

MOOG INC.

Form 10-K

November 10, 2014

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 27, 2014

OR

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_ Commission file number 1-05129

Inc.

(Exact Name of Registrant as Specified in its Charter)

New York

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.

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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 28, 2014, the last business day of the registrant’s most recently completed second fiscal quarter, was approximately \$2,561,000,000 million.

The number of shares of common stock outstanding as of the close of business on November 5, 2014 was: Class A 37,074,391 Class B 3,577,679.

Portions of the 2014 Proxy Statement to Shareholders (“2014 Proxy”) are incorporated by reference into Part III of this Form 10-K.

Inc.  
FORM 10-K INDEX

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#### 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 2014, 2013 and 2012 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, Valcor, Aeroflex, UTC Aerospace Systems, Flowsolve Limatorque, Sargent Aerospace and Defense, RUAG, Woodward, Sierra-Nevada Corp., Videotec, Lord Corp., SEAKR Engineering, Southwest Research Institute, Curtiss-Wright, Cohu, Pelco, IHI Aerospace, ATA Engineering, BAE, General Dynamics - OTS, ESW, Woodward, R/Vision and Chess Dynamics.

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

**Components:** Danaher, Allied Motion Technologies, Ametek, Woodward MPC, Schleifring, Aeroflex Motion Control, Kearfott, Stemmann, General Dynamics - GIT, Whippany Actuation Systems and EBM - PAPST.

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

**Government Contracts.** All U.S. Government contracts are subject to termination by the U.S. Government. In 2014, sales under U.S. Government contracts represented 29% 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 products and systems, such as those in the energy market of our Industrial Systems segment, 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 2014.

**Employees.** On September 27, 2014, we employed 11,031 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 49% of 2014 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 35% of 2014 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 2014, aftermarket sales accounted for 16% of total sales.

Significant customers in our five operating segments include:

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

**Space and Defense Controls:** Boeing, Lockheed Martin, Aerojet Rocketdyne, Raytheon, United Launch Alliance, Orbital Sciences, General Dynamics, Airbus Defence & Space and ATK.

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

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

**Medical Devices:** Nestle, Danone Nutricia, B. Braun Medical 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.



Other than Robert J. Oliveri 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. Robert J. Oliveri'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, 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.



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Executive Officers	Age	Year First Elected Officer
John R. Scannell Chairman of the Board; Chief Executive Officer Director; Member, Executive Committee	51	2006
Richard A. Aubrecht Vice Chairman of the Board; Vice President - Strategy and Technology; Director; Member, Executive Committee	70	1980
Donald R. Fishback Vice President; Chief Financial Officer	58	1985
Warren C. Johnson Vice President	55	2000
Jay K. Hennig Vice President	54	2002
Lawrence J. Ball Vice President	60	2004
Harald E. Seiffer Vice President	55	2005
Sasidhar Eranki Vice President	60	2006
Sean Gartland Vice President	51	2010
Gary A. Szakmary Vice President	63	2011
Patrick J. Roche Vice President	51	2012
Jennifer Walter Controller; Principal Accounting Officer	43	2008
Timothy P. Balkin Treasurer; Assistant Secretary	55	2000
Robert J. Olivieri Secretary	64	2014

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 and economic conditions. These factors could result in a reduction in the amount of air travel, which could reduce service and maintenance orders for flight controls and spare parts, thereby reducing our commercial sales.

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 and medical 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 2014, sales under U.S. Government contracts represented 29% of our total sales, primarily within Aircraft Controls, Space and Defense Controls and Components. 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. The Bipartisan Budget Act of 2013, passed and signed into law in January 2014, provides some opportunities to lessen the effects of sequestration. This act kept the defense base spending budget flat at approximately \$500 billion for Federal Government's 2014 and 2015 fiscal years. This provided over \$30 billion in sequester relief over the two fiscal years in exchange for extending the imposition of sequestration to fiscal years 2022 and 2023. However, we expect we will continue to face significant challenges over the next decade as a result of sequestration. Any reduction in future Department of Defense spending levels 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 Aircraft Controls and Space and Defense Controls. Revenue representing 34% of 2014 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. 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 impacts of scope change negotiations are considered in estimating revenues, costs and profits when they can be reliably estimated and realization is considered probable. Due to the substantial judgments involved with this process, our actual results could differ materially or could be settled unfavorably from our estimates.

