

MOOG INC.

Form 10-K

November 12, 2013

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended September 28, 2013

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 1-5129

Inc.

(Exact Name of Registrant as Specified in its Charter)

New York

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)

Registrant's Telephone Number, Including Area Code: (716) 652-2000

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class

Name of Each Exchange on Which Registered

Class A Common Stock, \$1.00 Par Value

New York Stock Exchange

Class B Common Stock, \$1.00 Par Value

New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulations S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Edgar Filing: MOOG INC. - Form 10-K

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

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes  No

The aggregate market value of the common stock outstanding and held by non-affiliates (as defined in Rule 405 under the Securities Act of 1933) of the registrant, based upon the closing sale price of the common stock on the New York Stock Exchange on March 30, 2013, the last business day of the registrant’s most recently completed second fiscal quarter, was approximately \$1,854 million.

The number of shares of common stock outstanding as of the close of business on November 8, 2013 was: Class A 41,625,945 Class B 3,740,156.

Portions of the 2013 Proxy Statement to Shareholders (“2013 Proxy”) are incorporated by reference into Part III of this Form 10-K.

Inc.  
FORM 10-K INDEX

## PART I

Item 1	Business	5-8
Item 1A	Risk Factors	9-13
Item 1B	Unresolved Staff Comments	14
Item 2	Properties	14
Item 3	Legal Proceedings	14
Item 4	Mine Safety Disclosures	14

## PART II

Item 5	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	15-17
Item 6	Selected Financial Data	18
Item 7	Management's Discussion and Analysis of Financial Condition and Results of Operations	19-38
Item 7A	Quantitative and Qualitative Disclosures About Market Risk	39
Item 8	Financial Statements and Supplementary Data	40-78
Item 9	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	79
Item 9A	Controls and Procedures	79
Item 9B	Other Information	79

## PART III

Item 10	Directors, Executive Officers and Corporate Governance	80
Item 11	Executive Compensation	80
Item 12	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	80
Item 13	Certain Relationships and Related Transactions, and Director Independence	80
Item 14	Principal Accountant Fees and Services	80

## PART IV

Item 15	Exhibits and Financial Statement Schedules	80-86
---------	--	-------

#### Disclosure Regarding Forward-Looking Statements

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. Certain of these factors, risks and uncertainties are discussed in the sections of this report entitled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” 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.

## PART I

The Registrant, Moog Inc., a New York corporation formed in 1951, is referred to in this report as “Moog” or in the nominative “we” or the possessive “our.”

Unless otherwise noted or the context otherwise requires, all references to years in this report are to fiscal years.

### Item 1. Business.

**Description of the Business.** Moog is a worldwide designer, manufacturer and integrator of high performance precision motion and fluid controls and systems for a broad range of applications in aerospace and defense and industrial markets. We have five operating segments: Aircraft Controls, Space and Defense Controls, Industrial Systems, Components and Medical Devices.

Additional information describing the business and comparative segment revenues, operating profits and related financial information for 2013, 2012 and 2011 are provided in Note 17 of Item 8, Financial Statements and Supplementary Data of this report.

**Distribution.** Our sales and marketing organization consists of individuals possessing highly specialized technical expertise. This expertise is required in order to effectively evaluate a customer’s precision control requirements and to facilitate communication between the customer and our engineering staff. Our sales staff is the primary contact with customers. Manufacturers’ representatives are used to cover certain domestic aerospace markets. Distributors are used selectively to cover certain industrial and medical markets.

**Industry and Competitive Conditions.** We experience considerable competition in our aerospace and defense and industrial markets. We believe that the principal points of competition in our markets are product quality, reliability, price, design and engineering capabilities, product development, conformity to customer specifications, timeliness of delivery, effectiveness of the distribution organization and quality of support after the sale. We believe we compete effectively on all of these bases. Competitors in our five operating segments include:

• **Aircraft Controls:** Parker Hannifin, UTC Aerospace Systems (Goodrich, Hamilton Sundstrand), Liebherr Group, Nabtesco, Woodward and Curtiss-Wright.

• **Space and Defense Controls:** Honeywell, Parker Hannifin, Vacco, ValveTech, Marotta, SABCA, Aerojet Rocketdyne, Snecma, Valcor, Aeroflex, UTC Aerospace Systems (Hamilton Sundstrand), Flowserve Limatorque, Sargent Industries, RUAG, Woodward, Sierra-Nevada Corp., Videotec, Lord Corp., SEAKR Engineering, Southwest Research Institute, Curtiss-Wright, Cohu, Schneider Pelco Electric and AXIS Communications.

• **Industrial Systems:** Bosch Rexroth, Danaher, Baumuller, Siemens, Emerson, Parker Hannifin, REenergy Electric (Suzhou), MTS Systems Corp., Exlar and Hydradyne.

• **Components:** Danaher, Allied Motion Technologies, Ametek, Woodward MPC, Axsys Technologies, Schleifring, Aeroflex Airflyte, Smiths Medical, Kearfott and Stemmann - Technik.

• **Medical Devices:** B. Braun Medical, CareFusion, Smiths Medical, Hospira, Alcon, Baxter International, CME Medical, Covidien and Introtek.

**Government Contracts.** All U.S. Government contracts are subject to termination by the Government. In 2013, sales under U.S. Government contracts represented 31% of total sales and were primarily within our Aircraft Controls, Space and Defense Controls and Components segments.

**Backlog.** Substantially all backlog will be realized as sales in the next twelve months. See the discussion in Item 7, Management’s Discussion and Analysis of Financial Condition and Results of Operations of this report.

**Raw Materials.** Materials, supplies and components are purchased from numerous suppliers. We believe the loss of any one supplier, although potentially disruptive in the short-term, would not materially affect our operations in the long-term.

**Working Capital.** See the discussion on operating cycle in Note 1 of Item 8, Financial Statements and Supplementary Data of this report.

**Seasonality.** Our business is generally not seasonal; however, certain markets, such as wind energy, do experience seasonal variations in sales levels.

**Patents.** We maintain a patent portfolio of issued or pending patents and patent applications worldwide that generally includes the U.S., Europe, China, Japan and India. The portfolio includes patents that relate to electrohydraulic, electromechanical, electronics, hydraulics, components and methods of operation and manufacture as related to motion control and actuation systems. The portfolio also includes patents related to wind turbines, robotics, surveillance/security, vibration control and medical devices. We do not consider any one or more of these patents or patent applications to be material in relation to our business as a whole. The patent portfolio related to certain medical devices is significant to our position in this market as several of these products work exclusively together, and provide us future revenue opportunities.

**Research Activities.** Research and development activity has been, and continues to be, significant for us. Research and development expense was at least \$100 million in each of the last three years and represented over 5% of sales in 2013.

**Employees.** On September 28, 2013, we employed 11,152 full-time employees.

**Customers.** Our principal customers are Original Equipment Manufacturers, or OEMs, and end users for whom we provide aftermarket support. Aerospace and defense OEM customers collectively represented approximately 48% of 2013 sales. The majority of these sales are to a small number of large companies. Due to the long-term nature of many of the programs, many of our relationships with aerospace and defense OEM customers are based on long-term agreements. Our industrial OEM sales, which represented approximately 36% of 2013 sales, are to a wide range of global customers and are normally based on lead times of 90 days or less. We also provide aftermarket support, consisting of spare and replacement parts and repair and overhaul services, for all of our products. Our major aftermarket customers are the U.S. Government and commercial airlines. In 2013, aftermarket sales accounted for 16% of total sales.

Customers in our five operating segments include:

**Aircraft Controls:** Boeing, Lockheed Martin, Airbus, BAE Systems, Bombardier, Gulfstream, Honeywell, Northrop Grumman, Bell Helicopter, Embraer and the U.S. Government.

- **Space and Defense Controls:** Lockheed Martin, Raytheon, Orbital Sciences, BAE Systems, Aerojet Rocketdyne, Alliant Techsystems, Boeing, General Dynamics and Thales Alenia Space.

**Industrial Systems:** CAE, Alstom, REpower Systems, FlightSafety International, Husky Energy, Arburg, Shuler, Doosan, Danieli and Schlumberger.

**Components:** Raytheon, Lockheed Martin, Philips Medical and the U.S. Government.

**Medical Devices:** Danone Nutricia, B. Braun Medical, Nestle and Abbott Laboratories.

**International Operations.** Our operations outside the United States are conducted through wholly-owned foreign subsidiaries and are located predominantly in Europe and the Asia-Pacific region. See Note 17 of Item 8, Financial Statements and Supplementary Data of this report for information regarding sales by geographic area and Exhibit 21 of Item 15, Exhibits and Financial Statement Schedules of this report for a list of subsidiaries. Our international operations are subject to the usual risks inherent in international trade, including currency fluctuations, local government contracting regulations, local governmental restrictions on foreign investment and repatriation of profits, exchange controls, regulation of the import and distribution of foreign goods, as well as changing economic and social conditions in countries in which our operations are conducted.

**Environmental Matters.** See the discussion in Note 18 of Item 8, Financial Statements and Supplementary Data of this report.

**Website Access to Information.** Our internet address is [www.moog.com](http://www.moog.com). We make our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and, if applicable, amendments to those reports, available on the investor relations portion of our website. The reports are free of charge and are available as soon as reasonably practicable after they are filed with the Securities and Exchange Commission. We have posted our corporate governance guidelines, Board committee charters and code of ethics to the investor relations portion of our website. This information is available in print to any shareholder upon request. All requests for these documents should be made to Moog's Manager of Investor Relations by calling 716-687-4225.



Executive Officers of the Registrant. Other than John B. Drenning and the changes noted below, the principal occupations of our officers for the past five years have been their employment with us in the same positions they currently hold. John B. Drenning's principal occupation is partner in the law firm of Hodgson Russ LLP.

On September 1, 2012, Patrick J. Roche was named Vice President. Previously, he was a Group Vice President and General Manager of the Moog Ireland operation.

On December 1, 2011, John R. Scannell was named Chief Executive Officer. Previously, he was President and Chief Operating Officer. Prior to that, he was Vice President and Chief Financial Officer.

On December 1, 2011, Robert T. Brady was named Executive Chairman. Previously, he was Chief Executive Officer.

On December 1, 2011, Gary Szakmary was named Vice President. Previously, he was a Corporate Group Vice President.

On December 2, 2010, Donald R. Fishback was named Vice President and Chief Financial Officer. Previously, he was Vice President of Finance.

On December 2, 2010, Sean Gartland was named Vice President. Previously, he was General Manager of the International Group, Pacific operation.



Edgar Filing: MOOG INC. - Form 10-K

Executive Officers	Age	Year First Elected Officer
John R. Scannell Chief Executive Officer	50	2006
Robert T. Brady Executive Chairman of the Board Director; Member, Executive Committee	72	1967
Joe C. Green Executive Vice President; Chief Administrative Officer; Director; Member, Executive Committee	72	1973
Richard A. Aubrecht Vice Chairman of the Board; Vice President - Strategy and Technology; Director; Member, Executive Committee	69	1980
Donald R. Fishback Vice President; Chief Financial Officer	57	1985
Martin J. Berardi Vice President	57	2000
Warren C. Johnson Vice President	54	2000
Jay K. Hennig Vice President	53	2002
Lawrence J. Ball Vice President	59	2004
Harald E. Seiffer Vice President	54	2005
Sasidhar Eranki Vice President	59	2006
Sean Gartland Vice President	50	2010
Gary A. Szakmary Vice President	62	2011
Patrick J. Roche Vice President	50	2012
Jennifer Walter Controller; Principal Accounting Officer	42	2008
Timothy P. Balkin Treasurer; Assistant Secretary	54	2000
John B. Drenning Secretary	76	1989

Item 1A. Risk Factors.

The markets we serve are cyclical and sensitive to domestic and foreign economic conditions and events, which may cause our operating results to fluctuate. The markets we serve are sensitive to fluctuations in general business cycles as well as domestic and foreign economic conditions and events. For example, our defense programs are largely contingent on U.S. Department of Defense funding. Our space programs rely on the same governmental funding as well as commercial investment into exploration activities. Demand for our industrial systems' products is dependent upon several factors, including capital investment, product innovations, economic growth, cost-reduction efforts and technology upgrades. In addition, the commercial airline industry is cyclical and sensitive to fuel price increases, labor disputes, economic conditions and program fleet modernization. These factors could result in a change in the amount of air travel, which could change service and maintenance orders for flight controls and spare parts, thereby affecting our commercial sales. As any of these occurrences evolve, they could have a material effect on our financial results if we are not flexible enough to match the cycle changes.

We operate in highly competitive markets with competitors who may have greater resources than we possess. Many of our products are sold in highly competitive markets. Some of our competitors, especially in our industrial markets, are larger, more diversified and have greater financial, marketing, production and research and development resources. As a result, they may be better able to withstand the effects of periodic economic downturns. Our sales and operating margins will be negatively impacted if our competitors:

- develop products that are superior to our products,
- develop products of comparable quality and performance that are more competitively priced than our products,
- develop methods of more efficiently and effectively providing products and services, or
- adapt more quickly than we do to new technologies or evolving customer requirements.

We believe that the principal points of competition in our markets are product quality, reliability, price, design and engineering capabilities, product development, conformity to customer specifications, timeliness of delivery, effectiveness of the distribution organization and quality of support after the sale. Maintaining and improving our competitive position will require continued investment in manufacturing, engineering, quality standards, marketing, customer service and support and our distribution networks. If we do not maintain sufficient resources to make these investments or are not successful in maintaining our competitive position, our operations and financial performance will suffer.

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. Sales to the U.S. Government and its prime contractors and subcontractors represent a significant portion of our business. In 2013, sales under U.S. Government contracts represented 31% of our total sales, primarily within our Aircraft Controls, Space and Defense Controls and Components segments. Sales to foreign governments represented 8% of our total sales. Government programs can be structured into a series of individual contracts and funding under those contracts is generally subject to annual congressional appropriations which are subject to change. Additionally, the 2011 Budget Control Act reduced the Department of Defense spending (or sequestration) by approximately \$500 billion over the next decade. These uniform cuts could have ramifications for the aerospace and defense market. Although federal agencies have received guidance from the Office of Management and Budget of how to implement these cuts, at this time, we do not have material information from our defense customers that would allow us to reliably estimate the impact of sequestration. As currently written in the Budget Control Act, sequestration could adversely impact our sales, operating profit and our cash flow. We have resources applied to specific government contracts and if any of those contracts are rescheduled or terminated, we may incur substantial costs redeploying those resources.

We make estimates in accounting for long-term contracts, and changes in these estimates may have significant impacts on our earnings. We have long-term contracts with some of our customers. These contracts are predominantly within our Aircraft Controls and Space and Defense Controls segments. Revenue representing 33% of 2013 sales was accounted for using the percentage of completion, cost-to-cost method of accounting. Under this method, we recognize revenue as work progresses toward completion as determined by the ratio of cumulative costs incurred to

date to estimated total contract costs at completion, multiplied by the total estimated contract revenue, less cumulative revenue recognized in prior periods.

9

---

Changes in these required estimates could have a material adverse effect on sales and profits. Any adjustments are recognized in the period in which the change becomes known using the cumulative catch-up method of accounting. For contracts with anticipated losses at completion, we establish a provision for the entire amount of the estimated remaining loss and charge it against income in the period in which the loss becomes known. Amounts representing performance incentives, penalties, contract claims or change orders are considered in estimating revenues, costs and profits when they can be reliably estimated and realization is considered probable.

We enter into fixed-price contracts, which could subject us to losses if we have cost overruns. In 2013, fixed-price contracts represented 90% of our sales that were accounted for using the percentage of completion, cost-to-cost method of accounting. On fixed-price contracts, we agree to perform the scope of work specified in the contract for a predetermined price. Depending on the fixed price negotiated, these contracts may provide us with an opportunity to achieve higher profits based on the relationship between our total contract costs and the contract's fixed price. However, we bear the risk that increased or unexpected costs may reduce our profit or cause us to incur a loss on the contract, which could reduce our net earnings. Loss reserves are most commonly associated with fixed-price contracts that involve the design and development of new and unique controls or control systems to meet the customer's specifications.

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. Many of our contracts involve subcontracts with other companies upon which we rely to perform a portion of the services we must provide to our customers. There is a risk that we may have disputes with our subcontractors, including disputes regarding the quality and timeliness of work performed by the subcontractor, customer concerns about the subcontractor, our failure to extend existing task orders or issue new task orders under a subcontract or our hiring of personnel of a subcontractor. Failure by our subcontractors to satisfactorily provide on a timely basis the agreed-upon supplies or perform the agreed-upon services may materially and adversely impact our ability to perform our obligations as the prime contractor. Subcontractor performance deficiencies could result in a customer terminating our contract for default. A default termination could expose us to liability and substantially impair our ability to compete for future contracts and orders. In addition, a delay or failure in our ability to obtain components and equipment parts from our suppliers may adversely affect our ability to perform our obligations to our customers.

Contracting on government programs is subject to significant regulation, including rules related to bidding, billing, accounting kickbacks and false claims, and any non-compliance could subject us to fines and penalties or possible debarment. Like all government contractors, we are subject to risks associated with this type of contracting. These risks include the potential for substantial civil and criminal fines and penalties. These fines and penalties could be imposed for failing to follow procurement integrity and bidding rules, employing improper billing practices or otherwise failing to follow cost accounting standards, receiving or paying kickbacks or filing false claims. We have been, and expect to continue to be, subjected to audits and investigations by U.S. and foreign government agencies and authorities. The failure to comply with the terms of our government contracts could harm our business reputation. It could also result in our progress payments being withheld or our suspension or debarment from future government contracts.

The loss of Boeing as a customer or a significant reduction in sales to Boeing could adversely impact our operating results. We provide Boeing with controls for both military and commercial applications, which, in total, represented 14% of our 2013 sales. Sales to Boeing's commercial airplane group are generally made under a long-term supply agreement through 2021 for the Boeing 787 and through 2019 for other commercial airplanes. The loss of Boeing as a customer or a significant reduction in sales to or earnings from Boeing could reduce our sales and earnings.

Our new product research and development efforts may not be successful which could reduce our sales and earnings. Technologies related to our products have undergone, and in the future may undergo, significant changes. We have incurred, and we expect to continue to incur, expenses associated with research and development activities and the introduction of new products in order to succeed in the future. Our technology has been developed through customer-funded and internally funded research and development and through business acquisitions. If we fail to predict customers' preferences or fail to provide viable technological solutions, we may experience difficulties that could delay or prevent the acceptance of new products or product enhancements. The research and development

expenses we incur may exceed our cost estimates and new products we develop may not generate sales sufficient to offset our costs. Additionally, our competitors may develop technologies and products that have more competitive advantages than ours and render our technology obsolete or uncompetitive.

Our inability to adequately enforce and protect our intellectual property or defend against assertions of infringement could prevent or restrict our ability to compete. We rely on patents, trademarks and proprietary knowledge and technology, both internally developed and acquired, in order to maintain a competitive advantage. Our inability to defend against the unauthorized use of these rights and assets could have an adverse effect on our results of operations and financial condition. Litigation may be necessary to protect our intellectual property rights or defend against claims of infringement. This litigation could result in significant costs and divert our management's focus away from operations.

Our business operations may be adversely affected by information systems interruptions, intrusions or new software implementations. We are dependent on various information technologies throughout our company to administer, store and support multiple business activities. Disruptions or cybersecurity attacks, such as unauthorized access, malicious software and other intrusions may lead to exposure of proprietary and confidential information as well as potential data corruption. Any intrusion may cause operational stoppages, diminished competitive advantages through reputational damages and increased operational costs. We are initiating a multi-year implementation of an Enterprise Resource Planning (ERP) system that will transform and standardize our business information systems. This endeavor will occupy additional resources, diverting attention from other operational activities, and may cause our information systems to perform unexpectedly. While we expect to invest significant resources throughout the planning and project management process, unanticipated delays could occur.

Our indebtedness and restrictive covenants under our credit facilities could limit our operational and financial flexibility. We have incurred significant indebtedness, and may in the future incur additional debt for acquisitions, operations, research and development and capital expenditures. Our ability to make interest and scheduled principal payments and meet restrictive covenants could be adversely impacted by changes in the availability, terms and cost of capital, increases in interest rates or a reduction in credit rating or outlook. These changes could cause our cost of doing business to increase and limit our ability to pursue acquisition opportunities, react to market conditions and meet operational and capital needs, which would place us at a competitive disadvantage.

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. Pension obligations and the related costs are determined using actual results and actuarial valuations that involve several assumptions. The most critical assumptions are the discount rate, the long-term expected return on assets and mortality. Other assumptions include salary increases and retirement age. Some of these assumptions, such as the discount rate and return on pension assets, are reflective of economic conditions and largely out of our control. Significant changes in these assumptions could adversely affect our earnings and equity, and increase our 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. Goodwill and other intangible assets are a substantial portion of our assets. At September 28, 2013, goodwill was \$767 million and other intangible assets were \$209 million of our total assets of \$3.2 billion. Our goodwill and other intangible assets may increase in the future since our strategy includes capitalizing on acquisitions. We may have to write off all or part of our goodwill or other intangible assets if their value becomes impaired. Although this write-off would be a non-cash charge, it could reduce our earnings and net worth significantly. Among other adverse impacts, this could result in our inability to refinance or renegotiate the terms of our bank indebtedness. In the fourth quarter of 2013, we took a \$38 million goodwill impairment charge in our Medical Devices segment.

Our sales and earnings may be affected if we cannot identify, acquire or integrate strategic acquisitions, or if we engage in divesting activities. Capitalizing on acquisitions is a key part of our fundamental strategy. Our historical growth has depended, and our future growth may depend, in part, on our ability to successfully identify, acquire and integrate acquired businesses. We intend to continue to seek additional acquisition opportunities, both to expand into new markets and to enhance our position in existing markets throughout the world. Growth by acquisition involves risk that could adversely affect our financial condition and operating results. We may not know the potential exposure to unanticipated liabilities. Additionally, the expected benefits or synergies might not be fully realized, integrating operations and personnel may be slowed as well as key employees, suppliers or customers of the acquired business may depart. We may also engage in divesting activities if the business operations do not meet our strategic objectives. Divestitures could adversely affect our profitability and, under certain circumstances, require us to record impairment charges or a loss as a result of a transaction. In pursuing acquisition opportunities, integrating acquired businesses, or divesting business operations, management's time and attention may be diverted from our core business, all the while consuming resources and incurring expenses for these activities.

