. EBITDA is defined in the loan agreement as (i) the sum of net income, interest expense, income taxes, depreciation expense, amortization expense, other non-cash items reducing consolidated net income and non-cash equity-based compensation expenses minus (ii) other non-cash items increasing consolidated net income.

We are generally not required to obtain the consent of lenders of the U.S. revolving credit facility before raising significant additional debt financing; however, certain limitations and conditions may apply that would require consent to be obtained. In recent years, we have demonstrated our ability to secure consents to access debt markets. We have also been successful in accessing equity markets from time to time. We believe that we will be able to obtain additional debt or equity financing as needed.

At July 1, 2017, we had $548 million of unused capacity, including $535 million from the U.S. revolving credit facility after considering standby letters of credit. However, our leverage ratio covenant limits our total borrowing capacity to $530 million as of July 1, 2017.

We have $300 million aggregate principal amount of 5.25% senior notes due December 1, 2022 with interest paid semiannually on June 1 and December 1 of each year. The senior notes are unsecured obligations, guaranteed on a senior unsecured basis by certain subsidiaries and contain normal incurrence-based covenants and limitations such as the ability to incur additional indebtedness, pay dividends, make other restricted payments and investments, create liens and certain corporate acts such as mergers and consolidations.

We have a trade receivables securitization facility (the "Securitization Program"), which terminates on April 13, 2018. Under the Securitization Program, we sell certain trade receivables and related rights to an affiliate, which in turn sells an undivided variable percentage ownership interest in the trade receivables to a financial institution, while maintaining a subordinated interest in a portion of the pool of trade receivables. The Securitization Program effectively increases our borrowing capacity by up to $120 million and lowers our cost to borrow funds as compared to the U.S. revolving credit facility. We had an outstanding balance of $120 million at July 1, 2017. The Securitization Program has a minimum borrowing requirement, which was $96 million at July 1, 2017. Interest on the secured borrowings under the Securitization Program was 2.10% at July 1, 2017 and is based on 30-day LIBOR plus an applicable margin.

Net debt to capitalization was 36% at July 1, 2017 and 41% at October 1, 2016. The decrease in net debt to capitalization is primarily due to our net earnings and positive cash flow.

We believe that our cash on hand, cash flows from operations and available borrowings under short and long-term arrangements will continue to be sufficient to meet our operating needs.

The Board of Directors has authorized a share repurchase program. This program has been amended from time to time to authorize additional repurchases that includes both Class A and Class B common shares, and allows us to buy up to an aggregate 13 million common shares. Under this program, we have purchased approximately 9.7 million shares for $650 million as of July 1, 2017.

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ECONOMIC CONDITIONS AND MARKET TRENDS

We operate within the aerospace and defense and industrial markets. Our aerospace and defense markets are affected by market conditions and program funding levels, while our industrial markets are influenced by general capital investment trends and economic conditions. A common factor throughout our markets is the continuing demand for technologically advanced products.

Aerospace and Defense

Approximately 65% of our 2016 sales were generated in aerospace and defense markets. Within aerospace and defense, we serve three end markets: defense, commercial aircraft and space.

The defense market is dependent on military spending for development and production programs. Aircraft production programs are typically long-term in nature, offering predictability as to capacity needs and future revenues. We maintain positions on numerous high priority programs, including the Lockheed Martin F-35 Joint Strike Fighter, FA-18E/F Super Hornet and V-22 Osprey. The large installed base of our products leads to attractive aftermarket sales and service opportunities. The tactical and strategic missile, missile defense and defense controls markets are dependent on many of the same market conditions as military aircraft, including overall military spending and program funding levels. Our security and surveillance product line is dependent on government funding at federal and local levels, as well as private sector demand.

Reductions in the U.S. Department of Defense's mandatory and discretionary budgeted spending, which became effective on March 1, 2013, resulting from the Budget Control Act of 2011, has had ramifications for the domestic aerospace and defense market. As originally passed, the Budget Control Act provided that, in addition to an initial significant reduction in future domestic defense spending, further automatic cuts to defense spending authorization (which is generally referred to as sequestration) of approximately $500 billion through the Federal Government's 2021 fiscal year would be triggered by the failure of Congress to produce a deficit reduction bill. The sequestration spending cuts were intended to be uniform by category for programs, projects and activities within accounts. The Bipartisan Budget Act of 2013 and the Bipartisan Budget Act of 2015 provided stability and modest growth in Department of Defense spending through 2017. However, future budgets beyond 2017 are uncertain with respect to the overall levels of defense spending. Currently, we expect approximately $690 million of U.S. defense sales in 2017.

The commercial aircraft market is dependent on a number of factors, including global demand for air travel, which generally follows underlying economic growth. As such, the commercial aircraft market has historically exhibited cyclical swings which tend to track the overall economy. In recent years, the development of new, more fuel-efficient commercial air transports has helped drive increased demand in the commercial aircraft market, as airlines replace older, less fuel-efficient aircraft with newer models in an effort to reduce operating costs. The aftermarket is driven by usage of the existing aircraft fleet and the age of the installed fleet, and is impacted by fleet re-sizing programs for passenger and cargo aircraft. Changes in aircraft utilization rates affect the need for maintenance and spare parts and impact aftermarket sales. Boeing and Airbus have historically adjusted production in line with air traffic volume. Demand for our commercial aircraft products is in large part dependent on new aircraft production, which is increasing as Boeing and Airbus work to fulfill large backlogs of unfilled orders.