We enter into fixed-price contracts, which could subject us to losses if we have cost overruns. In 2014, fixed-price contracts represented 91% 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.

We may not realize the full amounts reflected in our backlog as revenue, which could adversely affect our future revenue and growth prospects. As of September 27, 2014, our twelve-month backlog was \$1.3 billion, which represents confirmed orders we believe will be recognized as revenue within the next twelve months. There is no assurance that our customers will purchase all the orders represented in our backlog. In particular, the U.S. Government's ability not to exercise contract options or to modify, curtail or terminate our major programs or contracts makes the calculation of backlog subject to numerous uncertainties. Due to the uncertain nature of our contracts with the U.S. Government, we may never realize revenue from some of the orders that are included in our backlog. If we fail to realize the full amounts included in our backlog, our future revenue and growth prospects may be adversely affected.

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 and 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 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 The Boeing Company as a customer or a significant reduction in sales to The Boeing Company could adversely impact our operating results. We provide The Boeing Company, or Boeing, with controls for both military and commercial applications, which, in total, were 16% of our 2014 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 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 business information system transformation and standardization project. 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. Positive or negative changes in these assumptions could adversely affect our earnings, equity and 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 27, 2014, goodwill was \$758 million and other intangible assets were \$178 million of our total assets of \$3.2 billion. Our goodwill and other intangible assets may increase in the future since our strategy includes growth through 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. Acquisitions are a key part of our growth strategy. Our historical growth has depended, and our future growth is likely to 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 and 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 2014, 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 otherwise adversely affect our business. In 2014, 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. 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. From time to time, we may file voluntary disclosure reports with the U.S. Department of State and the Department of Commerce regarding certain violations of U.S. export laws and regulations discovered by us in the course of our business activities, employee training or internal reviews and audits. To date, voluntary disclosures have not resulted

in a fine, penalty, or export privilege denial or restriction that has had a material adverse impact on our financial condition or ability to export. 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 financial penalties or suspension or debarment from government contracts or suspension of our export privileges, which could have a material adverse effect on us.



New governmental regulations and customer demands related to conflict minerals may adversely impact our operating results. Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, required the Securities and Exchange Commission to establish new disclosure requirements for publicly-traded companies whose products contain metals derived from conflict minerals originating from the Democratic Republic of Congo (DRC) and its neighboring countries. The implementation of these requirements could result in additional costs associated with complying with the disclosure requirements. As this final rule will likely impact our suppliers, the availability of raw materials used in our operations could be negatively impacted, including an increase in the price of raw materials. In addition, because our global supply chain is complex, we may face commercial challenges if we are unable to sufficiently verify the origins for all metals used in our products through the due diligence procedures that we implement. We will work with our suppliers and customers to exclude, to the extent feasible, from our product supply chain the use of conflict minerals originating from the DRC or adjoining countries.

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, results of operations and cash flows. Terrorist attacks worldwide have caused instability from time to time in global financial markets and the aviation industry. In 2014, 22% of our net sales were 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 in these laws, regulations or interpretations of them, 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.

We are involved in various legal proceedings, the outcome of which may be unfavorable to us. Our business may be adversely impacted by the outcome of legal proceedings and other contingencies that cannot be predicted with certainty. We estimate loss contingencies and establish reserves based on our assessment where liability is deemed probable and reasonably estimable given the facts and circumstances known to us at a particular point in time. Subsequent developments may affect our assessment and estimates of the loss contingencies recorded as liabilities.

Item 1B. Unresolved Staff Comments.  
None.

Item 2. Properties.