Our operations in foreign countries expose us to political and currency risks and adverse changes in local legal and regulatory environments. We have significant manufacturing and sales operations in foreign countries. In addition, our domestic operations have sales to foreign customers. In 2013, 41% of our net sales were to customers outside of the United States. Our financial results may be adversely affected by fluctuations in foreign currencies and by the translation of the financial statements of our foreign subsidiaries from local currencies into U.S. dollars. We expect international operations and export sales to continue to contribute to our earnings for the foreseeable future. Both the sales from international operations and export sales are subject in varying degrees to risks inherent in doing business outside of the United States. Such risks include the possibility of unfavorable circumstances arising from host country laws or regulations, changes in tariff and trade barriers and import or export licensing requirements, and political or economic reprioritization, insurrection, civil disturbance or war.

Unforeseen exposure to additional income tax liabilities may affect our operating results. Our distribution of taxable income is subject to domestic and, as a result of our significant manufacturing and sales presence in foreign countries, foreign tax jurisdictions. Our effective tax rate and earnings may be affected by shifts in our mix of earnings in countries with varying statutory tax rates, changes in reinvested foreign earnings, alterations to tax regulations or interpretations and outcomes of any audits performed on previous tax returns.

Government regulations could limit our ability to sell our products outside the United States and could otherwise adversely affect our business. In 2013, approximately 12% of our sales were subject to compliance with the United States export regulations. Our failure to obtain, or fully adhere to the limitations contained in, the requisite licenses, meet registration standards or comply with other government export regulations would hinder our ability to generate revenues from the sale of our products outside the United States. Compliance with these government regulations may also subject us to additional fees and operating costs. The absence of comparable restrictions on competitors in other countries may adversely affect our competitive position. In order to sell our products in European Union countries, we must satisfy certain technical requirements. If we are unable to comply with those requirements with respect to a significant quantity of our products, our sales in Europe would be restricted. Doing business internationally also subjects us to numerous U.S. and foreign laws and regulations, including regulations relating to import-export control, technology transfer restrictions, foreign corrupt practices and anti-boycott provisions. Our failure, or failure by an authorized agent or representative that is attributable to us, to comply with these laws and regulations could result in administrative, civil or criminal liabilities and could, in the extreme case, result in monetary penalties, suspension or debarment from government contracts or suspension of our export privileges, which would have a material adverse effect on us.

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. Defects in the design and manufacture of our products may necessitate a product recall. We include complex system designs and components in our products that could contain errors or defects, particularly when we incorporate new technology into our products. If any of our products are defective, we could be required to redesign or recall those products or pay substantial damages or warranty claims and face actions by regulatory bodies and government authorities. Such an event could result in significant expenses, disrupt sales, affect our reputation and that of our products and cause us to withdraw from certain markets. We are also exposed to product liability claims. Many of our products are used in applications where their failure or misuse could result in significant property loss and serious personal injury or death. We carry product liability insurance consistent with industry norms. However, these insurance coverages may not be sufficient to fully cover the payment of any potential claim. A product recall or a product liability claim not covered by insurance could have a material adverse effect on our business, financial condition and results of operations. Future terror attacks, war, natural disasters or other catastrophic events beyond our control could negatively impact our business. Terror attacks, war or other civil disturbances, natural disasters and other catastrophic events could lead to economic instability and decreases in demand for commercial products, which could negatively impact our business, financial condition and results of operations. Terrorist attacks worldwide have caused instability from time to time in global financial markets and the aviation industry. In 2013, 19% of our net sales was in the commercial aircraft market. Our facilities are located throughout the world. They could be subject to damage from fire, flood, earthquake or other natural or man-made disasters. Although we carry third party property insurance covering these and other risks, our inability to meet customers' schedules as a result of a catastrophe may result in a loss of customers or significant additional costs, such as penalty claims under customer contracts. Our operations are subject to environmental laws, and complying with those laws may cause us to incur significant costs. Our operations and facilities are subject to numerous stringent environmental laws and regulations. Although we believe that we are in material compliance with these laws and regulations, future changes or interpretations in these laws or regulations, or changes in the nature of our operations may require us to make significant capital expenditures to ensure compliance. We have been and are currently involved in environmental remediation activities, the cost of which may become significant depending on the discovery of additional environmental exposures at sites that we currently own or operate and at sites that we formerly owned or operated, or at sites to which we have sent hazardous substances or wastes for treatment, recycling or disposal.



Item 1B. Unresolved Staff Comments.  
None.

Item 2. Properties.

On September 28, 2013, we occupied 5,342,000 square feet of space, distributed by segment as follows:

	Square Feet		Total
	Owned	Leased	
Aircraft Controls	1,423,000	390,000	1,813,000
Space and Defense Controls	555,000	410,000	965,000
Industrial Systems	704,000	685,000	1,389,000
Components	629,000	257,000	886,000
Medical Devices	142,000	125,000	267,000
Corporate Headquarters	20,000	2,000	22,000
Total	3,473,000	1,869,000	5,342,000

We have principal manufacturing facilities in the United States and countries throughout the world in the following locations:

✦ Aircraft Controls - U.S., Philippines and United Kingdom.

✦ Space and Defense Controls - U.S., Netherlands, United Kingdom, Germany and Ireland.

✦ Industrial Systems - Germany, U.S., Italy, China, Japan, Netherlands, Luxembourg, Philippines, India and United Kingdom.

✦ Components - U.S., United Kingdom and Canada.

✦ Medical Devices - U.S., Costa Rica and Lithuania.

Our corporate headquarters is located in East Aurora, New York.

We believe that our properties have been adequately maintained and are generally in good condition. Operating leases for our properties expire at various times from 2014 through 2034. Upon the expiration of our current leases, we believe that we will be able to either secure renewal terms or enter into leases for alternative locations at market terms.

Item 3. Legal Proceedings.

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

Item 4. Mine Safety Disclosures.

Not applicable.

## PART II

## Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Our two classes of common shares, Class A common stock and Class B common stock, are traded on the New York Stock Exchange ("NYSE") under the ticker symbols MOG.A and MOG.B. The following chart sets forth, for the periods indicated, the high and low sales prices of the Class A common stock and Class B common stock on the NYSE.

## Quarterly Stock Prices

Fiscal Year Ended	Class A		Class B	
	High	Low	High	Low
September 28, 2013				
1st Quarter	\$41.38	\$33.46	\$41.00	\$33.75
2nd Quarter	47.41	40.03	47.50	40.20
3rd Quarter	52.49	42.85	51.87	43.40
4th Quarter	59.81	50.38	59.40	50.69
September 29, 2012				
1st Quarter	\$44.72	\$30.47	\$44.62	\$31.00
2nd Quarter	45.53	40.31	45.00	40.60
3rd Quarter	43.75	36.48	43.43	36.60
4th Quarter	41.76	34.77	41.30	34.67

The number of shareholders of record of Class A common stock and Class B common stock was 921 and 408, respectively, as of November 8, 2013.

We did not pay cash dividends on our Class A common stock or Class B common stock in 2012 or 2013 and have no current plans to do so.

The following table summarizes our purchases of our common stock for the quarter ended September 28, 2013.  
Issuer Purchases of Equity Securities

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)
June 30 - July 31, 2013	17,504	\$56.79	—	1,000,000
August 1 - August 31, 2013	36,123	56.07	—	1,000,000
September 1 - September 28, 2013	12,449	55.28	—	1,000,000
Total	66,076	\$56.11	—	1,000,000

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") as follows: July, 519 shares at \$56.25 per (1) share, August, 966 shares at \$55.58 per share and September, 3,187 shares at \$58.69 per share. Purchases by the SECT from members of the Moog family included: August, 1,545 shares of Class B common stock at \$56.51 per share.

In connection with the exercise of stock options, we accept, from time to time, delivery of shares to pay the (2) exercise price of stock options. During July, we accepted delivery of 16,985 shares at \$56.81 per share, in August, we accepted delivery of 33,612 shares at \$56.06 per share and in September, we accepted delivery of 9,262 shares at \$54.11 per share, in connection with the exercise of stock options.

In December 2011, the Board of Directors authorized a share repurchase program. The program permits the (3) purchase of up to 1,000,000 shares of Class A or Class B common stock in open market or privately negotiated transactions at the discretion of management.

Performance Graph

The following graph and tables show the performance of the Company's Class A common stock compared to the NYSE Composite-Total Return Index and the S&P Aerospace & Defense Index for a \$100 investment made on September 30, 2008, including reinvestment of any dividends.

	9/08	9/09	9/10	9/11	9/12	9/13
Moog Inc. - Class A Common Stock	\$100.00	\$68.80	\$82.81	\$76.07	\$88.32	\$136.82
NYSE Composite - Total Return Index	100.00	94.53	101.92	97.27	121.39	145.20
S&P Aerospace & Defense Index	100.00	95.08	108.14	109.05	132.91	192.78

Edgar Filing: MOOG INC. - Form 10-K

Item 6. Selected Financial Data.

For a more detailed discussion of 2011 through 2013, refer to Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations of this report and Item 8, Financial Statements and Supplementary Data of this report.

(dollars in thousands, except per share data)	2013(1)(2)	2012(2)	2011(3)	2010(3)	2009(3)	
<b>RESULTS FROM OPERATIONS</b>						
Net sales	\$2,610,311	\$2,469,536	\$2,330,680	\$2,114,252	\$1,848,918	
Net earnings	120,497	152,462	136,021	108,094	85,045	
Net earnings per share						
Basic	\$2.66	\$3.37	\$2.99	\$2.38	\$2.00	
Diluted	\$2.63	\$3.33	\$2.95	\$2.36	\$1.98	
Weighted-average shares outstanding						
Basic	45,335,336	45,246,960	45,501,806	45,363,738	42,598,321	
Diluted	45,823,720	45,718,324	46,047,422	45,709,020	42,906,495	
<b>FINANCIAL POSITION</b>						
Total assets	\$3,237,095	\$3,105,907	\$2,842,967	\$2,712,134	\$2,634,317	
Working capital	924,145	885,032	834,056	812,805	764,137	
Securitized debt	100,000	81,800	—	—	—	
Indebtedness - senior	417,595	304,243	346,851	386,103	454,456	
Indebtedness - senior subordinated	191,562	378,579	378,596	378,613	378,630	
Shareholders' equity	1,535,765	1,304,790	1,191,891	1,120,956	1,065,033	
Shareholders' equity per common share outstanding	\$33.86	\$28.80	\$26.38	\$24.70	\$23.53	
<b>SUPPLEMENTAL FINANCIAL DATA</b>						
Capital expenditures	\$93,174	\$107,030	\$83,695	\$65,949	\$81,826	
Depreciation and amortization	108,073	100,816	96,327	91,216	76,384	
Research and development	134,652	116,403	106,385	102,600	100,022	
Twelve-month backlog (4)	1,296,371	1,279,307	1,324,809	1,181,303	1,097,760	
<b>RATIOS</b>						
Net return on sales	4.6	% 6.2	% 5.8	% 5.1	% 4.6	%
Return on shareholders' equity	8.6	% 12.1	% 11.4	% 9.8	% 8.3	%
Current ratio	2.28	2.33	2.53	2.70	2.71	
Net debt to capitalization (5)	26.4	% 32.1	% 33.9	% 36.8	% 41.4	%

(1) Includes goodwill impairment charge. See Note 6 of the Consolidated Financial Statements at Item 8, Financial Statements and Supplementary Data of this report.

(2) Includes the effects of acquisitions. See Note 2 of the Consolidated Financial Statements at Item 8, Financial Statements and Supplementary Data of this report.

(3) Includes the effects of acquisitions. In 2011, we acquired three business, two in our Aircraft Controls segment and one in our Components segment. In 2010, we acquired four businesses, one each in our Aircraft Controls and Industrial Systems segments and two in our Space and Defense Controls segment. In 2009, we acquired eight businesses, two each in our Aircraft Controls and Medical Devices segments, one in our Space and Defense Controls segment and three in our Industrial Systems segment.

(4) Twelve-month backlog is defined as confirmed orders we believe will be recognized as revenue within the next twelve months.

(5) Net debt is total debt less cash and cash equivalents. Capitalization is the sum of net debt and shareholders' equity.



Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

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:

military and commercial aircraft flight controls, satellite positioning controls, controls for gun aiming, stabilization and automatic ammunition loading for armored combat vehicles, thrust vector controls for space launch vehicles and controls for steering tactical and strategic missiles.

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

injection molding machines, metal forming, heavy industry, material and automotive testing, pilot training simulators, motors used in sleep apnea devices, enteral clinical nutrition and infusion therapy pumps, oil exploration, wind energy, power generation, surveillance systems and slip rings used on CT scanners.

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

We have long-term contracts with some of our customers. These contracts are predominantly within Aircraft Controls and Space and Defense Controls and represent 33% of our sales. 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, Components and Medical Devices 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, where performance really matters. In achieving a leadership position in the high performance, precision controls market, we have capitalized on our strengths, which include:

- superior technical competence,
- customer diversity and broad product portfolio, and
- well-established international presence serving customers worldwide.

These strengths afford us the ability to innovate our current solutions into new, complimentary technologies, providing us the opportunity to advance our products from one market to another. In addition, we aim to provide more systems solutions for the platforms on which we currently participate while strengthening the current niche market positions that we serve. 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 base and geographic presence. Our fundamental strategies to achieve our objectives include:

- maintaining our technological excellence by building upon our systems integration capabilities while solving our customers' most demanding technical problems, in applications where performance really matters,
- striving for organic growth as well as cost improvements,
- utilizing our global capabilities,
- developing products for new and emerging markets,
- growing our profitable aftermarket business, and
- capitalizing on strategic acquisitions and opportunities.

We face numerous challenges to improve shareholder value. These include, but are 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 address these challenges by focusing on strategic revenue growth, by continuing to improve operating efficiencies through various process and manufacturing initiatives and using low cost manufacturing facilities without compromising quality. Based on periodic strategy reviews, including the financial outlook of our business, we may also engage in restructuring activities, including reducing overhead, consolidating facilities and exiting some product lines.

#### 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 2013, we completed two business combinations. One of these business combinations was in our Space and Defense Controls segment. We acquired Broad Reach Engineering for \$46 million. Based in Colorado, Broad Reach Engineering is a leading designer and manufacturer of spaceflight electronics and software for aerospace, scientific, commercial and military missions. The company also provides ground testing, launch and on-orbit operations. We also completed one business combination in our Components segment. We acquired Aspen Motion Technologies, located in Radford, Virginia for \$34 million. Aspen is a designer and manufacturer of high-performance permanent magnet brushless DC motors, integrated digital controls and motorized impellers. Aspen also specializes in custom motor designs for end product integration in a variety of high-performance industrial applications.

In 2012, we completed four business combinations. Two of these business combinations were in our Components segment. We acquired Protokraft, LLC, based in Tennessee, for \$13 million plus contingent consideration with a fair value of \$5 million. Protokraft designs and manufactures opto-electronic transceivers, ethernet switches and media converters packaged into rugged, environmentally-sealed connectors. We also acquired Tritech International Limited, based in the United Kingdom, for \$34 million, which includes a working capital adjustment of \$1 million paid in 2013. Tritech is a leading designer and manufacturer of high performance acoustic sensors, sonars, video cameras and mechanical tooling equipment. We also completed two business combinations in our Space and Defense Controls segment. We acquired Bradford Engineering, based in the Netherlands, for \$13 million. Bradford is a developer and manufacturer of satellite equipment including attitude control, propulsion and thermal control subsystems. We also acquired In-Space Propulsion for \$45 million. In-Space Propulsion has locations in New York, California, Ireland and the United Kingdom and is a developer and manufacturer of liquid propulsion systems and components for satellites and missile defense systems.

In 2013, we completed one divestiture in our Medical Devices segment. We sold our Buffalo, New York operations of Ethox Medical for \$5 million.

Also in 2013, we began exploring strategic options for the Medical Devices segment, including the possibility of selling the entire segment.

#### CRITICAL ACCOUNTING POLICIES

Our financial statements and accompanying notes are prepared in accordance with U.S. generally accepted accounting principles. The preparation of these consolidated financial statements requires us to make estimates, assumptions and judgments that affect the amounts reported. These estimates, assumptions and judgments are affected by our application of accounting policies, which are discussed in Note 1 of Item 8, Financial Statements and Supplementary Data of this report. We believe the accounting policies discussed below are the most critical in understanding and evaluating our financial results. These critical accounting policies have been reviewed with the Audit Committee of



our Board of Directors.

20

---

#### Revenue Recognition on Long-Term Contracts

Revenue representing 33% of 2013 sales was accounted for using the percentage of completion, cost-to-cost method of accounting. This method of revenue recognition is predominantly used within the Aircraft Controls and Space and Defense Controls segments due to the contractual nature of the business activities, with the exception of their respective aftermarket activities. The contractual arrangements are either firm fixed-price or cost-plus contracts and are with the U.S. Government or its prime subcontractors, foreign governments or commercial aircraft manufacturers, including Boeing and Airbus. The nature of the contractual arrangements includes customers' requirements for delivery of hardware as well as funded nonrecurring development work in anticipation of follow-on production orders. We recognize revenue on contracts in the current period using the percentage of completion, cost-to-cost method of accounting as work progresses toward completion as determined by the ratio of cumulative costs incurred to date to estimated total contract costs at completion, multiplied by the total estimated contract revenue, less cumulative revenue recognized in prior periods. Changes in estimates affecting sales, costs and profits are recognized in the period in which the change becomes known using the cumulative catch-up method of accounting, resulting in the cumulative effect of changes reflected in the period. Estimates are reviewed and updated quarterly for substantially all contracts. A significant change in an estimate on one or more contracts could have a material effect on our results of operations.

Occasionally, it is appropriate to combine or segment contracts. Contracts are combined in those limited circumstances when they are negotiated as a package in the same economic environment with an overall profit margin objective and constitute, in essence, an agreement to do a single project. In such cases, we recognize revenue and costs over the performance period of the combined contracts as if they were one. Contracts are segmented in limited circumstances if the customer had the right to accept separate elements of the contract and the total amount of the proposals on the separate components approximated the amount of the proposal on the entire project. For segmented contracts, we recognize revenue and costs as if they were separate contracts over the performance periods of the individual elements or phases.

Contract costs include only allocable, allowable and reasonable costs which are included in cost of sales when incurred. For applicable U.S. Government contracts, contract costs are determined in accordance with the Federal Acquisition Regulations and the related Cost Accounting Standards. The nature of these costs includes development engineering costs and product manufacturing costs such as direct material, direct labor, other direct costs and indirect overhead costs. Contract profit is recorded as a result of the revenue recognized less costs incurred in any reporting period. Amounts representing performance incentives, penalties, contract claims or change orders are considered in estimating revenues, costs and profits when they can be reliably estimated and realization is considered probable. Revenue recognized on contracts for unresolved claims or unapproved contract change orders was not material in 2013, 2012 or 2011.

#### Contract Loss Reserves

At September 28, 2013, we had contract loss reserves of \$44 million. For contracts with anticipated losses at completion, a provision for the entire amount of the estimated remaining loss is charged against income in the period in which the loss becomes known. Contract losses are determined considering all direct and indirect contract costs, exclusive of any selling, general or administrative cost allocations that are treated as period expenses. Loss reserves are more common on firm fixed-price contracts that involve, to varying degrees, the design and development of new and unique controls or control systems to meet the customers' specifications.

#### Reserves for Inventory Valuation

At September 28, 2013, we had net inventories of \$552 million, or 33% of current assets. Reserves for inventory were \$94 million, or 15% of gross inventories. Inventories are stated at the lower-of-cost-or-market with cost determined primarily on the first-in, first-out method of valuation.

We record valuation reserves to provide for slow-moving or obsolete inventory by using both a formula-based method that increases the valuation reserve as the inventory ages and, additionally, a specific identification method. We consider overall inventory levels in relation to firm customer backlog in addition to forecasted demand including aftermarket sales. Changes in these and other factors such as low demand and technological obsolescence could cause us to increase our reserves for inventory valuation, which would negatively impact our gross margin. As we record

provisions within cost of sales to increase inventory valuation reserves, we establish a new, lower cost basis for the inventory.

21

---

#### Reviews for Impairment of Goodwill

At September 28, 2013, we had \$767 million of goodwill, or 24% of total assets. We test goodwill for impairment for each of our reporting units at least annually, during our fourth quarter, and whenever events occur or circumstances change, such as changes in the business climate, poor indicators of operating performance or the sale or disposition of a significant portion of a reporting unit.

We identify our reporting units by assessing whether the components of our operating segments constitute businesses for which discrete financial information is available and segment management regularly reviews the operating results of those components. Certain of our reporting units are our operating segments while others are one level below our operating segments.

Companies may perform a qualitative assessment as the initial step in the annual goodwill impairment testing process for all or selected reporting units. Companies are also allowed to bypass the qualitative analysis and perform a quantitative analysis if desired. Economic uncertainties and the length of time from the calculation of a baseline fair value are factors that we consider in determining whether to perform a quantitative test.

When we evaluate the potential for goodwill impairment using a qualitative assessment, we consider factors including, but not limited to, macroeconomic conditions, industry conditions, the competitive environment, changes in the market for our products and services, regulatory and political developments, entity specific factors such as strategy and changes in key personnel and overall financial performance. If, after completing this assessment, it is determined that it is more likely than not that the fair value of a reporting unit is less than its carrying value, we proceed to a quantitative two-step impairment test.

Quantitative testing first requires a comparison of the fair value of each reporting unit to its carrying value. We use the discounted cash flow method to estimate the fair value of each of our reporting units. The discounted cash flow method incorporates various assumptions, the most significant being projected revenue growth rates, operating profit margins and cash flows, the terminal growth rate and the discount rate. Management projects revenue growth rates, operating margins and cash flows based on each reporting unit's current business, expected developments and operational strategies over a five-year period. If the carrying value of the reporting unit exceeds its fair value, goodwill is considered impaired and any loss must be measured.

In measuring the impairment loss, the implied fair value of goodwill is determined by assigning a fair value to all of the reporting unit's assets and liabilities, including any unrecognized intangible assets, as if the reporting unit had been acquired in a business combination at fair value. If the carrying amount of the reporting unit goodwill exceeds the implied fair value of that goodwill, an impairment loss would be recognized in an amount equal to that excess.