The commercial space market is comprised of large satellite customers, traditionally communications companies. Trends for this market, as well as for commercial launch vehicles, follow demand for increased capacity. This, in turn tends to track with underlying demand for increased consumption of telecommunication services, satellite replacement and global navigation needs. The space market is also partially dependent on the governmental-authorized levels of funding for satellite communications, as well as investment for commercial and exploration activities.

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Industrial

Approximately 35% of our 2016 sales were generated in industrial markets. Within industrial, we serve three end markets: industrial automation, energy and medical.

The industrial automation market we serve is influenced by several factors including capital investment, product innovation, economic growth, cost-reduction efforts and technology upgrades. We experience challenges from the need to react to the demands of our customers, who are in large part sensitive to international and domestic economic conditions.

The energy market we serve is affected by changing oil and natural gas prices, global urbanization, the resulting change in supply and demand for global energy and the political climate and corresponding public support for investments in renewable energy generation capacity. Historically, drivers for global growth include investments in power generation infrastructure, including renewable energy, and exploration in search of new oil and gas resources. However, the significant decline in the price of crude oil has reduced investment in exploration activities. This reduced investment has directly affected our energy business in Components and in Industrial Systems. Currently, we expect approximately $38 million of oil exploration-related sales in 2017, down from approximately $100 million in 2014.

The medical market we serve is influenced by economic conditions, regulatory environments, hospital and outpatient clinic spending on equipment, population demographics, medical advances, patient demands and the need for precision control components and systems. Advances in medical technology and medical treatments have had the effect of extending average life spans, in turn resulting in greater need for medical services. These same technology and treatment advances also drive increased demand from the general population as a means to improve quality of life. Access to medical insurance, whether through government funded health care plans or private insurance, also affects the demand for medical services.

Foreign Currencies

We are affected by the movement of foreign currencies compared to the U.S. dollar, particularly in Industrial Systems. About one-quarter of our 2016 sales were denominated in foreign currencies. During the first nine months of 2017, average foreign currency rates generally weakened against the U.S. dollar compared to 2016. The translation of the results of our foreign subsidiaries into U.S. dollars decreased sales by $21 million compared to the same period one year ago.

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Cautionary Statement

Information included or incorporated by reference in this report that does not consist of historical facts, including statements accompanied by or containing words such as “may,” “will,” “should,” “believes,” “expects,” “expected,” “intends,” “projects,” “approximate,” “estimates,” “predicts,” “potential,” “outlook,” “forecast,” “anticipates,” “presume” and “assume,” forward-looking statements. Such forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements are not guarantees of future performance and are subject to several factors, risks and uncertainties, the impact or occurrence of which could cause actual results to differ materially from the expected results described in the forward-looking statements. These important factors, risks and uncertainties include:

- the markets we serve are cyclical and sensitive to domestic and foreign economic conditions and events, which may cause our operating results to fluctuate;
- we operate in highly competitive markets with competitors who may have greater resources than we possess;
- we depend heavily on government contracts that may not be fully funded or may be terminated, and the failure to receive funding or the termination of one or more of these contracts could reduce our sales and increase our costs;
- we make estimates in accounting for long-term contracts, and changes in these estimates may have significant impacts on our earnings;
- we enter into fixed-price contracts, which could subject us to losses if we have cost overruns;
- we may not realize the full amounts reflected in our backlog as revenue, which could adversely affect our future revenue and growth prospects;
- if our subcontractors or suppliers fail to perform their contractual obligations, our prime contract performance and our ability to obtain future business could be materially and adversely impacted;
- contracting on government programs is subject to significant regulation, including rules related to bidding, billing and accounting kickbacks and false claims, and any non-compliance could subject us to fines and penalties or possible debarment;
- the loss of The Boeing Company as a customer or a significant reduction in sales to The Boeing Company could adversely impact our operating results;
- our new product research and development efforts may not be successful which could reduce our sales and earnings;
- our inability to adequately enforce and protect our intellectual property or defend against assertions of infringement could prevent or restrict our ability to compete;
- our business operations may be adversely affected by information systems interruptions, intrusions or new software implementations;
- our indebtedness and restrictive covenants under our credit facilities could limit our operational and financial flexibility;
- significant changes in discount rates, rates of return on pension assets, mortality tables and other factors could adversely affect our earnings and equity and increase our pension funding requirements;
- a write-off of all or part of our goodwill or other intangible assets could adversely affect our operating results and net worth;
- our sales and earnings may be affected if we cannot identify, acquire or integrate strategic acquisitions, or if we engage in divesting activities;
- our operations in foreign countries expose us to political and currency risks and adverse changes in local legal and regulatory environments;
- unforeseen exposure to additional income tax liabilities may affect our operating results;
- government regulations could limit our ability to sell our products outside the United States and otherwise adversely affect our business;
- governmental regulations and customer demands related to conflict minerals may adversely impact our operating results;
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the failure or misuse of our products may damage our reputation, necessitate a product recall or result in claims against us that exceed our insurance coverage, thereby requiring us to pay significant damages;

- future terror attacks, war, natural disasters or other catastrophic events beyond our control could negatively impact our business;
- our operations are subject to environmental laws, and complying with those laws may cause us to incur significant costs; and
- we are involved in various legal proceedings, the outcome of which may be unfavorable to us.