#### Reporting units other than Medical Devices

For our annual test of goodwill for impairment in 2013, we performed a quantitative assessment for each of our reporting units. In performing these assessments, we used a 3% terminal growth rate, which is supported by our historical growth rate, near-term projections and long-term expected market growth. We then discounted our projected cash flows using weighted-average costs of capital that ranged from 10.5% to 11.5% for our various reporting units. These discount rates reflect management's assumptions of marketplace participants' cost of capital. Based on our tests, the fair value of each reporting unit exceeded its carrying amount by over 10%. Therefore, we concluded that goodwill was not impaired.

While any individual assumption could differ from those that we used, we believe the overall fair values of our reporting units are reasonable as the values are derived from a mix of reasonable assumptions. However, had we used discount rates that were 100 basis points higher than those we assumed or terminal growth rates that were 100 basis points lower than those we assumed, the fair value of each reporting unit would have still exceeded its carrying value by over 10%.

We evaluate the reasonableness of the resulting fair values of our reporting units by comparing the aggregate fair value to our market capitalization and assessing the reasonableness of any resulting premium.

#### Medical Devices reporting unit

We tested goodwill of our Medical Devices reporting unit for impairment in our fourth quarter as part of our annual test. In performing this assessment, we estimated fair value using a discounted cash flow analysis. We projected sales and operating margins. We used a 3% terminal growth rate, which is supported by our historical growth rate, near-term projections and long-term expected market growth. We then discounted our projected cash flows using a 10.5% weighted-average cost of capital that reflects management's assumptions of marketplace participants' cost of capital. In our fourth quarter, we also began a strategic assessment of our Medical Devices segment, including the possibility of divesting the entire segment. Our estimate of fair value was supported by information obtained as part of our strategic review of this business. Our test resulted in a fair value of Medical Devices that was less than its carrying amount, requiring us to measure goodwill for impairment.

We determined the implied fair value of goodwill, and recognized a \$38 million goodwill impairment charge in our fourth quarter of 2013 for the excess of the carrying amount of goodwill over its implied fair value.

The determination of our assumptions is subjective and requires significant estimates. Changes in these estimates and assumptions could materially affect the results of our reviews for impairment of goodwill.

#### Purchase Price Allocations for Business Combinations

During 2013, we completed two business combinations for a total purchase price of \$80 million. Under purchase accounting, we recorded assets and liabilities at fair value as of the acquisition dates. We identified and ascribed value to customer relationships, patents and technology, trade names, backlog and contracts and estimated the useful lives over which these intangible assets would be amortized. Valuations of these assets were performed largely using discounted cash flow models. These valuations support the conclusion that identifiable intangible assets had a value of \$29 million. The resulting goodwill was \$41 million.

Ascribing value to intangible assets requires estimates used in projecting relevant future cash flows, in addition to estimating useful lives of such assets. Using different assumptions could have a material effect on our current and future amortization expense.

#### Pension Assumptions

We maintain various defined benefit pension plans covering employees at certain locations. Pension expense for all defined benefit plans for 2013 was \$51 million. Pension obligations and the related costs are determined using actuarial valuations that involve several assumptions. The most critical assumptions are the discount rate and the long-term expected return on assets. Other assumptions include mortality rates, salary increases and retirement age. The discount rate is used to state expected future cash flows at present value. Using a higher discount rate decreases the present value of pension obligations and decreases pension expense. We began using the Mercer Pension Above Mean Discount Yield Curve to determine the discount rate for our U.S. plans as of September 28, 2013. The discount rate is constructed from bonds included in the Mercer Yield Curve that have a yield higher than the mean yield curve. We believe that the Mercer Pension Above Mean Discount Yield Curve best mirrors the yields of bonds that would be selected by management if actions were taken to settle our obligation. The yield curve calculation matches the notional cash inflows of the hypothetical bond portfolio with the expected benefit payments to arrive at the discount rate. Previously, we used the Mercer Yield Curve to determine the discount rate for our U.S. plans. In determining expense for 2013 for our largest U.S. plan, we used a 3.75% discount rate, compared to 4.75% for 2012. We will use a 5.0% discount rate to determine our expense in 2014 for this plan. This 125 basis point increase in the discount rate will decrease our pension expense by \$12 million in 2014. Of the 125 basis point increase in the discount rate, 25 basis points relate to our use of the Mercer Pension Above Mean Discount Yield Curve in determining 2014 expense compared to using the Mercer Yield Curve in determining 2013 expense.

The long-term expected return on assets assumption reflects the average rate of return expected on funds invested or to be invested to provide for the benefits included in the projected benefit obligation. In determining the long-term expected return on assets assumption, we consider our current and target asset allocations. We consider the relative weighting of plan assets, the historical performance of total plan assets and individual asset classes and economic and other indicators of future performance. Asset management objectives include maintaining an adequate level of diversification to reduce interest rate and market risk and to provide adequate liquidity to meet immediate and future benefit payment requirements. In determining the 2013 expense for our largest plan, we used an 8.6% return on assets assumption, compared to 8.9% for 2012. A 50 basis point decrease in the long-term expected return on assets assumption would increase our annual pension expense by \$2 million.

#### Deferred Tax Asset Valuation Allowances

At September 28, 2013, we had gross deferred tax assets of \$237 million and a deferred tax asset valuation allowance of \$4 million. The deferred tax assets principally relate to benefit accruals, inventory obsolescence, tax benefit carry forwards and contract loss reserves. The \$4 million deferred tax asset valuation allowance relates to certain tax benefit carryforwards.

We record a valuation allowance to reduce deferred tax assets to the amount of future tax benefit that we believe is more likely than not to be realized. We consider recent earnings projections, allowable tax carryforward periods, tax planning strategies and historical earnings performance to determine the amount of the valuation allowance. Changes in these factors could cause us to adjust our valuation allowance, which would impact our income tax expense when we determine that these factors have changed.

## CONSOLIDATED RESULTS OF OPERATIONS AND OUTLOOK

(dollars in millions except per share data)				2013 vs. 2012		2012 vs. 2011			
	2013	2012	2011	\$ Variance	% Variance	\$ Variance	% Variance	\$ Variance	% Variance
Net sales	\$2,610	\$2,470	\$2,331	\$141	6	%	\$139	6	%
Gross margin	30.0	% 30.2	% 29.2	%					
Research and development expenses	\$135	\$116	\$106	\$18	16	%	\$10	9	%
Selling, general and administrative expenses as a percentage of sales	15.2	% 15.6	% 15.2	%					
Interest expense	\$27	\$34	\$36	\$(7)	(21)	%	\$(1)	(4)	%
Goodwill Impairment	\$38	\$—	\$—	\$38	n/a		\$—	n/a	
Restructuring expense	\$14	\$—	\$1	\$14	n/a		\$(1)	n/a	
Other	\$8	\$1	\$(1)	\$8	1,079	%	\$2	(165)	%
Effective tax rate	27.0	% 27.0	% 26.0	%					
Net earnings	\$120	\$152	\$136	\$(32)	(21)	%	\$16	12	%
Diluted earnings per share	\$2.63	\$3.33	\$2.95	\$(0.70)	(21)	%	\$0.38	13	%

Net sales increased in 2013 compared to 2012 due to growth in Aircraft Controls, Components, Space and Defense Controls and Medical Devices, while sales in Industrial Systems declined. Acquisitions in Space and Defense Controls and in Components combined contributed 70% of the growth in 2013. Net sales increased in 2012 compared to 2011 due to growth in Aircraft Controls and Components.

Our gross margin in 2013 was similar to our gross margin in 2012. Favorable product mix in Aircraft Controls, Components and Medical Devices was offset by charges associated with recent acquisitions in Space and Defense Controls. Our gross margin increased in 2012 compared to 2011 due to more beneficial product mix across multiple segments. We had stronger gross margins in Aircraft Controls, Components and Industrial Systems, while gross margins were fairly flat in Space and Defense Controls and Medical Devices.

Research and development expenses increased in 2013 compared to 2012 due to reimbursements negotiated on commercial transport programs in 2012 and increased activity on the Boeing 787-9 program in 2013. Research and development expenses increased in 2012 compared to 2011 due to the ramp up of activity on the Airbus A350 program, partially offset by reduced activity on the Boeing 787-8 program.

Selling, general and administrative expenses as a percentage of sales for 2013 decreased compared to 2012 due to cost containment activities. Our selling, general and administrative expenses as a percentage of sales increased in 2012 compared to 2011 due to a shift of activity from direct product support to selling support.

Interest expense decreased in 2013 compared to 2012 due to the early redemption of our 6¼% senior subordinated notes on January 15, 2013. Interest expense decreased in 2012 compared to 2011 as a result of lower interest rates.

In the fourth quarter of 2013, we took a \$38 million goodwill impairment charge in our Medical Devices segment. The impairment charge net of tax was \$24 million, or \$0.52 per share.

In 2013, we restructured certain operations to better align our cost structure with our projected sales levels. The restructuring actions taken have resulted in workforce reductions in our Industrial Systems, Space and Defense Controls and Aircraft Controls segments.

Other expense in 2013 is primarily related to a \$7 million loss in our Medical Devices segment on the sale of the Buffalo, New York Ethox Medical operations. Additionally, we had a \$2 million write-down of an investment in Industrial Systems. These charges were partially offset by recording income in our Components and Aircraft Controls segments related to acquisitions with unachieved earn out provisions. Other expense in 2012 is mainly driven by foreign currency exchange losses, whereas in 2011, we recorded income in part due to an acquisition with unachieved earn out provisions in our Aircraft Controls segment.



The effective tax rate remained unchanged in 2013 as compared to 2012 due to similar levels of benefits in each year. In 2013, we benefited from a catchup adjustment for research and development tax credits mostly associated with 2012 following the enactment of legislation in 2013. Due to the goodwill impairment charge, we also had a lower effective tax rate. In 2012, we benefited from a reduction in the deferred tax asset valuation allowance associated with net operating loss carryforwards from a foreign operation. The effective tax rate increased in 2012 compared to 2011 due to lower foreign tax credits and research and development tax credits. Partially offsetting these items were the reduction in the deferred tax asset valuation allowance and a decrease in the legislated statutory tax rate in the United Kingdom affecting the measurement of deferred tax liabilities.

2014 Outlook – We expect sales in 2014 to increase 2% to \$2.67 billion, with growth in Components and Space and Defense Controls. We expect flat sales in Aircraft Controls as continued growth in our commercial programs is offset by declines in our military programs. We expect close to flat sales in Industrial Systems as our key markets are not forecasting a change in the current economic conditions. We expect our Medical Devices segment to decline slightly as organic sales growth is offset by a \$9 million reduction in sales due to the divestiture of the Buffalo, New York Ethox Medical operations. We expect a significant increase in profitability as our operating margin increases to 12.4% as Industrial Systems, Aircraft Controls, Space and Defense Controls and Medical Devices will contribute margin growth. Components' operating margin will decline slightly on less favorable sales mix. We expect net earnings to increase to between \$180 and \$189 million, and diluted earnings per share to increase to between \$3.90 and \$4.10.

## SEGMENT RESULTS OF OPERATIONS AND OUTLOOK

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 17 of Item 8, Financial Statements and Supplementary Data of this report.

## Aircraft Controls

(dollars in millions)	2013	2012	2011	2013 vs. 2012		2012 vs. 2011			
				\$	%	\$	%		
				Variance	Variance	Variance	Variance		
Net sales - military aircraft	\$596	\$576	\$530	\$20	4 %	\$46	9 %		
Net sales - commercial aircraft	463	388	321	76	20 %	67	21 %		
	\$1,060	\$963	\$850	\$96	10 %	\$113	13 %		
Operating profit	\$127	\$105	\$84	\$22	21 %	\$21	25 %		
Operating margin	12.0 %	10.9 %	9.9 %						
Backlog	\$671	\$658	\$641	\$13	2 %	\$17	3 %		

Aircraft Controls' sales increased in both 2013 as compared to 2012, and in 2012 as compared to 2011 in our commercial and military aircraft markets.

During 2013, nearly 80% of the sales growth was from the commercial market with OEM sales to Boeing driving most of the growth. Boeing OEM sales increased \$64 million as production continued to ramp up on the 787 Dreamliner as well as volume increases on legacy Boeing production programs. OEM sales to Airbus increased \$8 million, partly due to the A350 heading into production. Slightly offsetting the growth was a \$4 million decline in commercial aftermarket sales, in part due to lower Boeing 787 initial provisioning sales, from which we benefited in 2012. Also in 2013, most of the growth in the military market was from aftermarket platforms, especially in foreign military F-15 sales. Military OEM increased slightly as increases on the KC-46 Tanker program and our fighter programs were partially offset by lower sales in navigation aids.

During 2012, we experienced sales growth across the majority of our commercial platforms. Specifically, sales increased \$21 million to Boeing, \$12 million on business jets and \$7 million to Airbus as production on the A380 ramped up. Commercial aftermarket sales also increased \$15 million, primarily due to initial provisioning spares sales for the Boeing 787 program. Also during 2012, military aircraft sales increased \$12 million from foreign military sales, \$11 million on the F-35 program as production ramped up and \$9 million in navigation aids. Also military aftermarket sales increased \$8 million, and the KC-46 tanker program ramped up, providing an incremental \$5 million of sales.

Operating margin for 2013 improved as compared to 2012. Higher volume and more favorable product mix offset increases in research and development expenses. Specifically, research and development expense activity increased on the Boeing 787-9 platform in 2013. Also in 2012, research and development expenses included negotiated reimbursements on a commercial transport program. Operating margin for 2012 increased as compared to 2011 due to higher sales volumes. Higher research and development related to the ramp up of development work on the A350 program partially offset margin expansion. Increased expenses related to the move to our newly constructed manufacturing facility in Wolverhampton, England also partially offset the margin increase.

The increase of twelve-month backlog for Aircraft Controls at September 28, 2013 compared to September 29, 2012 is largely related to increases in commercial orders and is partially offset by fulfilling past orders on various military programs. The higher level of twelve-month backlog for Aircraft Controls at September 29, 2012 compared to

October 1, 2011 reflects strong orders for military aftermarket and commercial business.

2014 Outlook for Aircraft Controls – We expect sales in Aircraft Controls to remain relatively unchanged at \$1.06 billion in 2014. Commercial aircraft sales are expected to increase 8% to \$499 million due to stronger sales across our major OEM programs. Partially offsetting this growth is an expected 6% decline in military aircraft sales to \$558 million, as F-35 development slows and V-22 production rates decline. Also, we expect a decline in military aftermarket sales, reflecting our forecast of a possible sequestration impact. We expect our operating margin to increase to 13.0% in 2014 from 12.0% in 2013 as we benefit from incremental margin on higher commercial sales, a decline in research and development expenses and operational efficiencies.

## Space and Defense Controls

(dollars in millions)	2013	2012	2011	2013 vs. 2012		2012 vs. 2011	
				\$	%	\$	%
				Variance	Variance	Variance	Variance
Net sales	\$396	\$359	\$356	\$37	10 %	\$3	1 %
Operating profit	\$25	\$43	\$49	\$(18 )	(41 %)	\$(6 )	(13 %)
Operating margin	6.4 %	11.9 %	13.8 %				
Backlog	\$254	\$204	\$223	\$50	25 %	\$(19 )	(8 %)

Space and Defense Controls' sales increased in 2013 when compared to 2012 due to acquisitions in the space market more than offsetting declines in our defense and security markets. Space and Defense Controls sales were relatively flat in 2012 compared to 2011 with strong growth in the space market, including growth from acquisitions, offset by declines in both the security and defense markets.

Within the space market for 2013, sales increased \$48 million, with acquisitions accounting for \$58 million of incremental sales, but was offset by space market declines. In-Space Propulsion contributed an incremental \$32 million of sales and Broad Reach Engineering contributed \$26 million of sales. In addition, increased efforts on NASA's Soft Capture System and the core stage common thrust vector control programs were more than offset by space market declines due to multiple program completions and an overall weak satellite market. Sales within our defense sector in 2013 declined \$6 million, in part due to a decline in missile systems production rates. Within the security sector, sales declined \$5 million in 2013 as Driver Vision Enhancement ("DVE") program sales in 2012 did not repeat.

Within the space market for 2012, program sales grew \$37 million. Of this increase, \$17 million came from acquisitions with partial year contributions from In-Space Propulsion, \$9 million, and Bradford Engineering, \$8 million. Increased activities on the United Launch Alliance common thrust vector control system for the Delta IV and Atlas V next generation rockets drove an additional \$12 million increase. Sales in the security market decreased \$30 million, attributable to the DVE program wind down. Defense sales decreased \$6 million as 2011's order for an aircraft stores management system was only partially offset by higher tactical missile production rates in 2012.

Operating margin declined in 2013 as compared to the same periods of 2012. This is due in part to \$5 million of restructuring expenses incurred in the second half of the year. Excluding this expense, operating profit would have been \$30 million, or 7.7% of sales. The remaining decline is largely due to charges associated with technical challenges in one of our earlier space market acquisitions. Additionally, lower bookings in the satellite market and anticipated order delays in our defense market have negatively impacted our operating margin for the year. Operating margin decreased in 2012 due to a less favorable sales mix as 2011 included strong sales on the DVE program and profit contributions on the aircraft stores management system.

The increased level in twelve-month backlog at September 28, 2013 is mainly due to acquisitions in the past year. The lower twelve-month backlog as of September 29, 2012 compared to October 1, 2011 is a result of various projects completing and is partly offset by increases from our recent acquisitions.

2014 Outlook for Space and Defense Controls – We expect sales in Space and Defense Controls to increase 9% to \$433 million in 2014. We expect half of the increase to come from the benefit of a full year of the Broad Reach Engineering acquisition. We also expect increases in sales associated with foreign opportunities on a missile defense program and on ground vehicle systems. We expect our operating margin to increase to 10.0% in 2014 from 6.4%, or 7.7% excluding restructuring, in 2013.



## Industrial Systems

(dollars in millions)	2013	2012	2011	2013 vs. 2012		2012 vs. 2011	
				\$	%	\$	%
				Variance	Variance	Variance	Variance
Net sales	\$592	\$634	\$629	\$(42 )	(7 %)	\$4	1 %
Operating profit	\$42	\$63	\$63	\$(21 )	(33 %)	\$—	1 %
Operating margin	7.1	% 10.0	% 10.0				
Backlog	\$187	\$234	\$284	\$(46 )	(20 %)	\$(51 )	(18 %)

Industrial Systems' sales decreased in 2013 compared to 2012. Adjusting for foreign currency translation, Industrial Systems' sales decreased \$35 million, or 6%. Net sales in Industrial Systems were relatively flat in 2012 compared to 2011. Adjusting for foreign currency translation effects associated with the stronger U.S. dollar, real growth in 2012 was \$25 million, or 4%.

In 2013, wind energy sales declined \$43 million, primarily due to sales declines in the Chinese and European markets. Sales declined \$10 million in our industrial automation market, reflecting general economic conditions, as sales in metal forming and presses, heavy industry and plastics and die castings all decreased. Sales in our test markets declined \$9 million, primarily in our auto test programs, but were more than offset by our motion simulation programs increasing \$17 million on strength in flight training systems.

In 2012, sales increased \$24 million in our simulation and test markets. Sales increased \$13 million in our non-renewable energy market on strong demand for our energy exploration and generation products. The sales growth was partially offset by an \$18 million decline in the wind energy business due to continued weakness in China. Also, offsetting the increase was a \$15 million decline within industrial automation related to foreign currency translation effects and softer general industrial economic conditions.

Operating margin declined in 2013 compared to 2012 due to in part to \$7 million of restructuring expenses as well as a \$2 million investment write-down. Excluding these expenses, operating profit would have been \$52 million, or 8.7% of sales. The remaining decline was largely due to the lower sales volume, slightly offset by an improved last quarter of 2013 as we began to benefit from restructuring activities. The 2012 operating margin remained the same as 2011 on fairly level sales.

The lower level of twelve-month backlog in Industrial Systems at September 28, 2013 compared to September 29, 2012 is primarily due to lower levels of simulation and auto test orders, and due to a decline in wind energy orders. The lower level of twelve-month backlog in Industrial Systems at September 29, 2012 compared to October 1, 2011 is primarily due to a decline in wind energy orders and the timing of auto test orders.

2014 Outlook for Industrial Systems – We expect sales in Industrial Systems in 2014 to remain flat relative to sales in 2013. We expect that our operating margin will increase to 12.2% in 2014 from 7.1%, or 8.7% excluding restructuring and write-down expenses, in 2013, as we continue to benefit from our 2013 restructuring activities.

## Components

(dollars in millions)	2013	2012	2011	2013 vs. 2012		2012 vs. 2011		Variance	Variance
				\$	%	\$	%		
Net sales	\$415	\$374	\$353	\$41	11 %	\$21	6 %		
Operating profit	\$69	\$57	\$50	\$11	20 %	\$7	14 %		
Operating margin	16.5 %	15.3 %	14.3 %						
Backlog	\$176	\$167	\$163	\$10	6 %	\$3	2 %		

Components' sales increased in 2013 compared to 2012, and in 2012 compared to 2011, primarily as a result of incremental sales from acquisitions.

Sales increased in our non-aerospace and defense markets in 2013 compared to 2012 due to \$39 million of incremental sales from the Aspen and Tritech acquisitions. Additionally, sales increased in our energy market due to higher demand in off-shore oil exploration products and in our medical market. Excluding acquisitions, sales in our industrial market declined in 2013, in part due to lower demand for slip rings used in CCTV products. Also in 2013, sales increased \$1 million in our aerospace and defense markets largely due to commercial aircraft growth, which was mostly offset by the wind down of various defense platform upgrades.

Sales increased in 2012 compared to 2011 primarily due to \$15 million of combined incremental sales from the Animatics, Protokraft and Tritech acquisitions. Also, sales increased \$9 million in our marine business, driven by increased demand for off-shore oil exploration products, and increased \$6 million in our medical market. Partially offsetting these increases was a \$6 million decrease in military aircraft sales reflecting slower demand for military aircraft and defense control products, as well as a \$3 million sales decline in our wind energy component business.

Operating margin increased in 2013 compared to 2012 as a result of a favorable sales mix and cost containment efforts. In addition in 2013, we benefited from a \$2 million reversal of an earn out accrual related to an acquisition. Operating margin increased in 2012 compared to 2011 due to higher sales volumes in 2012 and a write down recorded in 2011.

The twelve-month backlog at September 28, 2013 compared to September 29, 2012 increased primarily related to acquisitions in our non-aerospace market. The higher level of twelve-month backlog at September 29, 2012 compared to October 1, 2011 is attributable to increased marine orders for oil and gas exploration products and in part attributable to our recent acquisitions. Offsetting the increase is a slowing demand for military aircraft and defense control products.

2014 Outlook for Components – We expect sales to increase 11% to \$460 million in 2014 with nearly half of this sales growth from our Aspen acquisition in our industrial market. Also we expect the remaining non-aerospace and defense markets to increase \$23 million, in part due to strong program volumes in our industrial market, new products in our energy market and continued strong medical imaging sales in our medical market. We expect sales in our aerospace and defense markets to increase slightly, as space and defense sales increases are almost entirely offset by aircraft sales declines. We expect operating margin will moderate to 15.0% in 2014 from 16.5% in 2013, reflecting a slightly less favorable mix of sales, and in part due to the absence of a favorable earn out accrual reversal.



## Medical Devices

(dollars in millions)	2013	2012	2011	2013 vs. 2012		2012 vs. 2011	
				\$	%	\$	%
				Variance	Variance	Variance	Variance
Net sales	\$147	\$140	\$142	\$8	5 %	\$(2 )	(2 %)
Operating profit (loss)	\$(36 )	\$5	\$—	\$(41 )	(753 %)	\$5	n/a
Operating margin	(24.1 %)	3.9 %	0.2 %				
Backlog	\$7	\$17	\$13	\$(9 )	(56 %)	\$4	28 %

Medical Devices' sales increased in 2013 when compared to 2012, and were relatively unchanged in 2012 compared to 2011.

In 2013 as compared to 2012, sales increased \$4 million due to increased volumes of enteral sets and \$1 million due to increased volume on IV pumps. Also, our sales increased \$3 million in other medical products as increased pump assembly demand was partly offset by a decline in sensor and handpieces, which had benefited from higher demand in 2012.

Pump sales increased slightly in 2012 as compared to 2011. Sales for syringe pumps increased as we had strong international shipments, especially in Europe, offset by lower sales of IV Pumps as we transitioned from our primary dependency on a single sales distributor to a model that includes more direct sales. Sales in 2012 of sensors, which are used to detect air bubbles in pumping applications, decreased \$3 million as we benefited from higher demand in 2011 for one of our customer's pumps due to a recall of certain large volume pumps in the hospital market.

Operating margin in 2013 included a \$38 million non-cash goodwill impairment charge in the fourth quarter of 2013. In the third quarter of 2013, we incurred a \$7 million loss on the sale of the Buffalo, New York Ethox Medical operations. Excluding these charges, operating margin was 6.4% in 2013. The resulting improved operating margin in 2013 compared to 2012 is in part due to increased enteral product volumes. Operating margins increased in 2012 due to improved efficiencies and increased cost containment activities. In addition, we recorded a \$1 million reserve in 2011 in connection with a voluntary software upgrade related to an infusion pump.

Twelve-month backlog for Medical Devices is not as substantial relative to sales as compared to our other segments, reflecting the shorter order-to-shipment cycle for this line of business.

2014 Outlook for Medical Devices – We expect sales in 2014 to decrease slightly to \$137 million due to lost sales from the Buffalo, New York Ethox Medical divestiture. We expect our operating margin to improve to 7.1% in 2014, from 6.4% in 2013 excluding the charges from goodwill impairment and the divestiture.

## FINANCIAL CONDITION AND LIQUIDITY

(dollars in millions)	2013	2012	2011	2013 vs. 2012		2012 vs. 2011	
				\$	%	\$	%
				Variance	Variance	Variance	Variance
Net cash provided (used) by:							
Operating activities	\$251	\$214	\$196	\$37	17 %	\$18	9 %
Investing activities	(173 )	(216 )	(121 )	43	(20 %)	(94 )	(78 %)
Financing activities	(72 )	37	(73 )	(109 )	(295 %)	110	151 %

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 September 28, 2013, our cash balance was \$157 million, which is 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. If we determined repatriation of foreign funds was 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 2013 compared to 2012. Timing drove higher customer advances in 2013, primarily from our Aircraft Controls and, to a lesser degree, our Space and Defense Controls segments. Higher customer advances accounted for more than half of the increase in cash provided by operating activities. In 2013, net cash from operating activities increased from higher accounts payable and slower growth in inventory. These benefits were partially offset by higher pension plan contributions in 2013 as compared to 2012. Net cash provided by operating activities increased in 2012 compared to 2011. The increase is primarily due to higher net earnings. Cash provided by working capital requirements also increased primarily due to lower pension plan contributions in 2012 after having accelerated the payment of previously planned 2012 contributions into the fourth quarter of 2011.

## Investing activities

Net cash used by investing activities for 2013 includes \$93 million for capital expenditures, \$69 million for two acquisitions, one in Space and Defense Controls and one in Components, \$13 million used to redeem our 6¼% senior subordinated notes that were invested in our supplemental retirement plan and a \$6 million loan to another company for strategic technology development. Additionally, cash provided by investing activities includes \$5 million for the sale of the Buffalo, New York Ethox Medical operations and \$3 million from proceeds of a liquidation of a technology investment.

Net cash used by investing activities in 2012 included \$107 million for capital expenditures, \$105 million for four acquisitions, two each in Space and Defense Controls and Components, and \$5 million related to another company for strategic technology development.

Net cash used by investing activities in 2011 included \$84 million for capital expenditures and \$38 million for three acquisitions, two in Aircraft Controls and one in Components.

The higher level of capital expenditures in 2012 compared to 2011 and 2013 was partly attributable to newly constructed facilities. We expect our 2014 capital expenditures to be approximately \$105 million.



Financing activities

Net cash used by financing activities in 2013 primarily reflects pay downs on our U.S. revolving credit facility due to our strong cash flow.

Net cash provided by financing activities in 2012 primarily reflects increased domestic borrowings to fund acquisitions and higher levels of capital expenditures.

Net cash used by financing activities in 2011 primarily reflects pay downs on our U.S. revolving credit facility and \$29 million used for our previous share repurchase program.

## 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 equity and debt securities to fund acquisitions or take advantage of favorable market conditions.

On January 15, 2013, we repurchased our 6<sup>1</sup>/<sub>4</sub>% senior subordinated notes due on January 15, 2015 at par, pursuant to an early redemption right. We redeemed the aggregate principal amount of \$200 million using proceeds drawn from our U.S. revolving credit facility.

On March 28, 2013, we amended our U.S. credit facility. The amendments primarily reflect a modification of the matrix used to determine the applicable interest margin, the commitment fee rate and extended the maturity of the credit facility to March 28, 2018. Our \$900 million U.S. revolving credit facility had an outstanding balance of \$418 million at September 28, 2013. Interest on the majority of the outstanding credit facility borrowings is based on LIBOR plus the applicable margin, which was 138 basis points at September 28, 2013. 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. The covenant for maximum capital expenditures is \$155 million for 2013 and increases by \$10 million each year thereafter. 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 September 28, 2013, we had \$496 million of unused borrowing capacity, including \$482 million from the U.S. revolving credit facility after considering standby letters of credit.

We have a trade receivables securitization facility (the "Securitization Program"), which terminates on March 3, 2014. 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 can be extended by agreement of the parties thereto for successive 364-day terms. The Securitization Program effectively increases our borrowing capacity by up to \$100 million and lowers our cost to borrow funds as compared to the U.S. credit facility. We had an outstanding balance of \$100 million at September 28, 2013. The Securitization Program reduced the amount outstanding under our U.S. revolving credit facility and increased the amount of short-term borrowings. Interest on the secured borrowings under the Securitization Program was 85 basis points at September 28, 2013 and is based on prevailing market rates for short-term commercial paper plus an applicable margin.

Net debt to capitalization was 26% at September 28, 2013 and 32% at September 29, 2012. The decrease in net debt to capitalization is primarily due to our positive cash flow and net earnings.

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

### 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 significant contractual obligations and commercial commitments at September 28, 2013 are as follows:

(dollars in millions)	Payments due by period				
	Total	2014	2015- 2016	2017- 2018	After 2018
Contractual Obligations					
Long-term debt	\$604	\$3	\$5	\$596	\$—
Interest on long-term debt	66	14	28	24	—
Operating leases	87	21	32	20	14
Purchase obligations	510	440	45	4	21
Total contractual obligations	\$1,267	\$478	\$110	\$644	\$35

In addition to the obligations in the table above, we have \$3 million recorded for unrecognized tax benefits in current liabilities, which includes \$1 million of related accrued interest. We are unable to determine if and when any of those amounts will be settled, nor can we estimate any potential changes to the unrecognized tax benefits.

Interest on long-term debt consists of payments on fixed-rate debt, primarily our senior subordinated notes. It excludes interest on variable-rate debt, primarily our U.S. revolving credit facility, as we are unable to determine the rate and average balance outstanding for the periods presented in the above table. Interest on variable-rate long-term debt, assuming the rate and outstanding balances do not change from those at September 28, 2013, would be approximately \$8 million annually.

Total contractual obligations exclude pension obligations. Our requirement to satisfy minimum funding requirements in 2014 with cash contributions is approximately \$19 million; however, we anticipate making contributions of \$51 million to defined benefit pension plans in 2014. We are unable to determine minimum funding requirements beyond 2014.

(dollars in millions)	Commitments expiring by period				
	Total	2014	2015- 2016	2017- 2018	After 2018
Other Commercial Commitments					
Standby letters of credit	\$14	\$10	\$2	\$2	\$—

## 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 61% of our 2013 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 F-35 Joint Strike Fighter, F/A-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 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 homeland security product line is dependent on government funding at federal and local levels, as well as private sector demand. Additional cuts to the U.S. Department of Defense's mandatory and discretionary budgeted spending, which became effective on March 1, 2013, resulting from the 2011 Budget Control Act, will have ramifications for the aerospace and defense market. Currently, the Budget Control Act provides that cuts of approximately \$500 billion over the next decade (which is generally referred to as sequestration) are uniform by category for programs, projects and activities within accounts. Although federal agencies have received guidance from the Office of Management and Budget of how to implement these cuts, at this time, we do not have material information from our defense customers that would allow us to reliably estimate the impact of sequestration. We believe that our military aftermarket sales could be most affected. Currently, we have approximately \$650 million in U.S. defense sales forecasted for 2014.

Global demand for air travel generally follows economic growth and, therefore, the commercial aircraft market has historically exhibited cyclical swings. 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, satellite replacement and global navigation. The space market is also partially dependent on the governmental authorized levels of funding for satellite communications.

### Industrial

Approximately 39% of our 2013 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 economies.

The energy market is in part affected by changing natural oil and gas prices, global urbanization and the resulting increase in demand for global energy. Drivers for global growth include investments in power generation infrastructure, including renewable energy, and exploration for new resource reservoirs.



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 the average life span of people, 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-third of our 2013 sales were denominated in foreign currencies. During 2013, average foreign currency rates generally weakened against the U.S. dollar compared to 2012. The translation of the results of our foreign subsidiaries into U.S. dollars decreased sales by \$10 million compared to one year ago. During 2012, average foreign currency rates generally strengthened against the U.S. dollar compared to 2011. The translation of the results of our foreign subsidiaries into U.S. dollars increased 2012 sales by \$32 million compared to 2011.

#### RECENT ACCOUNTING PRONOUNCEMENTS

In February 2013, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2013-02, "Reporting of Amounts Reclassified Out of Accumulated Other Comprehensive Income." The amendments require companies to provide information about the amounts reclassified out of accumulated comprehensive income by component. The amendments also require the presentation of the significant amounts reclassified out of accumulated comprehensive income by line items of net income, if the amount is required to be reclassified in its entirety in the same reporting period, either on the face of the financial statements or in the related footnotes. For other amounts that are not required to be reclassified in their entirety to net income, a company is required to cross-reference to other disclosures that provide additional detail about those amounts. The amendments are effective for fiscal years beginning after December 15, 2012 and interim periods within those fiscal years. Early adoption is permitted. This amendment is applicable to us beginning in the first quarter of 2014. Other than modifying our disclosures, the adoption of this standard is not expected to have a material impact on our financial statements.

In March 2013, the FASB issued ASU No. 2013-05, "Parent's Accounting for the Cumulative Translation Adjustment upon Derecognition of Certain Subsidiaries or Group of Assets within a Foreign Entity or of an Investment in a Foreign Entity." This ASU is intended to eliminate diversity in practice on the release of cumulative translation adjustments into net income when a parent either sells part or all of its investment in a foreign entity, or when it no longer holds a controlling financial interest. In addition, the amendments resolve the diversity in practice for the treatment of business combinations achieved in stages involving a foreign entity. The provisions of this ASU are effective for fiscal years beginning after December 15, 2013 and interim periods within those fiscal years. This amendment is applicable to us beginning in the first quarter of 2015. Early adoption is permitted. The adoption of this standard is not expected to have a material impact on our financial statements.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

In the normal course of business, we are exposed to interest rate risk from our long-term debt and foreign exchange rate risk related to our foreign operations and foreign currency transactions. To manage these risks, we may enter into derivative instruments such as interest rate swaps and foreign currency forward contracts. We do not hold or issue financial instruments for trading purposes. In 2013, our derivative instruments consisted of interest rate swaps designated as cash flow hedges and foreign currency forwards.

At September 28, 2013, we had \$389 million of borrowings subject to variable interest rates. During 2013, our average borrowings subject to variable interest rates were \$438 million and, therefore, if interest rates had been one percentage point higher during 2013, our interest expense would have been \$4 million higher. At September 28, 2013, we had interest rate swaps with notional amounts totaling \$120 million. The interest rate swaps effectively convert this amount of variable-rate debt to fixed-rate debt at 1.8%, including the applicable margin of 138 basis points as of September 28, 2013. The interest will revert back to variable rates based on LIBOR plus the applicable margin upon the maturity of the interest rate swaps on January 15, 2015 and January 15, 2016.

We also enter into forward contracts to reduce fluctuations in foreign currency cash flows related to third party purchases, intercompany product shipments and to reduce exposure on intercompany balances that are denominated in foreign currencies. We have foreign currency forwards with notional amounts of \$275 million outstanding at September 28, 2013 that mature at various times through the fourth quarter of 2015.

Although the majority of our sales, expenses and cash flows are transacted in U.S. dollars, we have exposure to changes in foreign currency exchange rates such as the Euro, British pound and Japanese yen. If average annual foreign exchange rates collectively weakened against the U.S. dollar by 10%, our pre-tax earnings in 2013 would have decreased by \$9 million from foreign currency translation. Offsetting that translation decrease would be a \$24 million increase from changes in operating margins as a result of foreign currency transactions, primarily from U.S. dollar denominated sales by our foreign operations.

Item 8. Financial Statements and Supplementary Data.  
Inc.

Consolidated Statements of Earnings

(dollars in thousands, except per share data)	Fiscal Years Ended		
	September 28, 2013	September 29, 2012	October 1, 2011
NET SALES	\$2,610,311	\$2,469,536	\$2,330,680
COST OF SALES	1,826,561	1,724,232	1,651,203
GROSS PROFIT	783,750	745,304	679,477
Research and development	134,652	116,403	106,385
Selling, general and administrative	396,636	385,051	353,964
Interest	26,962	34,312	35,666
Goodwill impairment	38,200	—	—
Restructuring	14,075	—	751
Other	8,219	697	(1,074 )
EARNINGS BEFORE INCOME TAXES	165,006	208,841	183,785
INCOME TAXES	44,509	56,379	47,764
NET EARNINGS	\$120,497	\$152,462	\$136,021
NET EARNINGS PER SHARE			
Basic	\$2.66	\$3.37	\$2.99
Diluted	\$2.63	\$3.33	\$2.95
AVERAGE COMMON SHARES OUTSTANDING			
Basic	45,335,336	45,246,960	45,501,806
Diluted	45,823,720	45,718,324	46,047,422
See accompanying Notes to Consolidated Financial Statements.			



Inc.  
Consolidated Statements of Comprehensive Income

(dollars in thousands)	Fiscal Years Ended		
	September 28, 2013	September 29, 2012	October 1, 2011
NET EARNINGS	\$120,497	\$152,462	\$136,021
OTHER COMPREHENSIVE INCOME (LOSS), NET OF TAX:			
Foreign currency translation adjustment	7,079	144	(9,515 )
Retirement liability adjustment	106,729	(46,296 )	(51,792 )
Change in accumulated (loss) income on derivatives	(1,255 )	385	(309 )
OTHER COMPREHENSIVE INCOME (LOSS), NET OF TAX	112,553	(45,767 )	(61,616 )
COMPREHENSIVE INCOME	\$233,050	\$106,695	\$74,405

See accompanying Notes to Consolidated Financial Statements.

Inc.		
Consolidated Balance Sheets		
(dollars in thousands, except per share data)	September 28, 2013	September 29, 2012
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$157,090	\$148,841
Receivables	811,376	744,551
Inventories	551,674	538,262
Deferred income taxes	91,052	87,780
Prepaid expenses and other current assets	36,183	29,474
<b>TOTAL CURRENT ASSETS</b>	<b>1,647,375</b>	<b>1,548,908</b>
<b>PROPERTY, PLANT AND EQUIPMENT, net</b>	<b>562,363</b>	<b>546,179</b>
<b>GOODWILL</b>	<b>766,924</b>	<b>762,854</b>
<b>INTANGIBLE ASSETS, net of accumulated amortization of \$180,586 in 2013 and \$147,342 in 2012</b>	<b>208,756</b>	<b>212,195</b>
<b>OTHER ASSETS</b>	<b>51,677</b>	<b>35,771</b>
<b>TOTAL ASSETS</b>	<b>\$3,237,095</b>	<b>\$3,105,907</b>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Short-term borrowings	\$105,088	\$90,774
Current installments of long-term debt	3,382	3,186
Accounts payable	181,893	169,587
Accrued salaries, wages and commissions	130,467	134,179
Customer advances	145,854	112,204
Contract loss reserves	44,228	48,428
Other accrued liabilities	112,318	105,518
<b>TOTAL CURRENT LIABILITIES</b>	<b>723,230</b>	<b>663,876</b>
<b>LONG-TERM DEBT, excluding current installments</b>		
Senior debt	409,125	292,083
Senior subordinated notes	191,562	378,579
<b>LONG-TERM PENSION AND RETIREMENT OBLIGATIONS</b>	<b>269,751</b>	<b>427,588</b>
<b>DEFERRED INCOME TAXES</b>	<b>104,377</b>	<b>36,455</b>
<b>OTHER LONG-TERM LIABILITIES</b>	<b>3,285</b>	<b>2,536</b>
<b>TOTAL LIABILITIES</b>	<b>1,701,330</b>	<b>1,801,117</b>
<b>COMMITMENTS AND CONTINGENCIES (Note 18)</b>		
	—	—
<b>SHAREHOLDERS' EQUITY</b>		
Common stock - par value \$1.00		
Class A - Authorized 100,000,000 shares	43,613	43,575
Issued 43,613,060 and outstanding 41,608,799 shares at September 28, 2013		
Issued 43,575,124 and outstanding 41,321,806 shares at September 29, 2012		
Class B - Authorized 20,000,000 shares. Convertible to Class A on a one-for-one basis	7,667	7,705
Issued 7,666,653 and outstanding 3,750,459 shares at September 28, 2013		
Issued 7,704,589 and outstanding 3,980,301 shares at September 29, 2012		
Additional paid-in capital	447,478	421,969
Retained earnings	1,289,713	1,169,216
Treasury shares	(83,003 )	(74,980 )
Stock Employee Compensation Trust	(35,545 )	(15,984 )

Edgar Filing: MOOG INC. - Form 10-K

Accumulated other comprehensive loss	(134,158	)	(246,711	)
TOTAL SHAREHOLDERS' EQUITY	1,535,765		1,304,790	
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$3,237,095		\$3,105,907	

See accompanying Notes to Consolidated Financial Statements.

Inc.			
Consolidated Statements of Shareholders' Equity			
(dollars in thousands)	Fiscal Years Ended		
	September 28, 2013	September 29, 2012	October 1, 2011
<b>COMMON STOCK</b>			
Beginning and end of year	\$51,280	\$51,280	\$51,280
<b>ADDITIONAL PAID-IN CAPITAL</b>			
Beginning of year	421,969	412,370	389,376
Issuance of treasury shares at more than cost	7,134	1,282	17,374
Equity-based compensation expense	6,620	6,226	6,952
Adjustment to market - SECT, and other	11,755	2,091	(1,332)
End of year	447,478	421,969	412,370
<b>RETAINED EARNINGS</b>			
Beginning of year	1,169,216	1,016,754	880,733
Net earnings	120,497	152,462	136,021
End of year	1,289,713	1,169,216	1,016,754
<b>TREASURY SHARES AT COST</b>			
Beginning of year	(74,980)	(74,479)	(47,724)
Class A shares issued as consideration for acquisitions	—	(46)	2,495
Class A shares issued related to options	3,591	945	828
Class A shares purchased	(11,614)	(1,400)	(30,078)
End of year	(83,003)	(74,980)	(74,479)
<b>STOCK EMPLOYEE COMPENSATION TRUST (SECT)</b>			
Beginning of year	(15,984)	(13,090)	(13,381)
Sale of SECT stock to RSP	781	1,766	2,852
Purchase of SECT stock	(9,676)	(2,929)	(3,992)
Adjustment to market - SECT	(10,666)	(1,731)	1,431
End of year	(35,545)	(15,984)	(13,090)
<b>ACCUMULATED OTHER COMPREHENSIVE (LOSS) INCOME</b>			
Beginning of year	(246,711)	(200,944)	(139,328)
Other comprehensive income (loss)	112,553	(45,767)	(61,616)
End of year	(134,158)	(246,711)	(200,944)
<b>TOTAL SHAREHOLDERS' EQUITY</b>	<b>\$1,535,765</b>	<b>\$1,304,790</b>	<b>\$1,191,891</b>
<b>TREASURY SHARES - CLASS A COMMON STOCK</b>			
Beginning of year	(2,253,318)	(2,393,039)	(2,221,635)
Class A shares issued as consideration for acquisitions	—	(1,208)	467,749
Class A shares issued related to options	495,297	175,823	155,262
Class A shares purchased	(246,241)	(34,894)	(794,415)
End of year	(2,004,262)	(2,253,318)	(2,393,039)
<b>TREASURY SHARES - CLASS B COMMON STOCK</b>			
Beginning and end of year	(3,305,971)	(3,305,971)	(3,305,971)
<b>SECT SHARES - CLASS B COMMON STOCK</b>			
Beginning of year	(418,317)	(395,470)	(374,502)
Sale of SECT stock to RSP	21,237	48,579	73,611
Purchase of SECT stock	(213,143)	(71,426)	(94,579)
End of year	(610,223)	(418,317)	(395,470)
See accompanying Notes to Consolidated Financial Statements.			