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These factors are not exhaustive. New factors, risks and uncertainties may emerge from time to time that may affect the forward-looking statements made herein. Given these factors, risks and uncertainties, investors should not place undue reliance on forward-looking statements as predictive of future results. We disclaim any obligation to update the forward-looking statements made in this report.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

Refer to the Company's Annual Report on Form 10-K for the year ended October 1, 2016 for a complete discussion of our market risk. There have been no material changes in the current year regarding this market risk information.

Item 4. Controls and Procedures.

(a) Disclosure Controls and Procedures. We carried out an evaluation, under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures as defined in Exchange Act Rules 13a-15(e) and 15d-15(e). Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that these disclosure controls and procedures are effective as of the end of the period covered by this report, to ensure that information required to be disclosed in reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures.

(b) Changes in Internal Control over Financial Reporting. There have been no changes during the most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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PART II OTHER INFORMATION

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

(c) The following table summarizes our purchases of our common stock for the quarter ended July 1, 2017.

Period	(a) Total Number of Shares Purchased (1)(2)	(b) Average Price Paid Per Share	(c) Total number of Shares Purchased as Part of Publicly Announced Plans or Programs (3)	(d) Maximum Number (or Approx. Dollar Value) of Shares that May Yet Be Purchased Under Plans or Programs (3)
April 2, 2017 - April 30, 2017	31,705	$ 66.73	543	3,349,932
May 1, 2017 - May 31, 2017	26,071	68.54	113	3,349,819
June 1, 2017 - July 1, 2017	22,590	72.15	—	3,349,819
Total	80,366	$ 68.84	656	3,349,819

(1) Reflects purchases by the Moog Inc. Stock Employee Compensation Trust Agreement ("SECT") of shares of Class B common stock from the Moog Inc. Retirement Savings Plan ("RSP") at average prices as follows: 29,925 shares at $66.67 per share during April; 22,519 shares at $67.91 per share during May; and 21,573 shares at $72.10 per share during June. Purchases by the SECT from members of the Moog family included: 100 shares of Class B common stock at $68.82 per share on April 12, 2017; and 500 shares of Class B common stock at $73.23 per share on June 8, 2017.

(2) In connection with the exercise of equity-based compensation awards, we accept delivery of shares to pay for the exercise price and withhold shares for tax withholding obligations. In April, we accepted delivery of 1,137 shares at $67.51 per share, in May, we accepted delivery of 3,439 shares at $72.63 per share and in June, we accepted delivery of 517 shares at $73.29 per share, in connection with the exercise of equity-based awards.

(3) The Board of Directors has authorized a share repurchase program. This program has been amended from time to time to authorize additional repurchases up to an aggregate 13 million common shares. The program permits the purchase of shares of Class A or Class B common stock in open market or privately negotiated transactions at the discretion of management. In April, we purchased 543 Class B shares at an average price of $68.22 per share and in May, we purchased 113 Class B shares at an average price of $69.34 per share.

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Item 6. Exhibits.

(a) Exhibits

31.1 Certification of Chief Executive Officer pursuant to Exchange Act Rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

31.2 Certification of Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

32.1 Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

101 Interactive Date files (submitted electronically herewith)

(101.INS) XBRL Instance Document

(101.SCH) XBRL Taxonomy Extension Schema Document

(101.CAL) XBRL Taxonomy Extension Calculation Linkbase Document

(101.DEF) XBRL Taxonomy Extension Definition Linkbase Document

(101.LAB) XBRL Taxonomy Extension Label Linkbase Document

(101.PRE) XBRL Taxonomy Extension Presentation Linkbase Document

In accordance with Rule 406T of Regulation S-T, the XBRL related information in Exhibit 101 to this Quarterly Report on Form 10-Q shall not be deemed to be “filed” for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section and shall not be part of any registration or other document filed under the Securities Act or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

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SIGNATURES

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

Moog Inc.

(Registrant)

Date:	July 28, 2017	By	/s/ John R. Scannell
			John R. Scannell
			Chairman Chief Executive Officer
			(Principal Executive Officer)
Date:	July 28, 2017	By	/s/ Donald R. Fishback
			Donald R. Fishback
			Vice President
			Chief Financial Officer
			(Principal Financial Officer)
Date:	July 28, 2017	By	/s/ Jennifer Walter
			Jennifer Walter
			Controller (Principal Accounting Officer)