Inc.			
Consolidated Statements of Cash Flows			
(dollars in thousands)	Fiscal Years Ended		
	September 28, 2013	September 29, 2012	October 1, 2011
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>			
Net earnings	\$ 120,497	\$ 152,462	\$ 136,021
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation	75,000	67,084	64,963
Amortization	33,073	33,732	31,364
Deferred income taxes	(8,216 )	(4,113 )	2,923
Equity-based compensation expense	6,620	6,226	6,952
Goodwill impairment	38,200	—	—
Other	7,620	3,077	1,399
Changes in assets and liabilities providing (using) cash, excluding the effects of acquisitions:			
Receivables	(58,368 )	(53,424 )	(31,493 )
Inventories	(6,871 )	(21,289 )	(38,816 )
Accounts payable	10,543	(7,602 )	9,299
Customer advances	32,437	11,508	22,301
Accrued expenses	1,053	986	29,890
Net pension and post retirement liabilities	8,174	27,122	(35,437 )
Other assets and liabilities	(8,485 )	(1,429 )	(3,176 )
<b>NET CASH PROVIDED BY OPERATING ACTIVITIES</b>	<b>251,277</b>	<b>214,340</b>	<b>196,190</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>			
Acquisitions of businesses, net of cash acquired	(69,157 )	(104,089 )	(37,841 )
Purchase of property, plant and equipment	(93,174 )	(107,030 )	(83,695 )
Other investing transactions	(11,067 )	(4,454 )	298
<b>NET CASH USED BY INVESTING ACTIVITIES</b>	<b>(173,398 )</b>	<b>(215,573 )</b>	<b>(121,238 )</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>			
Net short-term borrowings	16,124	81,849	4,952
Proceeds from revolving lines of credit	897,162	805,859	676,930
Payments on revolving lines of credit	(782,617 )	(848,505 )	(714,452 )
Payments on long-term debt	(3,113 )	(1,335 )	(8,117 )
Payments on senior subordinated notes	(187,000 )	—	—
Proceeds from sale of treasury stock	10,725	2,227	1,912
Purchase of outstanding shares for treasury	(11,614 )	(1,400 )	(30,078 )
Proceeds from sale of stock held by SECT	781	1,766	2,852
Purchase of stock held by SECT	(9,676 )	(2,929 )	(3,992 )
Excess tax benefits from equity-based payment arrangements	1,089	360	135
Other financing transactions	(3,949 )	(470 )	(2,933 )
<b>NET CASH PROVIDED (USED) BY FINANCING ACTIVITIES</b>	<b>(72,088 )</b>	<b>37,422</b>	<b>(72,791 )</b>
Effect of exchange rate changes on cash	2,458	(1,027 )	(903 )

Edgar Filing: MOOG INC. - Form 10-K

INCREASE IN CASH AND CASH EQUIVALENTS	8,249	35,162	1,258
Cash and cash equivalents at beginning of year	148,841	113,679	112,421
Cash and cash equivalents at end of year	\$157,090	\$148,841	\$113,679
SUPPLEMENTAL CASH FLOW INFORMATION			
Interest paid	\$29,320	\$32,636	\$34,582
Income taxes paid, net of refunds	54,461	69,480	32,112
Treasury shares issued as consideration for acquisitions	—	(46	) 18,785
Unsecured notes issued for acquisitions	8,450	—	—
See accompanying Notes to Consolidated Financial Statements.			

---

Notes to Consolidated Financial Statements  
(dollars in thousands, except per share data)

---

Note 1 - Summary of Significant Accounting Policies

**Consolidation:** The consolidated financial statements include the accounts of Moog Inc. and all of our U.S. and foreign subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

**Fiscal Year:** Our fiscal year ends on the Saturday that is closest to September 30. The consolidated financial statements include 52 weeks for the years ended September 28, 2013, September 29, 2012 and October 1, 2011.

**Operating Cycle:** Consistent with industry practice, aerospace and defense related inventories, unbilled recoverable costs and profits on long-term contract receivables, customer advances and contract loss reserves include amounts relating to contracts having long production and procurement cycles, portions of which are not expected to be realized or settled within one year.

**Foreign Currency Translation:** Assets and liabilities of subsidiaries that prepare financial statements in currencies other than the U.S. dollar are translated using rates of exchange as of the balance sheet date and the statements of earnings are translated at the average rates of exchange for each reporting period.

**Use of Estimates:** The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates and assumptions.

**Revenue Recognition:** We recognize revenue using either the percentage of completion method for contracts or as units are delivered or services are performed.

**Percentage of completion method for contracts:** Revenue representing 33% of 2013 sales was accounted for using the percentage of completion, cost-to-cost method of accounting. This method of revenue recognition is predominantly used within the Aircraft Controls and Space and Defense Controls segments due to the contractual nature of the business activities, with the exception of their respective aftermarket activities. The contractual arrangements are either firm fixed-price or cost-plus contracts and are primarily with the U.S. Government or its prime subcontractors, foreign governments or commercial aircraft manufacturers, including Boeing and Airbus. The nature of the contractual arrangements includes customers' requirements for delivery of hardware as well as funded nonrecurring development work in anticipation of follow-on production orders.

Revenue on contracts using the percentage of completion, cost-to-cost method of accounting is recognized as work progresses toward completion as determined by the ratio of cumulative costs incurred to date to estimated total contract costs at completion, multiplied by the total estimated contract revenue, less cumulative revenue recognized in prior periods. Changes in estimates affecting sales, costs and profits are recognized in the period in which the change becomes known using the cumulative catch-up method of accounting, resulting in the cumulative effect of changes reflected in the period. Estimates are reviewed and updated quarterly for substantially all contracts. A significant change in an estimate on one or more contracts could have a material effect on our results of operations.

Occasionally, it is appropriate to combine or segment contracts. Contracts are combined in those limited circumstances when they are negotiated as a package in the same economic environment with an overall profit margin objective and constitute, in essence, an agreement to do a single project. In such cases, revenue and costs are recognized over the performance period of the combined contracts as if they were one. Contracts are segmented in limited circumstances if the customer had the right to accept separate elements of the contract and the total amount of the proposals on the separate components approximated the amount of the proposal on the entire project. For segmented contracts, revenue and costs are recognized as if they were separate contracts over the performance periods of the individual elements or phases.



Contract costs include only allocable, allowable and reasonable costs, as determined in accordance with the Federal Acquisition Regulations and the related Cost Accounting Standards for applicable U.S. Government contracts, and are included in cost of sales when incurred. The nature of these costs includes development engineering costs and product manufacturing costs including direct material, direct labor, other direct costs and indirect overhead costs. Contract profit is recorded as a result of the revenue recognized less costs incurred in any reporting period. Amounts representing performance incentives, penalties, contract claims or change orders are considered in estimating revenues, costs and profits when they can be reliably estimated and realization is considered probable. Revenue recognized on contracts for unresolved claims or unapproved contract change orders was not material for 2013, 2012 or 2011.

For contracts with anticipated losses at completion, a provision for the entire amount of the estimated remaining loss is charged against income in the period in which the loss becomes known. Contract losses are determined considering all direct and indirect contract costs, exclusive of any selling, general or administrative cost allocations that are treated as period expenses. Loss reserves are more common on firm fixed-price contracts that involve, to varying degrees, the design and development of new and unique controls or control systems to meet the customers' specifications.

As units are delivered or services are performed: In 2013, 67% of our sales were recognized as units were delivered or as service obligations were satisfied. Revenue is recognized when the risks and rewards of ownership and title to the product are transferred to the customer. When engineering or similar services are performed, revenue is recognized upon completion of the obligation including any delivery of engineering drawings or technical data. This method of revenue recognition is predominantly used within the Industrial Systems, Components and Medical Devices segments, as well as with aftermarket activity. Profits are recorded as costs are relieved from inventory and charged to cost of sales and as revenue is recognized. Inventory costs include all product manufacturing costs such as direct material, direct labor, other direct costs and indirect overhead cost allocations.

Shipping and Handling Costs: Shipping and handling costs are included in cost of sales.

Research and Development: Research and development costs are expensed as incurred and include salaries, benefits, consulting, material costs and depreciation.

Bid and Proposal Costs: Bid and proposal costs are expensed as incurred and classified as selling, general and administrative expenses.

Equity-Based Compensation: Equity-based compensation expense is included in selling, general and administrative expenses.

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

	2013	2012	2011
Basic weighted-average shares outstanding	45,335,336	45,246,960	45,501,806
Dilutive effect of equity-based awards	488,384	471,364	545,616
Diluted weighted-average shares outstanding	45,823,720	45,718,324	46,047,422

Cash and Cash Equivalents: All highly liquid investments with an original maturity of three months or less are considered cash equivalents.

Allowance for Doubtful Accounts: The allowance for doubtful accounts is based on our assessment of the collectibility of customer accounts. The allowance is determined by considering factors such as historical experience, credit quality, age of the accounts receivable balances and current economic conditions that may affect a customer's ability to pay.

Inventories: Inventories are stated at the lower-of-cost-or-market with cost determined on the first-in, first-out (FIFO) method of valuation.



**Property, Plant and Equipment:** Property, plant and equipment are stated at cost. Plant and equipment are depreciated principally using the straight-line method over the estimated useful lives of the assets, generally 40 years for buildings, 15 years for building improvements, 12 years for furniture and fixtures, 10 years for machinery and equipment, 8 years for tooling and test equipment and 3 to 4 years for computer hardware. Leasehold improvements are amortized on a straight-line basis over the term of the lease or the estimated useful life of the asset, whichever is shorter.

**Goodwill:** We test goodwill for impairment at the reporting unit level on an annual basis or more frequently if an event occurs or circumstances change that indicate that the fair value of a reporting unit is likely to be below its carrying amount.

We may elect to perform a qualitative assessment that considers economic, industry and company-specific factors for all or selected reporting units. If, after completing this assessment, it is determined that it is more likely than not that the fair value of a reporting unit is less than its carrying value, we proceed to a quantitative test. We may also elect to perform a quantitative test instead of a qualitative test for any or all of our reporting units.

Quantitative testing requires a comparison of the fair value of each reporting unit to its carrying value. We use the discounted cash flow method to estimate the fair value of our reporting units. The discounted cash flow method incorporates various assumptions, the most significant being projected revenue growth rates, operating margins and cash flows, the terminal growth rate and the weighted-average cost of capital. If the carrying value of the reporting unit exceeds its fair value, goodwill is considered impaired and any loss must be measured. To determine the amount of the impairment loss, the implied fair value of goodwill is determined by assigning a fair value to all of the reporting unit's assets and liabilities, including any unrecognized intangible assets, as if the reporting unit had been acquired in a business combination at fair value. If the carrying amount of the reporting unit goodwill exceeds the implied fair value of that goodwill, an impairment loss would be recognized in an amount equal to that excess.

We recorded a \$38,200 goodwill impairment charge in 2013 in our Medical Devices reporting unit. There were no impairment charges recorded in 2012 or 2011.

**Acquired Intangible Assets:** Acquired identifiable intangible assets are recorded at cost and are amortized over their estimated useful lives.

**Impairment of Long-Lived Assets:** Long-lived assets, including acquired identifiable intangible assets, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of those assets may not be recoverable. We use undiscounted cash flows to determine whether impairment exists and measure any impairment loss using discounted cash flows. There were no impairment charges recorded in 2013, 2012 or 2011.

**Product Warranties:** In the ordinary course of business, we warrant our products against defect 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:

	2013	2012	2011
Warranty accrual at beginning of year	\$ 18,859	\$ 19,247	\$ 14,856
Additions from acquisitions	—	233	120
Warranties issued during current year	9,019	9,842	11,426
Adjustments to pre-existing warranties	(1,911)	(460)	713
Reductions for settling warranties	(8,507)	(10,016)	(7,865)
Foreign currency translation	(31)	13	(3)
Warranty accrual at end of year	\$ 17,429	\$ 18,859	\$ 19,247

**Financial Instruments:** Our financial instruments consist primarily of cash and cash equivalents, receivables, notes payable, accounts payable, long-term debt, interest rate swaps and foreign currency forwards. The carrying values for our financial instruments approximate fair value with the exception at times of long-term debt. See Note 7,

Indebtedness, for fair value of long-term debt. We do not hold or issue financial instruments for trading purposes.





We carry derivative instruments on the consolidated balance sheets at fair value, determined by reference to quoted market prices. The accounting for changes in the fair value of a derivative instrument depends on whether it has been designated and qualifies as part of a hedging relationship and, if so, the reason for holding it. Our use of derivative instruments is generally limited to cash flow hedges of certain interest rate risks and minimizing foreign currency exposure on foreign currency transactions, which are typically designated in hedging relationships, and intercompany balances, which are not designated as hedging instruments. Cash flows resulting from forward contracts are accounted for as hedges of identifiable transactions or events and classified in the same category as the cash flows from the items being hedged.

Reclassifications: Certain prior year amounts have been reclassified to conform to the current year's presentation. The Consolidated Statements of Cash Flows has been restated to classify previously reported provisions for non-cash losses along with the respective assets and liabilities. See Note 17, Segments, for further information on reclassifications.

#### Note 2 - 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.

In 2013, we completed two business combinations. One of these business combinations was in our Space and Defense Controls segment. We acquired Broad Reach Engineering for \$34,550 of cash consideration, issuance of \$8,450 of notes payable and contingent consideration with an initial fair value of \$3,447. Based in Colorado, Broad Reach Engineering is a leading designer and manufacturer of spaceflight electronics and software for aerospace, scientific, commercial and military missions. The company also provides ground testing, launch and on-orbit operations. We also completed one business combination in our Components segment. We acquired Aspen Motion Technologies, located in Radford, Virginia for \$33,911 in cash. Aspen is a designer and manufacturer of high-performance permanent magnet brushless DC motors, integrated digital controls and motorized impellers for motors. Aspen also specializes in custom motor designs for end product integration and significant product enhancement in a variety of high-performance industrial applications.

In 2012, we completed four business combinations. Two of these business combinations were in our Components segment. We acquired Protokraft, LLC, based in Tennessee, for \$12,500 in cash plus contingent consideration with a fair value of \$4,809. Protokraft designs and manufactures opto-electronic transceivers, ethernet switches and media converters packaged into rugged, environmentally-sealed connectors. We also acquired Tritech International Limited, based in the United Kingdom, for \$34,267, net of cash acquired, which includes a working capital adjustment of \$1,346 paid in 2013. Tritech is a leading designer and manufacturer of high performance acoustic sensors, sonars, video cameras and mechanical tooling equipment. We also completed two business combinations in our Space and Defense Controls segment. We acquired Bradford Engineering, based in the Netherlands, for \$13,173, net of cash acquired. Bradford is a developer and manufacturer of satellite equipment including attitude control, propulsion and thermal control subsystems. We also acquired In-Space Propulsion for \$44,845, net of cash acquired, which includes a refund of \$650 received in 2013. In-Space Propulsion has locations in New York, California, Ireland and the United Kingdom and is a developer and manufacturer of liquid propulsion systems and components for satellites and missile defense systems.

In 2013, we completed one divestiture in our Medical Devices segment. We sold our Buffalo, New York operations of Ethox Medical for \$5,000 in cash, plus a \$200 note receivable.

The purchase price allocations for the 2012 acquisitions are complete. Allocations for 2013 acquisitions are subject to subsequent adjustment as we obtain additional information for our estimates during the respective measurement

periods.

48

---

## Note 3 - Receivables

Receivables consist of:

	September 28, 2013	September 29, 2012
Accounts receivable	\$328,038	\$338,000
Long-term contract receivables:		
Amounts billed	133,149	114,482
Unbilled recoverable costs and accrued profits	337,520	286,887
Total long-term contract receivables	470,669	401,369
Other	17,168	10,936
Total receivables	815,875	750,305
Less allowance for doubtful accounts	(4,499 )	(5,754 )
Receivables	\$811,376	\$744,551

Under our trade receivables securitization facility (the "Securitization Program"), we securitize certain trade receivables in transactions that are accounted for as secured borrowings. 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 balance sheets, is recorded at fair value, which approximates the total amount of the designated pool of accounts receivable. See Note 7, Indebtedness, for additional disclosures related to the Securitization Program.

Long-term contract receivables are primarily associated with prime contractors and subcontractors in connection with U.S. Government contracts, commercial aircraft and satellite manufacturers. Amounts billed under long-term contracts to the U.S. Government were \$11,532 at September 28, 2013 and \$7,413 at September 29, 2012. Unbilled recoverable costs and accrued profits under long-term contracts to be billed to the U.S. Government were \$11,963 at September 28, 2013 and \$4,223 at September 29, 2012. Unbilled recoverable costs and accrued profits principally represent revenues recognized on contracts that were not billable on the balance sheet date. These amounts will be billed in accordance with contract terms, generally as certain milestones are reached or upon shipment. Approximately three-quarters of unbilled amounts are expected to be collected within one year. In situations where billings exceed revenues recognized, the excess is included in customer advances.

There are no material amounts of claims or unapproved change orders included in the consolidated balance sheets. Balances billed but not paid by customers under retainage provisions are not material.

Concentrations of credit risk on receivables are limited to those from significant customers who are believed to be financially sound. Receivables from Boeing were \$182,050 at September 28, 2013 and \$139,287 at September 29, 2012. We perform periodic credit evaluations of our customers' financial condition and generally do not require collateral.

## Note 4 - Inventories

Inventories, net of reserves, consist of:

	September 28, 2013	September 29, 2012
Raw materials and purchased parts	\$194,249	\$188,643
Work in progress	289,124	283,122
Finished goods	68,301	66,497
Inventories	\$551,674	\$538,262

## Note 5 - Property, Plant and Equipment

Property, plant and equipment consists of:

	September 28, 2013	September 29, 2012
Land	\$28,983	\$27,154
Buildings and improvements	390,525	386,101
Machinery and equipment	756,503	693,780
Property, plant and equipment, at cost	1,176,011	1,107,035
Less accumulated depreciation and amortization	(613,648 )	(560,856 )
Property, plant and equipment	\$562,363	\$546,179

## Note 6 - Goodwill and Intangible Assets

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

	Aircraft Controls	Space and Defense Controls	Industrial Systems	Components	Medical Devices	Total
Balance at October 2, 2010	\$ 173,507	\$ 121,623	\$ 122,120	\$ 160,896	\$ 126,670	\$ 704,816
Acquisitions	22,464	—	—	12,404	—	34,868
Adjustments to prior year acquisitions	(903)	) 22	84	—	(138)	) (935)
Foreign currency translation	(1,016)	) (229)	) (1,370)	) (769)	) (344)	) (3,728)
Balance at October 1, 2011	194,052	121,416	120,834	172,531	126,188	735,021
Acquisitions	—	9,696	—	19,987	—	29,683
Adjustments to prior year acquisitions	(3,865)	) —	—	(147)	) —	) (4,012)
Foreign currency translation	2,199	(397)	) (1,259)	) 2,093	(474)	) 2,162
Balance at September 29, 2012	192,386	130,715	119,575	194,464	125,714	762,854
Acquisitions	—	29,361	—	11,218	—	40,579
Adjustments to prior year acquisitions	—	2,418	—	472	—	2,890
Impairment	—	—	—	—	(38,200)	) (38,200)
Divestiture	—	—	—	—	(2,900)	) (2,900)
Foreign currency translation	27	642	1,745	(1,301)	) 588	1,701
Balance at September 28, 2013	\$ 192,413	\$ 163,136	\$ 121,320	\$ 204,853	\$ 85,202	\$ 766,924

We recorded a \$38,200 goodwill impairment in 2013 in our Medical Devices reporting unit. We test goodwill for impairment at least annually, during our fourth quarter. In our fourth quarter, we also began a strategic assessment of our Medical Devices segment, including the possibility of divesting the entire segment. We estimated the fair value of this reporting unit using a discounted cash flow analysis, and our result was supported by information obtained as part of our strategic review of this business.

The components of acquired intangible assets are as follows:

	September 28, 2013			September 29, 2012	
	Weighted- Average Life (Years)	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Customer-related	10	\$ 193,744	\$(97,347)	) \$ 179,383	\$(80,953)
Program-related	18	79,607	(18,988)	) 79,631	(13,976)
Technology-related	9	76,558	(42,000)	) 67,969	(35,676)
Marketing-related	9	33,259	(18,476)	) 29,327	(16,145)
Acquired intangible assets	12	\$ 383,168	\$(176,811)	) \$ 356,310	\$(146,750)

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

Amortization of acquired intangible assets was \$31,137 in 2013, \$31,235 in 2012 and \$28,948 in 2011. Based on acquired intangible assets recorded at September 28, 2013, amortization is estimated to be approximately \$29,800 in 2014, \$25,600 in 2015, \$24,000 in 2016, \$20,600 in 2017 and \$18,900 in 2018.



## Note 7 - Indebtedness

Short-term borrowings consist of:

	September 28, 2013	September 29, 2012
Securitization program	\$100,000	\$81,800
Lines of credit	5,088	8,974
Short-term borrowings	\$105,088	\$90,774

The Securitization Program matures on March 3, 2014 and effectively increases our borrowing capacity by up to \$100,000. 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. The Securitization Program can be extended by agreement of the parties for successive 364-day terms. Interest for the Securitization Program is 0.8% at September 28, 2013 and is based on prevailing market rates for short-term commercial paper 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. We are in compliance with all covenants.

In addition to the Securitization Program we maintain short-term credit facilities with banks throughout the world that are principally demand lines subject to revision by the banks. Interest on outstanding lines of credit is 1.9% at September 28, 2013.

Long-term debt consists of:

	September 28, 2013	September 29, 2012
U.S. revolving credit facility	\$403,865	\$292,026
Other long-term debt	8,577	3,216
Obligations under capital leases	65	27
Senior debt	412,507	295,269
7¼% senior subordinated notes	191,562	191,575
6¼% senior subordinated notes	—	187,004
Total long-term debt	604,069	673,848
Less current installments	(3,382)	(3,186)
Long-term debt	\$600,687	\$670,662

On March 28, 2013, we amended our U.S. revolving credit facility. The amendments primarily reflect a modification of the matrix used to determine the applicable interest margin, the commitment fee rate and extended the maturity of the credit facility to March 28, 2018. The credit facility consists of a \$900,000 revolver and 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. Interest on substantially all of the outstanding credit facility borrowings is 1.6% and is based on LIBOR plus the applicable margin, which was 138 basis points at September 28, 2013.

Other long-term debt at September 28, 2013 consist of debt instruments being repaid through 2015 that carry interest rates ranging from 3.3% to 6.2%.

Our 7¼% senior subordinated notes are due June 15, 2018, with interest paid semiannually on June 15 and December 15 of each year. The 7¼% senior subordinated notes are unsecured, general obligations, subordinated in right of payment to all existing and future senior indebtedness and contain normal incurrence-based covenants. On January 15,



2013, we repurchased at par our 6<sup>1</sup>/<sub>4</sub>% senior subordinated notes due January 15, 2015, pursuant to an early redemption right. We redeemed the aggregate principal amount of \$200,000 using proceeds drawn from our U.S. revolving credit facility.

Maturities of long-term debt are \$3,382 in 2014, \$5,237 in 2015, \$13 in 2016, \$10 in 2017 and \$595,427 in 2018. At September 28, 2013, we had pledged assets with a net book value of \$1,603,208 as security for long-term debt. Our only financial instrument for which the carrying value at times differs from its fair value is long-term debt. At September 28, 2013, the fair value of long-term debt was \$611,266 compared to its carrying value of \$604,069. The fair value of long-term debt was estimated based on quoted market prices. At September 28, 2013, we had \$496,209 of unused short and long-term borrowing capacity, including \$482,180 from the U.S. revolving credit facility. Commitment fees are charged on some of these arrangements and on the U.S. revolving credit facility based on a percentage of the unused amounts available and are not material.

## Note 8 - Derivative Financial Instruments

We principally use derivative financial instruments to manage foreign exchange risk related to foreign operations and foreign currency transactions and interest rate risk associated with long-term debt. 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 September 28, 2013, we had interest rate swaps with notional amounts totaling \$120,000. The interest rate swaps effectively convert this amount of variable-rate debt to fixed-rate debt at 1.8%, including the applicable margin of 138 basis points as of September 28, 2013. The interest will revert back to variable rates based on LIBOR plus the applicable margin upon the maturity of the interest rate swaps on January 15, 2015 and January 15, 2016.

We use foreign currency forward contracts as cash flow hedges to effectively fix the exchange rates on future payments and revenue. To mitigate exposure in movements between various currencies, primarily the Philippine peso, we had outstanding foreign currency forwards with notional amounts of \$46,505 at September 28, 2013. These contracts mature at various times through September 24, 2015.

These interest rate swaps and foreign currency forwards are recorded on the consolidated balance sheet at fair value and the related gains or losses are deferred in shareholders' equity as a component of Accumulated Other Comprehensive Income (Loss) (AOCI). These deferred gains and losses are reclassified into expense during the periods in which the related payments or receipts affect earnings. However, to the extent the interest rate swaps and foreign currency forwards are not perfectly effective in offsetting the change in the value of the payments being hedged, the ineffective portion of these contracts is recognized in earnings immediately. Ineffectiveness was not material in 2013, 2012 or 2011.

Activity in Accumulated Other Comprehensive Income (Loss) (AOCI) related to these derivatives is summarized below:

	September 28, 2013	September 29, 2012
Balance at beginning of period	\$220	\$(165 )
Net deferral in AOCI of derivatives:		
Net increase (decrease) in fair value of derivatives	(1,937 )	783
Tax effect	827	(318 )
	(1,110 )	465
Net reclassification from AOCI into earnings:		
Reclassification from AOCI into earnings	(217 )	(161 )
Tax effect	72	81
	(145 )	(80 )
Balance at end of period	\$(1,035 )	\$220

Activity and classification of derivatives are as follows:

	Statement of earnings classification	Net deferral in AOCI of derivatives - effective portion	
		2013	2012
Foreign currency forwards	Sales	\$182	\$—
Foreign currency forwards	Cost of sales	(1,833 )	783
Interest rate swaps	Interest expense	(286 )	—
Net gain (loss)		\$(1,937 )	\$783
	Statement of earnings classification	Net reclassification from AOCI into earnings - effective portion	
		2013	2012
Foreign currency forwards	Sales	\$23	\$—
Foreign currency forwards	Cost of sales	361	228
Interest rate swaps	Interest expense	(167 )	(67 )
Net gain		\$217	\$161

#### Derivatives not designated as hedging instruments

We also have foreign currency exposure on balances, primarily intercompany, that are denominated in a foreign currency and are adjusted to current values using period-end exchange rates. The resulting gains or losses are recorded in the consolidated statements of earnings. To minimize foreign currency exposure, we have foreign currency forwards with notional amounts of \$228,457 at September 28, 2013. The foreign currency forwards are recorded in the consolidated balance sheets at fair value and resulting gains or losses are recorded in the consolidated statements of earnings. We recorded a net gain of \$2,249 in 2013 and a net loss of \$4,192 in 2012 on the foreign currency forwards. These losses are included in other expense and generally offset the gains from the foreign currency adjustments on the intercompany balances that are also included in other income or expense.

#### Summary of derivatives

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

		September 28, 2013	September 29, 2012
Derivatives designated as hedging instruments:			
Foreign currency forwards	Other current assets	\$217	\$467
Foreign currency forwards	Other assets	100	32
	Total assets	\$317	\$499
Foreign currency forwards	Other accrued liabilities	\$1,342	\$41
Foreign currency forwards	Other long-term liabilities	636	40
Interest rate swaps	Other accrued liabilities	85	—
Interest rate swaps	Other long-term liabilities	42	—
	Total liabilities	\$2,105	\$81
Derivatives not designated as hedging instruments:			
Foreign currency forwards	Other current assets	\$68	\$1,456
	Total assets	\$68	\$1,456
Foreign currency forwards	Other accrued liabilities	\$956	\$2,549
	Total liabilities	\$956	\$2,549



## 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. Our Level 3 fair value liabilities represent contingent consideration recorded for acquisitions to be paid if various financial targets are met. The amounts recorded were calculated for each payment scenario in each period using an estimate of the probability of the future cash outflows. The varying contingent payments were then discounted to the present value at the weighted average cost of capital. Fair value is assessed on a quarterly basis, or whenever events or circumstances change that indicates an adjustment is required. The assessment includes an evaluation of the performance of the acquired business compared to previous expectations, changes to future projections and the probability of achieving the earn out targets.

The following table presents the fair values and classification of our financial assets and liabilities measured on a recurring basis as of September 28, 2013:

	Classification	Level 1	Level 2	Level 3	Total
Foreign currency forwards	Other current assets	\$—	\$285	\$—	\$285
Foreign currency forwards	Other assets	—	100	—	100
	Total assets	\$—	\$385	\$—	\$385
Foreign currency forwards	Other accrued liabilities	\$—	\$2,298	\$—	\$2,298
Foreign currency forwards	Other long-term liabilities	—	636	—	636
Interest rate swaps	Other accrued liabilities	—	85	—	85
Interest rate swaps	Other long-term liabilities	—	42	—	42
Acquisition contingent consideration	Other accrued liabilities	—	—	1,804	1,804
Acquisition contingent consideration	Other long-term liabilities	—	—	2,203	2,203
	Total liabilities	\$—	\$3,061	\$4,007	\$7,068

The changes in financial liabilities classified as Level 3 within the fair value hierarchy are as follows:

	2013	2012
Balance at beginning of year	\$6,422	\$1,990
Additions from acquisitions	3,447	4,809
Increase in discounted future cash flows recorded as interest expense	317	287
Decrease in earn out provisions recorded as other income	(3,368)	(645)
Settlements paid in cash	(2,811)	(19)
Balance at end of year	\$4,007	\$6,422

Note 10 - Restructuring

In 2013, we initiated restructuring plans to better align our cost structure with projected sales levels. The restructuring actions taken have resulted in workforce reductions, primarily in the U.S., Europe and Asia.

Restructuring expense, which is principally related to severance, by segment for the year ended September 28, 2013 is as follows:

	2013
Aircraft Controls	\$1,692
Space and Defense Controls	4,968
Industrial Systems	7,415
Total	\$14,075

Restructuring activity is as follows:

	2013
Balance at beginning of period	\$—
Charged to expense	14,075
Cash payments	(6,983 )
Foreign currency translation	37
Balance at end of period	\$7,129

Payments related to these severance benefits are expected to be paid in full by the end of 2014.

## Note 11 - Employee Benefit Plans

We maintain multiple employee benefit plans, covering employees at certain locations.

Our qualified U.S. defined benefit pension plan is not open to new entrants. New employees are not eligible to participate in the pension plan. Instead, we make contributions for those employees to an employee-directed investment fund in the Moog Inc. Retirement Savings Plan ("RSP"). The Company's contributions are based on a percentage of the employee's eligible compensation and age. These contributions are in addition to the employer match on voluntary employee contributions.

The RSP includes an Employee Stock Ownership Plan. As one of the investment alternatives, participants in the RSP can acquire our stock at market value. We match 25% of the first 2% of eligible compensation contributed to any investment selection. Shares are allocated and compensation expense is recognized as the employer share match is earned. At September 28, 2013, the participants in the RSP owned 600,840 Class A shares and 1,781,712 Class B shares.

The changes in projected benefit obligations and plan assets and the funded status of the U.S. and non-U.S. defined benefit plans are as follows:

	U.S. Plans		Non-U.S. Plans	
	2013	2012	2013	2012
Change in projected benefit obligation:				
Projected benefit obligation at prior year measurement date	\$779,977	\$635,798	\$153,089	\$131,914
Service cost	26,856	23,347	4,874	4,046
Interest cost	28,818	29,786	5,749	5,864
Contributions by plan participants	—	—	970	900
Actuarial losses (gains)	(138,603 )	108,095	8,781	16,557
Foreign currency exchange impact	—	—	1,400	(1,995 )
Benefits paid from plan assets	(17,586 )	(15,926 )	(1,903 )	(1,430 )
Benefits paid by Moog	(1,556 )	(1,123 )	(3,162 )	(2,700 )
Other	157	—	182	(67 )
Projected benefit obligation at measurement date	\$678,063	\$779,977	\$169,980	\$153,089
Change in plan assets:				
Fair value of assets at prior year measurement date	\$441,426	\$389,286	\$84,044	\$68,991
Actual return on plan assets	42,853	68,074	12,147	11,086
Employer contributions	34,584	1,115	8,077	6,842
Contributions by plan participants	—	—	970	900
Benefits paid	(19,142 )	(17,049 )	(5,065 )	(4,130 )
Foreign currency exchange impact	—	—	(1,485 )	422
Other	(803 )	—	(63 )	(67 )
Fair value of assets at measurement date	\$498,918	\$441,426	\$98,625	\$84,044
Funded status and amount recognized in assets and liabilities	\$(179,145 )	\$(338,551 )	\$(71,355 )	\$(69,045 )
Amount recognized in assets and liabilities:				
Other assets - non-current	\$—	\$—	\$2,043	\$—
Accrued and long-term pension liabilities	(179,145 )	(338,551 )	(73,398 )	(69,045 )
Amount recognized in assets and liabilities	\$(179,145 )	\$(338,551 )	\$(71,355 )	\$(69,045 )
Amount recognized in accumulated other comprehensive loss, before taxes:				
Prior service cost (credit)	\$995	\$42	\$(172 )	\$(305 )
Actuarial losses	247,803	415,524	28,550	29,775
Amount recognized in accumulated other comprehensive loss, before taxes	\$248,798	\$415,566	\$28,378	\$29,470



Our stock included in U.S. plan assets consisted of 149,022 shares of Class A common stock and 1,001,034 shares of Class B common stock. Our funding policy is to contribute at least the amount required by law in the respective countries.

The total accumulated benefit obligation as of the measurement date for all defined benefit pension plans was \$766,870 in 2013 and \$832,303 in 2012. At the measurement date in 2013, our plans had fair values of plan assets totaling \$597,543. At the measurement date in 2013, two of our plans had fair values of plan assets totaling \$47,847, which exceeded their accumulated benefit obligations of \$40,984. At the measurement date in 2012, three of our plans had fair values of plan assets totaling \$37,798, which exceeded their accumulated benefit obligations of \$33,438. The following table provides aggregate information for the other pension plans, which have projected benefit obligations or accumulated benefit obligations in excess of plan assets:

	September 28, 2013	September 29, 2012
Projected benefit obligation	\$802,239	\$892,005
Accumulated benefit obligation	725,886	798,865
Fair value of plan assets	549,696	487,673

Weighted-average assumptions used to determine benefit obligations as of the measurement dates and weighted-average assumptions used to determine net periodic benefit cost are as follows:

	U.S. Plans			Non-U.S. Plans		
	2013	2012	2011	2013	2012	2011
Assumptions for net periodic benefit cost:						
Discount rate	3.7 %	4.7 %	5.2 %	4.0 %	4.7 %	4.6 %
Return on assets	8.6 %	8.9 %	8.9 %	4.5 %	5.5 %	5.1 %
Rate of compensation increase	4.1 %	3.8 %	3.8 %	2.9 %	3.0 %	3.1 %
Assumptions for benefit obligations:						
Discount rate	5.0 %	3.7 %	4.7 %	3.6 %	3.9 %	4.7 %
Rate of compensation increase	4.1 %	4.1 %	3.8 %	2.8 %	2.9 %	3.0 %

Pension plan investment policies and strategies are developed on a plan specific basis, which varies by country. At September 28, 2013, the U.S. plans represented 84% of consolidated pension assets, while the non-U.S. plans represented 16% of consolidated pension assets, the largest concentration being in the United Kingdom (6%). The overall objective for the long-term expected return on both domestic and international plan assets is to earn a rate of return over time to meet anticipated benefit payments in accordance with plan provisions. The long-term investment objective of both the domestic and international retirement plans is to maintain the economic value of plan assets and future contributions by producing positive rates of investment return after subtracting inflation, benefit payments and expenses. Each of the plan's strategic asset allocations is based on this long-term perspective and short-term fluctuations are viewed with appropriate perspective.

The U.S. qualified defined benefit plan's assets are invested for long-term investment results. To accommodate the long-term investment horizon while providing appropriate liquidity, the plan maintains a liquid cash reserve of one-month to three-months of benefit distributions. Its assets are broadly diversified to help alleviate the risk of adverse returns in any one security or investment class. The international plans' assets are invested in both low-risk and high-risk investments in order to achieve the long-term investment strategy objective. Investment risks for both domestic and international plans are considered within the context of the entire plan, rather than on a security-by-security basis.

The U.S. qualified defined benefit plan and certain international plans have investment committees that are responsible for formulating investment policies, developing manager guidelines and objectives and approving and managing qualified advisors and investment managers. The guidelines established for each of the plans define permitted investments within each asset class and apply certain restrictions such as limits on concentrated holdings in order to meet overall investment objectives.

Pension obligations and the related costs are determined using actuarial valuations that involve several assumptions. The return on assets assumption reflects the average rate of return expected on funds invested or to be invested to provide for the benefits included in the projected benefit obligation. In determining the return on assets assumption, we consider the relative weighting of plan assets, the historical performance of total plan assets and individual asset

classes and economic and other indicators of future performance. Asset management objectives include maintaining an adequate level of diversification to reduce interest rate and market risk and to provide adequate liquidity to meet immediate and future benefit payment requirements.

In determining our U.S. pension expense for 2013, we assumed an average rate of return on U.S. pension assets of approximately 8.6% measured over a planning horizon with reasonable and acceptable levels of risk. The rate of return assumed an average of 60% in equity securities, 30% in fixed income securities and 10% in other securities. In determining our non-U.S. pension expense for 2013, we assumed an average rate of return on non-U.S. pension assets of approximately 4.5% measured over a planning horizon with reasonable and acceptable levels of risk. The rate of return assumed an average asset allocation of 40% in equity securities and 60% in fixed income securities.

The weighted average asset allocations by asset category for the pension plans as of September 28, 2013 and September 29, 2012 are as follows:

Asset category:	U.S. Plans			Non-U.S. Plans		
	Target	2013 Actual	2012 Actual	Target	2013 Actual	2012 Actual
Equity	45%-70%	60	% 82	% 40%-60%	30	% 35
Debt	20%-35%	30	% 15	% 40%-60%	43	% 44
Real estate and other	10%-20%	10	% 3	% 0%-30%	27	% 21

The following tables present the consolidated plan assets using the fair value hierarchy, which is described in Note 9 - Fair Value, as of September 28, 2013 and September 29, 2012.

U.S. Plans, September 28, 2013	Level 1	Level 2	Level 3	Total
Shares of registered investment companies:				
Non-investment grade	\$61,133	\$—	\$—	\$61,133
Real assets	17,916	—	—	17,916
Other	16,487	—	—	16,487
Fixed income funds:				
U.S. Government obligations	—	40,173	—	40,173
Corporate and other	—	27,418	—	27,418
Employer securities	67,163	—	—	67,163
Interest in common collective trusts	—	152,355	—	152,355
Money market funds	—	23,938	—	23,938
Cash and cash equivalents	68	—	—	68
Limited partnerships	—	—	71,072	71,072
Insurance contracts and other	—	—	21,195	21,195
Fair value	\$162,767	\$243,884	\$92,267	\$498,918
Non-U.S. Plans, September 28, 2013	Level 1	Level 2	Level 3	Total
Shares of registered investment companies	\$—	\$26,520	\$—	\$26,520
Domestic equity	4,493	169	—	4,662
International equity	9,784	—	—	9,784
Fixed income funds	4,430	23,658	—	28,088
Cash and cash equivalents	96	3,107	—	3,203
Insurance contracts and other	—	548	25,820	26,368
Fair value	\$18,803	\$54,002	\$25,820	\$98,625

Edgar Filing: MOOG INC. - Form 10-K

U.S. Plans, September 29, 2012	Level 1	Level 2	Level 3	Total
Shares of registered investment companies:				
Large growth stocks	\$87,062	\$—	\$—	\$87,062
International equity	72,763	—	—	72,763
Emerging markets	18,566	—	—	18,566
Common stock:				
International equity	28,774	—	—	28,774
Large value stocks	17,454	—	—	17,454
Large core stocks	18,409	—	—	18,409
Large growth stocks	19,411	—	—	19,411
Other	16,950	—	—	16,950
Fixed income funds:				
Intermediate-term core fixed income	67,046	—	—	67,046
Employer securities	43,893	—	—	43,893
Interest in common collective trusts	—	29,105	—	29,105
Money market funds	—	6,630	—	6,630
Cash and cash equivalents	1,759	—	—	1,759
Limited partnerships	—	—	13,604	13,604
Fair value	\$392,087	\$35,735	\$13,604	\$441,426
Non-U.S. Plans, September 29, 2012	Level 1	Level 2	Level 3	Total
Shares of registered investment companies	\$—	\$30,700	\$—	\$30,700
Domestic equity	3,161	142	—	3,303
International equity	9,866	—	—	9,866
Fixed income funds	2,157	16,765	—	18,922
Cash and cash equivalents	748	—	—	748
Insurance contracts and other	—	653	19,852	20,505
Fair value	\$15,932	\$48,260	\$19,852	\$84,044

The following is a roll forward of the consolidated plan assets classified as Level 3 within the fair value hierarchy:

	U.S. Plans	Non-U.S. Plans	Total
Balance at October 1, 2011	\$8,633	\$ 11,378	\$20,011
Return on assets	3,026	3,769	6,795
Purchases from contributions to Plans	5,344	5,420	10,764
Proceeds from sales of investments	(3,399 )	—	(3,399 )
Settlements paid in cash	—	(160 )	(160 )
Foreign currency translation	—	(555 )	(555 )
Balance at September 29, 2012	13,604	19,852	33,456
Return on assets	7,653	3,670	11,323
Purchases from contributions to Plans	81,045	2,229	83,274
Proceeds from sales of investments	(3,000 )	—	(3,000 )
Settlements paid in cash	(7,035 )	(164 )	(7,199 )
Foreign currency translation	—	233	233
Balance at September 28, 2013	\$92,267	\$ 25,820	\$118,087



The valuation methodologies used for pension plan assets measured at fair value have not changed in the past two years. Cash and cash equivalents consist of direct cash holdings and institutional short-term investment vehicles. Direct cash holdings are valued at cost, which approximates fair value. Institutional short-term investment vehicles are valued daily. Investments in U.S. Government obligations are valued by a pricing service based upon closing market prices at year end. Shares of registered investment companies are valued at net asset value of shares held by the plan at year end. Common stocks traded on national exchanges are valued at the last reported sales price. Investments denominated in foreign currencies are translated into U.S. dollars using the last reported exchange rate. Fixed income funds are valued using methods, such as dealer quotes, available trade information, spreads, bids and offers provided by a pricing vendor. Investments in limited partnerships are valued based on the net asset value of our share in the fair value of the investments at year end. Common collective trust funds consist of pools of investments used by institutional investors to obtain exposure to equity and fixed income markets. Common collective trust funds held by us invest primarily in investment grade fixed income securities, common stock and real property assets. The common collective trusts have no unfunded commitments at September 28, 2013, and there are no significant restrictions on redemptions. Shares held in common collective trust funds are reported at the net unit value of units held by the trust at year end. The unit value is determined by the total value of fund assets divided by the total number of units of the fund owned. Investments in insurance contracts are valued at contract value, which is the fair value of the underlying investment of the insurance company. Securities or other assets for which market quotations are not readily available or for which market quotations do not represent the value at the time of pricing (including certain illiquid securities) are fair valued in accordance with procedures established under the supervision and responsibility of the Custodian of that investment.

Such procedures may include the use of independent pricing services or affiliated advisor pricing, which use prices based upon yields or prices of securities of comparable quality, coupon, maturity and type, indications as to values from dealers, operating data and general market conditions.

The preceding methods may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, although we believe the valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

Pension expense for all plans, including costs for various defined contribution plans, is as follows:

	U.S. Plans			Non-U.S. Plans		
	2013	2012	2011	2013	2012	2011
Service cost	\$26,856	\$23,347	\$22,566	\$4,874	\$4,046	\$4,804
Interest cost	28,818	29,786	28,683	5,750	5,864	6,260
Expected return on plan assets	(41,340 )	(41,970 )	(39,089 )	(3,789 )	(3,832 )	(3,900 )
Amortization of prior service cost (credit)	8	9	9	(51 )	(62 )	(60 )
Amortization of actuarial loss	27,604	17,024	11,292	1,589	875	1,546
Settlement loss	—	—	16	245	—	275
Pension expense for defined benefit plans	41,946	28,196	23,477	8,618	6,891	8,925
Pension expense for defined contribution plans	11,223	9,114	7,674	5,672	5,105	4,765
Total pension expense	\$53,169	\$37,310	\$31,151	\$14,290	\$11,996	\$13,690

The estimated net prior service cost and net actuarial loss that will be amortized from accumulated other comprehensive loss into net periodic benefit cost for pension plans in 2014 are \$101 and \$17,734, respectively.

Benefits expected to be paid to the participants of the plans are:

	U.S. Plans	Non-U.S. Plans
2014	\$21,953	\$4,936
2015	24,811	5,833
2016	26,878	5,949
2017	29,651	6,306
2018	32,258	6,194
Five years thereafter	209,198	39,215

We presently anticipate contributing approximately \$44,000 to the U.S. plans and \$7,300 to the non-U.S. plans in 2014.

We provide postretirement health care benefits to certain domestic retirees, who were hired prior to October 1, 1989. There are no plan assets. The transition obligation was being expensed over 20 years and was fully amortized in 2013. The changes in the accumulated benefit obligation of this unfunded plan for 2013 and 2012 are shown in the following table:

	September 28, 2013	September 29, 2012
Change in Accumulated Postretirement Benefit Obligation (APBO):		
APBO at prior year measurement date	\$17,456	\$18,025
Service cost	292	330
Interest cost	549	785
Contributions by plan participants	1,550	1,510
Benefits paid	(2,617 )	(2,634 )
Actuarial gains	(2,860 )	(656 )
Retiree drug subsidy receipts	—	96
APBO at measurement date	\$14,370	\$17,456
Funded status	\$(14,370 )	\$(17,456 )
Accrued postretirement benefit liability	\$14,370	\$17,456
Amount recognized in accumulated other comprehensive loss, before taxes:		
Transition obligation	\$—	\$361
Actuarial gains	(3,464 )	(604 )
Amount recognized in accumulated other comprehensive loss, before taxes	\$(3,464 )	\$(243 )

The cost of the postretirement benefit plan is as follows:

	2013	2012	2011
Service cost	\$292	\$330	\$491
Interest cost	549	785	1,103
Amortization of transition obligation	361	394	394
Amortization of actuarial loss	—	—	579
Net periodic postretirement benefit cost	\$1,202	\$1,509	\$2,567

As of the measurement date, the assumed discount rate used in the accounting for the postretirement benefit obligation was 4.5% in 2013, 3.3% in 2012 and 4.5% in 2011. As of the measurement date, the assumed discount rate used in the accounting for the net periodic postretirement benefit cost was 3.3% in 2013, 4.5% in 2012 and 4.8% in 2011.



For measurement purposes, a 7.4%, 6.8% and 7.8% annual per capita rate of increase of medical and drug costs before age 65, medical costs after age 65 and drug costs after age 65, respectively, were assumed for 2013, all gradually decreasing to 4.5% for 2028 and years thereafter. A one percentage point increase in this rate would increase our accumulated postretirement benefit obligation as of the measurement date in 2013 by \$520, while a one percentage point decrease in this rate would decrease our accumulated postretirement benefit obligation by \$483. A one percentage point increase or decrease in this rate would not have a material effect on the total service cost and interest cost components of the net periodic postretirement benefit cost.

Activity in AOCI related to U.S. pension plans, non-U.S. pension plans and post-retirement health care benefit plans is summarized below:

	September 28, 2013	September 29, 2012
Balance at beginning of period	\$(280,424 )	\$(234,128 )
Net deferral in AOCI of actuarial loss:		
Net actuarial gain (loss) during period	141,806	(90,463 )
Tax effect	(53,532 )	32,990
	88,274	(57,473 )
Net reclassification from AOCI into earnings:		
Reclassification from AOCI into earnings	29,427	17,969
Tax effect	(10,972 )	(6,792 )
	18,455	11,177
Balance at end of period	\$(173,695 )	\$(280,424 )

Employee and management profit sharing reflects a discretionary payment based on our financial performance. Profit share expense was \$14,950, \$25,100 and \$30,025 in 2013, 2012 and 2011, respectively.

## Note 12 - Income Taxes

The reconciliation of the provision for income taxes to the amount computed by applying the U.S. federal statutory tax rate to earnings before income taxes is as follows:

	2013	2012	2011
Earnings before income taxes:			
Domestic	\$83,962	\$120,158	\$89,409
Foreign	80,559	86,506	96,801
Eliminations	485	2,177	(2,425 )
Total	\$165,006	\$208,841	\$183,785
Computed expected tax expense	\$57,752	\$73,094	\$64,325
Increase (decrease) in income taxes resulting from:			
Foreign and R&D tax credits	(3,271 )	(1,029 )	(7,578 )
Foreign tax rates	(10,726 )	(11,126 )	(6,704 )
Export and manufacturing incentives	(3,400 )	(2,275 )	(1,680 )
State taxes, net of federal benefit	1,921	3,346	2,396
Change in valuation allowance for deferred taxes	2,231	(4,030 )	(3,100 )
Change in enacted tax rates	—	(1,303 )	(277 )
Other	2	(298 )	382
Income taxes	\$44,509	\$56,379	\$47,764
Effective income tax rate	27.0 %	27.0 %	26.0 %

At September 28, 2013, various subsidiaries had tax benefit carryforwards totaling \$42,489. Much of these tax benefit carryforwards do not expire and can be used to reduce current taxes otherwise due on future earnings of those subsidiaries. The change in the valuation allowance relates to tax benefit carryforwards reflecting recent and projected financial performance, tax planning strategies and statutory tax carryforward periods.

No provision has been made for U.S. federal or foreign taxes on that portion of certain foreign subsidiaries' undistributed earnings (\$672,625 at September 28, 2013) considered to be permanently reinvested. It is not practicable to determine the amount of tax that would be payable if these amounts were repatriated to the U.S.

The components of income taxes are as follows:

	2013	2012	2011
Current:			
Federal	\$29,345	\$34,361	\$14,307
Foreign	18,835	20,646	27,746
State	4,545	5,485	2,788
Total current	52,725	60,492	44,841
Deferred:			
Federal	(7,542 )	1,239	7,449
Foreign	914	(5,014 )	(5,424 )
State	(1,588 )	(338 )	898
Total deferred	(8,216 )	(4,113 )	2,923
Income taxes	\$44,509	\$56,379	\$47,764

Realization of deferred tax assets is dependent, in part, upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers projected future taxable income and tax planning strategies in making its assessment of the recoverability of deferred tax assets.

The tax effects of temporary differences that generated deferred tax assets and liabilities are as follows:

	September 28, 2013	September 29, 2012
Deferred tax assets:		
Benefit accruals	\$164,458	\$219,396
Inventory reserves	29,873	30,953
Tax benefit carryforwards	14,376	14,928
Contract loss reserves not currently deductible	10,885	12,124
Other accrued expenses	17,249	14,563
Total gross deferred tax assets	236,841	291,964
Less valuation allowance	(4,006 )	(1,746 )
Total net deferred tax assets	232,835	290,218
Deferred tax liabilities:		
Differences in bases and depreciation of property, plant and equipment	174,743	172,253
Pension	55,157	49,293
Foreign currency	—	1,963
Other	216	415
Total gross deferred tax liabilities	230,116	223,924
Net deferred tax assets	\$2,719	\$66,294

Net deferred tax assets and liabilities are included in the balance sheet as follows:

	September 28, 2013	September 29, 2012
Current assets	\$91,052	\$87,780
Other assets	16,583	16,280
Other accrued liabilities	(539 )	(1,311 )
Long-term liabilities	(104,377 )	(36,455 )
Net deferred tax assets	\$2,719	\$66,294

We have unrecognized tax benefits which, if ultimately recognized, will reduce our annual effective tax rate. A reconciliation of the total amounts of unrecognized tax benefits, excluding interest and penalties, is as follows:

	September 28, 2013	September 29, 2012
Balance at beginning of year	\$3,923	\$6,696
Decreases as a result of tax positions for prior years	—	(151 )
Reductions as a result of lapse of statute of limitations	(1,969 )	(2,622 )
Settlement of tax positions	(421 )	—
Balance at end of year	\$1,533	\$3,923

We are subject to income taxes in the U.S. and in various states and foreign jurisdictions. Tax regulations within each jurisdiction are subject to the interpretation of the related tax laws and regulations and require the application of significant judgment. With few exceptions, we are no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations by tax authorities for years before 2010. The statute of limitations in several jurisdictions will expire in the next twelve months and we have unrecognized tax benefits of \$78, which would be recognized if the statute of limitations expires without the relevant taxing authority examining the applicable returns.

We record interest and penalties related to unrecognized tax benefits in income tax expense. We had accrued interest and penalties of \$1,363 and \$1,473 at September 28, 2013 and September 29, 2012, respectively. We expensed

interest of \$309 and \$368 for 2013 and 2012, respectively.

66

---

## Note 13 - Shareholders' Equity

Class A and Class B common stock share equally in our earnings and are identical with certain exceptions. Other than on matters relating to the election of directors or as required by law where the holders of Class A and Class B shares vote as separate classes, Class A shares have limited voting rights, with each share of Class A being entitled to one-tenth of a vote on most matters, and each share of Class B being entitled to one vote. Class A shareholders are entitled, subject to certain limitations, to elect at least 25% of the Board of Directors (rounded up to the nearest whole number) with Class B shareholders entitled to elect the balance of the directors. No cash dividend may be paid on Class B shares unless at least an equal cash dividend is paid on Class A shares. Class B shares are convertible at any time into Class A shares on a one-for-one basis at the option of the shareholder. The number of common shares issued reflects conversion of Class B to Class A of 37,936 in 2013, 40,549 in 2012 and 49,158 in 2011.

Class A shares reserved for issuance at September 28, 2013 are as follows:

	Shares
Conversion of Class B to Class A shares	7,666,653
2008 Stock Appreciation Rights Plan	3,693,241
2003 Stock Option Plan	742,262
1998 Stock Option Plan	50,624
Class A shares reserved for issuance	12,152,780

We are authorized to issue up to 10,000,000 shares of preferred stock. The Board of Directors may authorize, without further shareholder action, the issuance of additional preferred stock which ranks senior to both classes of our common stock with respect to the payment of dividends and the distribution of assets on liquidation. The preferred stock, when issued, would have such designations relative to voting and conversion rights, preferences, privileges and limitations as determined by the Board of Directors.

#### Note 14 - Equity-Based Compensation

We have equity-based compensation plans that authorize the issuance of equity-based awards for shares of Class A common stock to directors, officers and key employees. Equity-based compensation grants are designed to reward long-term contributions to Moog and provide incentives for recipients to remain with Moog.

Equity-based compensation expense is based on share-based payment awards that are ultimately expected to vest. Vesting requirements vary for directors, officers and key employees. In general, options and stock appreciation rights (SARs) granted to outside directors vest one year from the date of grant, options granted to officers vest on various schedules, options granted to key employees vest in equal annual increments over a period of five years from the date of grant and SARs granted to officers and key employees vest in equal annual installments over a period of three years from the date of grant.

The fair value of equity-based awards granted was estimated on the date of grant using the Black-Scholes option-pricing model. The following table provides the range of assumptions used to value equity-based awards and the weighted-average fair value of the awards granted.

	2013	2012	2011
Expected volatility	34% - 40%	40% - 42%	39% - 49%
Risk-free rate	.4% - 1.1%	.5% - 1.4%	.8% - 2.0%
Expected dividends	— %	— %	— %
Expected term	3-7 years	3-7 years	3-7 years
Weighted-average fair value of SARs granted	\$14.10	\$16.92	\$15.25

To determine expected volatility, we generally use historical volatility based on weekly closing prices of our Class A common stock over periods that correlate with the expected terms of the awards granted. The risk-free rate is based on the United States Treasury yield curve at the time of grant for the appropriate term of the awards granted. Expected dividends are based on our history and expectation of dividend payouts. The expected term of equity-based awards is based on vesting schedules, expected exercise patterns and contractual terms.

The 2008 Stock Appreciation Rights Plan (2008 Plan) authorizes the issuance of 4,000,000 SARs, which represent the right to receive shares of Class A common stock. The exercise price of the SARs, determined by a committee of the Board of Directors, may not be less than the fair market value of the Class A common stock on the grant date. The number of shares received upon exercise of a SAR is equal in value to the difference between the fair market value of the Class A common stock on the exercise date and the exercise price of the SAR. The term of a SAR may not exceed ten years from the grant date.

The 2003 Stock Option Plan (2003 Plan) authorizes the issuance of options for 1,350,000 shares of Class A common stock. The 1998 Stock Option Plan (1998 Plan) authorizes the issuance of options for 2,025,000 shares of Class A common stock. Under the terms of the plans, options may be either incentive or non-qualified. Options outstanding as of September 28, 2013 consisted of both incentive options and non-qualified options. The exercise price, determined by a committee of the Board of Directors, may not be less than the fair market value of the Class A common stock on the grant date. Options become exercisable over periods not exceeding ten years.



Options and SARs are as follows:

	Stock Options/SARs	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Life	Aggregate Intrinsic Value
<b>1998 Stock Option Plan</b>				
Outstanding at October 2, 2010	449,484	\$ 13.19		
Exercised in 2011	(143,323 )	11.84		
Outstanding at October 1, 2011	306,161	13.81		
Exercised in 2012	(148,300 )	12.07		
Outstanding at September 29, 2012	157,861	15.45		
Exercised in 2013	(107,237 )	13.42		
Outstanding at September 28, 2013	50,624	\$ 19.74	0.2 years	\$ 1,952
Exercisable at September 28, 2013	45,190	\$ 19.74	0.2 years	\$ 1,742
<b>2003 Stock Option Plan</b>				
Outstanding at October 2, 2010	1,135,789	\$ 32.90		
Exercised in 2011	(10,065 )	24.31		
Outstanding at October 1, 2011	1,125,724	32.98		
Exercised in 2012	(19,852 )	28.17		
Expired in 2012	(1,538 )	42.45		
Outstanding at September 29, 2012	1,104,334	33.05		
Exercised in 2013	(341,822 )	30.20		
Expired in 2013	(20,250 )	42.45		
Outstanding at September 28, 2013	742,262	\$ 34.11	2.7 years	\$ 17,946
Exercisable at September 28, 2013	513,852	\$ 35.93	3.0 years	\$ 11,487
<b>Total Stock Option Plans</b>				
Outstanding at September 28, 2013	792,886	\$ 33.19		
Exercisable at September 28, 2013	559,042	\$ 34.62		
<b>2008 Stock Appreciation Rights Plan</b>				
Outstanding at October 2, 2010	763,209	\$ 33.00		
Granted in 2011	385,000	36.86		
Exercised in 2011	(14,501 )	32.79		
Forfeited in 2011	(17,000 )	37.74		
Outstanding at October 1, 2011	1,116,708	34.26		
Granted in 2012	408,000	41.82		
Exercised in 2012	(56,543 )	32.62		
Outstanding at September 29, 2012	1,468,165	36.43		
Granted in 2013	460,791	36.41		
Exercised in 2013	(235,715 )	33.71		
Outstanding at September 28, 2013	1,693,241	\$ 36.80	7.4 years	\$ 36,390
Exercisable at September 28, 2013	845,183	\$ 35.42	6.2 years	\$ 19,328

The aggregate intrinsic value in the preceding tables represent the total pre-tax intrinsic value, based on our closing price of Class A common stock of \$58.29 as of September 28, 2013. That value would have been effectively received by the option and SAR holders had all option and SAR holders exercised their options and SARs as of that date.



The intrinsic value of awards exercised and fair value of awards vested are as follows:

	2013	2012	2011
1998 Stock Option Plan			
Intrinsic value of options exercised	\$2,585	\$4,254	\$4,186
Total fair value of options vested	\$27	\$27	\$791
2003 Stock Option Plan			
Intrinsic value of options exercised	\$6,199	\$227	\$156
Total fair value of options vested	\$399	\$376	\$4,758
2008 Stock Appreciation Rights Plan			
Intrinsic value of SARs exercised	\$3,368	\$437	\$108
Total fair value of SARs vested	\$5,199	\$4,563	\$3,438

As of September 28, 2013, total unvested compensation expense associated with stock options amounted to \$597 and will be recognized over a weighted-average period of two years, and total unvested compensation expense associated with SARs amounted to \$3,716 and will be recognized over a weighted-average period of two years.

#### Note 15 - Stock Employee Compensation Trust

We have a Stock Employee Compensation Trust ("SECT") to assist in administering and to provide funding for employee stock plans and benefit programs, including the RSP. The shares in the SECT are not considered outstanding for purposes of calculating earnings per share. However, in accordance with the trust agreement governing the SECT, the SECT trustee votes all shares held by the SECT on all matters submitted to shareholders.

#### Note 16 - Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive income (loss), net of tax, consists of:

	September 28, 2013	September 29, 2012
Accumulated foreign currency translation	\$40,572	\$33,493
Accumulated retirement liability	(173,695 )	(280,424 )
Accumulated gain (loss) on derivatives	(1,035 )	220
Accumulated other comprehensive loss	\$(134,158 )	\$(246,711 )

Note 17 - Segments

**Aircraft Controls.** We design, manufacture and integrate primary and secondary flight controls for military and commercial aircraft and provide aftermarket support. Our systems are used on both development and production programs in large commercial transports, supersonic fighters, multi-role military aircraft, business jets and rotorcraft. We also supply ground-based navigation aids.

We are currently working on several large development programs including: the KC-46 military air refueling tanker and the F-35 Joint Strike Fighter on the military side, and the Airbus A350XWB, COMAC C919 and the Embraer E-Jet E2 family on the commercial side. Typically these development programs require concentrated periods of research and development by our engineering teams.

Production programs are generally long-term manufacturing efforts that extend for as long as the aircraft builder receives new orders. Our large military production programs include the F-35 Joint Strike Fighter, the V-22 Osprey tiltrotor, the F/A-18E/F Super Hornet and the Black Hawk/Seahawk helicopter. Our large commercial production programs include the full line of Boeing 7-series aircraft, Airbus A330 and a variety of business jets.

Aftermarket sales, which represented 32% of 2013 sales for this segment, consist of the maintenance, repair, overhaul and parts supply for both military and commercial aircraft. Further, we sell to both military and commercial customers spares inventory that they store throughout the world in order to minimize down time.

**Space and Defense Controls.** Space and Defense Controls provides controls for satellites and space vehicles, launch vehicles, armored combat vehicles, tactical and strategic missiles, security and surveillance and other defense applications.

Within our space market, we design, manufacture and integrate commercial and military satellite positioning controls. These propulsion and actuation systems and the components also control attitude, orbit insertion, solar panels and antennas. We also design, manufacture and integrate steering and propulsion controls for space launch vehicles, such as the Atlas, Delta and Ariane programs. Additionally, we design and manufacture spaceflight electronics and software, and develop new products for NASA's new Space Launch System.

Within our defense market, we design controls for gun aiming, stabilization and automatic ammunition loading for armored combat vehicles for a variety of domestic and international customers. We also design controls for steering tactical and strategic missiles. Our tactical and strategic missile programs include Hellfire, the U.S. National Missile Defense Agency's Ballistic Missile Defense initiative, TOW and Trident. We design, build and integrate stores management systems for light attack aerial reconnaissance platforms, as well as build high power, quiet controls for naval surface ship and submarine applications.

**Industrial Systems.** Industrial Systems serves a global customer base across a variety of markets.

In our industrial automation market, we design manufacture and integrate systems for injection and blow molding machines, metal forming presses and our heavy industry customers use our high precision electrical and hydraulic servovalves for steel and aluminum mill equipment. Our systems allow for precise controls of critical parameters in the industrial process, using both hydraulic and electric technology. Other industrial markets we serve include material handling, carpet tufting and paper and lumber mills.

In our energy market, our power generation programs focus on complete control assemblies for fuel, steam and variable geometry control applications. We also design and manufacture electric pitch controls and blade monitoring systems for wind turbines in our wind energy programs.

In our simulation and test market, we supply electromechanical motion simulation bases for the flight simulation and training markets. For the test markets, we supply controls for automotive, structural and fatigue testing.



Components. The Components segment serves many of the same markets as our other segments. The Components segment's three largest product categories are slip rings, fiber optic rotary joints and motors.

Slip rings and fiber optic rotary joints use sliding contacts and optical technology to allow unimpeded rotation while delivering power and data through a rotating interface. They come in a range of sizes that allow them to be used in many applications, including diagnostic imaging CT scan medical equipment, de-icing and data transfer for rotorcraft, remotely operated vehicles and floating platforms for offshore oil exploration, surveillance cameras, forward-looking infrared camera installations and radar pedestals, satellites, missiles and wind turbines.

Our motors are used in an equally broad range of markets, many of which are the same as for slip rings. Components designs and manufactures a series of fractional horsepower brushless motors that provide extremely low acoustic noise and reliable long life operation, with the largest market being sleep apnea equipment. Industrial markets use our motors for material handling and electric pumps. Military applications use our motors for gimbals, missiles and radar pedestals.

Components' other product lines include electromechanical actuators for military, aerospace and commercial applications, fiber optic modems that provide electrical-to-optical conversion of communication and data signals, avionic instrumentation, optical switches and resolvers.

Medical Devices. This segment operates within four medical devices market areas: infusion therapy, enteral clinical nutrition, sensors and surgical hand pieces.

We manufacture and distribute a complete line of portable pumps, stationary pumps and disposable sets that are used in the delivery of enteral nutrition for patients in their own homes, hospitals and long-term care facilities.

For infusion therapy, our primary products are electronic ambulatory infusion pumps along with the associated administration sets. Applications of these products include hydration, nutrition, patient-controlled analgesia, local anesthesia, chemotherapy and antibiotics.

We manufacture and distribute ultrasonic and optical sensors used to detect air bubbles in infusion pump lines and ensure accurate fluid delivery. Our surgical hand pieces are used to safely fragment and aspirate tissue in common medical procedures such as cataract removal.

Edgar Filing: MOOG INC. - Form 10-K

Segment information and reconciliations to consolidated amounts are as follows:

	2013		2012		2011	
Net sales:						
Aircraft Controls	\$1,059,587		\$963,421		\$850,490	
Space and Defense Controls	395,945		358,755		355,762	
Industrial Systems	592,112		633,713		629,312	
Components	415,428		374,081		353,142	
Medical Devices	147,239		139,566		141,974	
Net sales	2,610,311		2,469,536		2,330,680	
Operating profit (loss) and margins:						
Aircraft Controls	126,751		104,582		\$83,776	
	12.0	%	10.9	%	9.9	%
Space and Defense Controls	25,350		42,854		49,245	
	6.4	%	11.9	%	13.8	%
Industrial Systems	42,254		63,243		62,805	
	7.1	%	10.0	%	10.0	%
Components	68,731		57,303		50,353	
	16.5	%	15.3	%	14.3	%
Medical Devices	(35,542)	)	5,443		241	
	(24.1	%)	3.9	%	0.2	%
Total operating profit	227,544		273,425		246,420	
	8.7	%	11.1	%	10.6	%
Deductions from operating profit:						
Interest expense	26,962		34,312		35,666	
Equity-based compensation expense	6,620		6,226		6,952	
Corporate and other expenses, net	28,956		24,046		20,017	
Earnings before income taxes	\$165,006		\$208,841		\$183,785	
Depreciation and amortization:						
Aircraft Controls	\$45,547		\$42,774		\$40,945	
Space and Defense Controls	15,470		11,996		11,349	
Industrial Systems	22,703		23,408		23,194	
Components	11,735		9,123		7,409	
Medical Devices	10,269		11,101		11,472	
Corporate	2,349		2,414		1,958	
Total depreciation and amortization	\$108,073		\$100,816		\$96,327	
Identifiable assets:						
Aircraft Controls	\$1,268,753		\$1,194,742		\$1,110,771	
Space and Defense Controls	514,260		423,838		342,093	
Industrial Systems	675,115		691,636		689,683	
Components	486,421		457,254		384,409	
Medical Devices	189,669		234,431		243,283	
Corporate	102,877		104,006		72,728	
Total assets	\$3,237,095		\$3,105,907		\$2,842,967	

Identifiable assets in prior years have been restated to reclassify cash held by our international treasury operation as a corporate asset. Previously, this cash was reported as an Industrial Systems asset.



	2013	2012	2011
Capital expenditures:			
Aircraft Controls	\$49,859	\$67,507	\$51,727
Space and Defense Controls	14,401	10,270	11,589
Industrial Systems	14,230	16,525	11,702
Components	8,166	7,071	4,620
Medical Devices	3,659	2,398	2,737
Corporate	2,859	3,259	1,320
Total capital expenditures	\$93,174	\$107,030	\$83,695

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, manpower or profit.

Sales, based on the customer's location, and property, plant and equipment by geographic area are as follows:

	2013	2012	2011
Net sales:			
United States	\$1,540,096	\$1,363,892	\$1,293,058
Germany	199,800	210,842	185,840
United Kingdom	123,004	117,336	113,253
China	94,829	121,338	144,586
Other	652,582	656,128	593,943
Net sales	\$2,610,311	\$2,469,536	\$2,330,680
Property, plant and equipment, net:			
United States	\$322,282	\$310,390	\$288,647
Philippines	75,087	68,993	70,159
United Kingdom	62,105	58,329	35,468
Other	102,889	108,467	109,598
Property, plant and equipment, net	\$562,363	\$546,179	\$503,872

Sales to Boeing were \$366,972, \$263,060 and \$229,825, or 14%, 11% and 10% of sales, in 2013, 2012 and 2011, respectively, including sales to Boeing Commercial Airplanes of \$195,100, \$131,318 and \$110,802 in 2013, 2012 and 2011, respectively. Sales arising from U.S. Government prime or sub-contracts, including military sales to Boeing, were \$807,728, \$737,980 and \$738,429 in 2013, 2012 and 2011, respectively. Sales to Boeing and the U.S. Government and its prime- or sub-contractors are made primarily from our Aircraft Controls and Space and Defense Controls segments.

## Note 18 - 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 or results of operations.

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 or results of operations.

We lease certain facilities and equipment under operating lease arrangements. These arrangements may include fair market renewal or purchase options. Rent expense under operating leases amounted to \$28,070 in 2013, \$26,518 in 2012 and \$26,544 in 2011. Future minimum rental payments required under non-cancellable operating leases are \$20,749 in 2014, \$17,770 in 2015, \$14,150 in 2016, \$11,177 in 2017, \$8,550 in 2018 and \$13,789 thereafter.

We are contingently liable for \$13,955 of standby letters of credit issued by a bank to third parties on our behalf at September 28, 2013. Purchase commitments outstanding at September 28, 2013 are \$509,833, including \$25,387 for property, plant and equipment.

## Note 19 - Quarterly Data - Unaudited

## Net Sales and Earnings

	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Total
2013					
Net sales	\$620,803	\$643,023	\$670,632	\$675,853	\$2,610,311
Gross profit	192,700	197,423	198,269	195,358	783,750
Net earnings	34,118	36,527	34,227	15,625	120,497
Net earnings per share:					
Basic	\$0.75	\$0.81	\$0.76	\$0.34	\$2.66
Diluted	\$0.75	\$0.80	\$0.75	\$0.34	\$2.63
2012					
Net sales	\$600,618	\$624,970	\$611,221	\$632,727	\$2,469,536
Gross profit	185,135	184,430	183,418	192,321	745,304
Net earnings	36,373	35,421	38,871	41,797	152,462
Net earnings per share:					
Basic	\$0.80	\$0.78	\$0.86	\$0.92	\$3.37
Diluted	\$0.80	\$0.77	\$0.85	\$0.91	\$3.33

Note: Quarterly amounts may not add to the total due to rounding.





Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of Moog Inc.

We have audited the accompanying consolidated balance sheets of Moog Inc. as of September 28, 2013 and September 29, 2012, and the related consolidated statements of earnings, comprehensive income, shareholders' equity, and cash flows for each of the three years in the period ended September 28, 2013. Our audits also included the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Moog Inc. at September 28, 2013 and September 29, 2012, and the consolidated results of its operations and its cash flows for each of the three years in the period ended September 28, 2013, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Moog Inc.'s internal control over financial reporting as of September 28, 2013, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (1992 framework) and our report dated November 12, 2013 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP  
Buffalo, New York  
November 12, 2013

#### MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) and 15d-15(f) of the Exchange Act. Under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of September 28, 2013 based upon the framework in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on that evaluation, our management concluded that our internal control over financial reporting is effective as of September 28, 2013.

We completed two acquisitions in 2013, which were excluded from our management's report on internal control over financial reporting as of September 28, 2013. On December 31, 2012, we acquired Broad Reach Engineering. On March 21, 2013, we acquired Aspen Motion Technologies. Both of these acquisitions are included in our 2013 consolidated financial statements and collectively constituted \$96 million and \$80 million of total and net assets, respectively, as of September 28, 2013 and \$46.3 million and \$1.6 million of net sales and net income, respectively, for the year then ended.

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in this Annual Report on Form 10-K and, as part of their audit, has issued their report, included herein, on the effectiveness of our internal control over financial reporting.

/s/ JOHN R. SCANNELL  
John R. Scannell  
Chief Executive Officer  
(Principal Executive Officer)

/s/ DONALD R. FISHBACK  
Donald R. Fishback  
Vice President,  
Chief Financial Officer  
(Principal Financial Officer)

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of Moog Inc.

We have audited Moog Inc.'s internal control over financial reporting as of September 28, 2013, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (1992 framework) (the COSO criteria). Moog Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

As indicated in the accompanying Management's Report on Internal Control Over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Broad Reach Engineering acquired on December 31, 2012, and Aspen Motion Technologies acquired on March 21, 2013, which are included in the 2013 consolidated financial statements of Moog Inc. and collectively constituted \$96 million and \$80 million of total and net assets, respectively, as of September 28, 2013 and \$46.3 million and \$1.6 million of revenues and net income, respectively, for the year then ended. Our audit of internal control over financial reporting of Moog Inc. also did not include an evaluation of the internal control over financial reporting of Broad Reach Engineering and Aspen Motion Technologies.

In our opinion, Moog Inc. maintained, in all material respects, effective internal control over financial reporting as of September 28, 2013, based on the COSO criteria.

Edgar Filing: MOOG INC. - Form 10-K

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Moog Inc. as of September 28, 2013 and September 29, 2012 and the related consolidated statements of earnings, comprehensive income, shareholders' equity, and cash flows for each of the three years in the period ended September 28, 2013 of Moog Inc. and our report dated November 12, 2013 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP  
Buffalo, New York  
November 12, 2013

78

---

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

Not applicable.

Item 9A. Controls and Procedures.

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.

Management's Report on Internal Control over Financial Reporting.

See the report appearing under Item 8, Financial Statements and Supplemental Data of this report.

Changes in Internal Control over Financial Reporting.

There have been no changes in our internal control over financial reporting during the most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required herein with respect to our directors and certain information required herein with respect to our executive officers is incorporated by reference to the 2013 Proxy. Other information required herein is included in Item 1, Business, under “Executive Officers of the Registrant” of this report.

We have adopted a code of ethics that applies to our Chief Executive Officer, Chief Financial Officer and Controller. The code of ethics is available upon request without charge by contacting our Chief Financial Officer at 716-652-2000.

Item 11. Executive Compensation.

The information required herein is incorporated by reference to the 2013 Proxy.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required herein is incorporated by reference to the 2013 Proxy.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required herein is incorporated by reference to the 2013 Proxy.

Item 14. Principal Accountant Fees and Services.

The information required herein is incorporated by reference to the 2013 Proxy.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(a) Documents filed as part of this report:

- 1 Financial Statements
  - Consolidated Statements of Earnings
  - Consolidated Statements of Comprehensive Income
  - Consolidated Balance Sheets
  - Consolidated Statements of Shareholders’ Equity
  - Consolidated Statements of Cash Flows
  - Notes to Consolidated Financial Statements
  - Reports of Independent Registered Public Accounting Firm

- 2 Financial Statement Schedules
  - II. Valuation and Qualifying Accounts.

Schedules other than that listed above are omitted because the conditions requiring their filing do not exist or because the required information is included in the Consolidated Financial Statements, including the Notes thereto.

3 Exhibits

- (3 ) Articles of Incorporation and By-Laws.
- (i) Restated Certificate of Incorporation of Moog Inc. (Filed herewith)
  - (ii) Restated By-laws of Moog Inc., dated November 30, 2011, as amended, incorporated by reference to exhibit 3.2 of our report on Form 10-K for the year ended October 1, 2011.
- (4 ) Instruments defining the rights of security holders, including indentures.
- Form of Indenture between Moog Inc. and Wells Fargo Bank, N.A., as Trustee, dated June 2, 2008,
  - (a) relating to the 7 1/4% Senior Subordinated Notes due 2018, incorporated by reference to exhibit 4.1 of our report on Form 10-Q for the quarter ended June 28, 2008.
- (9 ) Voting trust agreement.
- (a) Agreement as to Voting, effective November 30, 1983, incorporated by reference to exhibit (i) of our report on Form 8-K dated December 9, 1983.
- (10 ) Material contracts.
- Credit and Securitization agreements.
- Form of Receivables Purchase Agreement, by and among Moog Receivables LLC, as Seller, Moog Inc., as Servicer, Market Street Funding LLC, as Issuer, and PNC Bank, National Association, as Administrator, dated as of March 5, 2012, incorporated by reference to exhibit 10.1 on Form 8-K dated March 9, 2012.
  - (a)
  - Second Amendment to the Receivables Purchase Agreement, dated March 4, 2013, by and among Moog Receivables LLC, as Seller, Moog Inc., as Servicer, Market Street Funding LLC, as Issuer and PNC Bank, National Association, as Administrator, incorporated by reference to exhibit 10.1 on Form 8-K dated March 6, 2013.
  - (b)
  - Fourth Amended and Restated Loan Agreement between Moog Inc., HSBC Bank USA, National Association, Manufacturers and Traders Trust Company, Bank of America, N.A. and JPMorgan Chase Bank, N.A. dated as of March 28, 2013, incorporated by reference to exhibit 10.1 of our report on Form 8-K dated April 1, 2013.
  - (c)
- Management contracts or compensatory plan or arrangement.
- 1998 Stock Option Plan, incorporated by reference to exhibit A of definitive proxy statement filed under Schedule 14A on January 5, 1998.
  - (d)
  - 2003 Stock Option Plan, incorporated by reference to exhibit A of definitive proxy statement filed under Schedule 14A on January 9, 2003.
  - (e)
  - Forms of Stock Option Agreements under the 1998 Stock Option Plan and 2003 Stock Option Plan, incorporated by reference to exhibit 10.12 of our report on Form 10-K for the year ended September 25, 2004.
  - (f)
  - 2008 Stock Appreciation Rights Plan, incorporated by reference to exhibit A of definitive proxy statement filed under Schedule 14A on December 10, 2007.
  - (g)
  - Form of Stock Appreciation Rights Award Agreement under 2008 Stock Appreciation Rights Plan, incorporated by reference to exhibit 10.14 of our report on Form 10-K for the year ended September 27, 2008.
  - (h)
  - First Amendment to the Moog Inc. 2008 Stock Appreciation Rights Plan, incorporated by reference to Appendix A of definitive proxy statement filed under Schedule 14A on December 13, 2012.
  - (i)
  - Second Amendment to the Moog Inc. 2008 Stock Appreciation Rights Plan, incorporated by reference to Item 8.01 on Form 8-K dated December 26, 2012.
  - (j)
  - Form of Employment Termination Benefits Agreement between Moog Inc. and Employee-Officers, incorporated by reference to exhibit 10(vii) of our report on Form 10-K for the year ended September 25, 1999.
  - (k)
  - Deferred Compensation Plan for Directors and Officers, amended and restated May 16, 2002, incorporated by reference to exhibit 10(ii) of our report on Form 10-K for the year ended September 28, 2002.
  - (l)



- (m) Form of Indemnification Agreement for officers, directors and key employees, incorporated by reference to exhibit 10.1 of our report on Form 8-K dated November 30, 2004.

- (n) Description of Management Profit Sharing Program, incorporated by reference to exhibit 10.1 of our report on Form 10-Q for the quarter ended July 2, 2011.  
Supplemental Retirement Plan, as amended and restated, effective December 31, 2008, as amended
  - (o) February 6, 2012, incorporated by reference to exhibit 10.1 of our report on Form 10-Q for the quarter ended December 31, 2011.
- Other material contracts.
- (p) Moog Inc. Stock Employee Compensation Trust Agreement effective December 2, 2003, incorporated by reference to exhibit 10.1 of our report on Form 10-Q for the quarter ended December 31, 2003.

All of the exhibits listed above have been filed under Moog Inc., Commission file number 1-5129.

(21 ) Our subsidiaries. (All of which are wholly owned by the Corporation, directly or indirectly, unless otherwise noted). The names of indirectly owned subsidiaries are indented under the names of their respective parent corporations.

Name	Organized Under the Laws of
Animatics GmbH	Germany
Bradford Engineering B.V.	Netherlands
Broad Reach Engineering Company	Delaware
Octant Technologies Inc.	California
CSA Engineering, Inc.	California
Curlin Medical Inc.	Delaware
Moog MDG SRL	Costa Rica
Viltechmeda UAB	Lithuania
ZEVEX, Inc.	Delaware
Ethox (Beijing) Medical Devices Trading Inc.	People's Republic of China
Eurmotion Ltd.	England and Wales
Harmonic Linear Drives Ltd. (75% owned by Moog Inc.)	England and Wales
Ingenieurburo Pieper GmbH	Germany
Mid-America Aviation, Inc.	North Dakota
Moog Australia Pty., Ltd.	Australia
Moog do Brasil Controles Ltda.	Brazil
Moog de Argentina SRL	Argentina
Moog Controls Corp.	Ohio
Moog Controls Hong Kong Ltd.	Hong Kong
Moog Control Systems (Shanghai) Co., Ltd.	People's Republic of China
Moog Industrial Controls (Shanghai) Co., Ltd.	People's Republic of China
Moog Controls (India) Private Ltd.	India
Moog Controls Ltd.	United Kingdom
Fernau Limited	United Kingdom
Moog Fernau Ltd.	United Kingdom
Moog Components Group Limited	United Kingdom
Tritech Holdings Limited	United Kingdom
Tritech International Limited	United Kingdom
Moog FCS Ltd.	United Kingdom
Moog Norden A.B.	Sweden
Moog OY	Finland
Moog Wolverhampton Limited	United Kingdom
Moog Europe Holdings Luxembourg SCS	Luxembourg
Moog Holding Co. GmbH KG	Germany
Insensys Holdings Ltd.	United Kingdom
Moog Insensys Limited	United Kingdom
Aston Photonic Technologies Limited	United Kingdom
Indigo Photonics Limited	United Kingdom
Moog Unna GmbH	Germany
Moog Control Equipment (Shanghai) Co. Ltd.	People's Republic of China
Moog B.V.	Netherlands
Obshestwo s Ogranizennoi Otvetstvennostju Moog	Russia
Moog GmbH	Germany

Edgar Filing: MOOG INC. - Form 10-K

Moog Italiana S.r.l.	Italy
Moog Luxembourg S.a.r.l	Luxembourg
ProControl AG	Switzerland
Moog Luxembourg Finance S.a.r.l.	Luxembourg
Moog International Financial Services Center S.a.r.l	Luxembourg
Focal Technologies Corporation	Nova Scotia
Moog Verwaltungs GmbH	Germany

83

---

Edgar Filing: MOOG INC. - Form 10-K

Moog Holland Aircraft Services B.V.	Netherlands
Moog Ireland Limited	Ireland
Moog Holdings Ltd.	Ireland
Moog Dublin Ltd.	Ireland
Moog UK Cheltenham Ltd.	United Kingdom
Moog UK Westcott Ltd.	United Kingdom
Moog Japan Ltd.	Japan
Moog Korea Ltd.	South Korea
Moog Medical Devices Rochester, Inc.	Delaware
MMC Sterilization Services Group, Inc.	Pennsylvania
Moog Receivables LLC	Delaware
Moog S.A.R.L. (95% owned by Moog Inc.; 5% owned by Moog GmbH)	France
Moog Singapore Pte. Ltd.	Singapore
Moog India Technology Center Pvt. Ltd.	India
Moog Motion Controls Private Limited	India
Moog Techtron Corp.	Florida
QuickSet International, Inc.	Illinois
Videolarm, Inc.	Georgia

(23) Consent of Ernst & Young LLP. (Filed herewith)

(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. (Filed herewith)

(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. (Filed herewith)

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

(101) Interactive Data 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 Annual Report on Form 10-K 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.



Inc.  
Valuation and Qualifying Accounts - Fiscal Years 2011, 2012 and 2013

(dollars in thousands)						Schedule II
Description	Balance at beginning of year	Additions charged to costs and expenses	Deductions	Acquisitions	Foreign exchange impact and other	Balance at end of year
Fiscal year ended October 1, 2011						
Contract loss reserves	\$40,810	\$53,197	\$48,666	\$—	\$(168)	) \$45,173
Allowance for doubtful accounts	4,813	1,230	1,260	—	(65)	) 4,718
Reserve for inventory valuation	85,608	17,566	8,804	—	100	94,470
Deferred tax valuation allowance	7,352	257	3,151	—	(352)	) 4,106
Fiscal year ended September 29, 2012						
Contract loss reserves	\$45,173	\$49,120	\$47,986	\$1,801	\$320	\$48,428
Allowance for doubtful accounts	4,718	3,936	2,817	—	(83)	) 5,754
Reserve for inventory valuation	94,470	15,985	14,101	—	165	96,519
Deferred tax valuation allowance	4,106	77	3,235	977	(179)	) 1,746
Fiscal year ended September 28, 2013						
Contract loss reserves	\$48,428	\$38,717	\$43,567	\$638	\$12	\$44,228
Allowance for doubtful accounts	5,754	1,779	3,006	—	(28)	) 4,499
Reserve for inventory valuation	96,519	13,848	15,735	—	(186)	) 94,446
Deferred tax valuation allowance	1,746	2,959	708	—	9	4,006

Signatures

Pursuant to the requirements of Section 13 or 15(d) 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)

By /s/ JOHN R. SCANNELL  
John R. Scannell

Chief Executive Officer  
Date: November 12, 2013

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on November 12, 2013.

/s/ ROBERT T. BRADY  
Robert T. Brady  
Executive Chairman of the Board  
Director

/s/ JOE C. GREEN  
Joe. C. Green  
Director

/s/ JOHN R. SCANNELL  
John R. Scannell  
Chief Executive Officer  
and Director  
(Principal Executive Officer)

/s/ WILLIAM G. GISEL, JR.  
William G. Gisel, Jr.  
Director

/s/ DONALD R. FISHBACK  
Donald R. Fishback  
Vice President and Chief Financial Officer  
(Principal Financial Officer)

/s/ PETER J. GUNDERMANN  
Peter J. Gundermann  
Director

/s/ JENNIFER WALTER  
Jennifer Walter  
Controller  
(Principal Accounting Officer)

/s/ KRAIG H. KAYSER  
Kraig H. Kayser  
Director

/s/ RICHARD A. AUBRECHT  
Richard A. Aubrecht  
Director

/s/ BRIAN J. LIPKE  
Brian J. Lipke  
Director

/s/ RAYMOND W. BOUSHIE  
Raymond W. Boushie  
Director



/s/ ROBERT H. MASKREY  
Robert H. Maskrey  
Director

86