On September 27, 2014, we occupied 5,216,000 square feet of space, distributed by segment as follows:

	Square Feet		Total
	Owned	Leased	
Aircraft Controls	1,448,000	372,000	1,820,000
Space and Defense Controls	531,000	412,000	943,000
Industrial Systems	744,000	563,000	1,307,000
Components	629,000	233,000	862,000
Medical Devices	137,000	125,000	262,000
Corporate Headquarters	20,000	2,000	22,000
Total	3,509,000	1,707,000	5,216,000

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

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

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

• Industrial Systems - Germany, U.S., Italy, China, Netherlands, Luxembourg, Philippines, India, Japan, Ireland 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 2015 through 2036. 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, results of operations or cash flows.

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 27, 2014				
1st Quarter	\$69.97	\$56.07	\$69.80	\$56.67
2nd Quarter	69.45	57.11	69.44	57.61
3rd Quarter	75.00	60.00	74.65	61.10
4th Quarter	74.20	65.42	73.83	65.98
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

The number of shareholders of record of Class A common stock and Class B common stock was 853 and 375, respectively, as of November 5, 2014.

We did not pay cash dividends on our Class A common stock or Class B common stock in 2013 or 2014 and have no current plans to do so.

The following table summarizes our purchases of our common stock for the quarter ended September 27, 2014.  
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 29 - July 31, 2014	378,790	\$69.77	377,497	1,490,569
August 1 - August 31, 2014	684,168	68.67	670,446	5,820,123
September 1 - September 27, 2014	847,114	69.90	822,000	4,998,123
Total	1,910,072	\$69.43	1,869,943	4,998,123

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: 1,293 shares at \$69.94 per share (1) during July, 13,722 shares at \$68.87 per share during August and 23,594 shares at \$70.45 per share during September. Purchases by the SECT from members of the Moog family included: 300 shares of Class B common stock at \$70.75 per share on September 22, 2014.

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. On September 9, 2014, we accepted delivery of 1,220 shares at \$71.77 per share, in connection with the exercise of stock options.

In December 2011, the Board of Directors authorized a share repurchase program, which was amended in January 2014. The program permits the purchase of up to 4,000,000 shares of Class A or Class B common stock in open market or privately negotiated transactions at the discretion of management. In August 2014, the Board of (3) Directors authorized an additional repurchase of up to 5,000,000 shares of Class A or Class B common stock under identical terms and conditions. During July, we purchased 376,056 Class A shares at an average price of \$69.77 per share and 1,441 Class B shares at an average price of \$70.71 per share. In August, we purchased 669,506 Class A shares at an average price of \$68.67 per share and 940 Class B shares at an average price of \$67.47 per share. In September, we purchased 822,000 Class A shares at an average price of \$69.88 per share.

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, 2009, including reinvestment of any dividends.

	9/09	9/10	9/11	9/12	9/13	9/14
Moog Inc. - Class A Common Stock	\$100.00	\$120.37	\$110.58	\$128.37	\$198.88	\$231.86
NYSE Composite - Total Return Index	100.00	107.81	102.89	128.40	153.59	174.97
S&P Aerospace & Defense Index	100.00	113.73	114.69	139.79	202.76	239.62

## Item 6. Selected Financial Data.

For a more detailed discussion of 2012 through 2014, 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)	2014(1)	2013(2)(3)	2012(4)	2011(4)	2010(4)	
<b>RESULTS FROM OPERATIONS</b>						
Net sales	\$2,648,385	\$2,610,311	\$2,469,536	\$2,330,680	\$2,114,252	
Net earnings	158,198	120,497	152,462	136,021	108,094	
Net earnings per share						
Basic	\$3.57	\$2.66	\$3.37	\$2.99	\$2.38	
Diluted	\$3.52	\$2.63	\$3.33	\$2.95	\$2.36	
Weighted-average shares outstanding						
Basic	44,362,412	45,335,336	45,246,960	45,501,806	45,363,738	
Diluted	44,952,437	45,823,720	45,718,324	46,047,422	45,709,020	
<b>FINANCIAL POSITION</b>						
Total assets	\$3,208,452	\$3,237,095	\$3,105,907	\$2,842,967	\$2,712,134	
Working capital	941,260	924,145	885,032	834,056	812,805	
Securitized debt	100,000	100,000	81,800	—	—	
Indebtedness - senior	774,036	417,595	304,243	346,851	386,103	
Indebtedness - senior subordinated	—	191,562	378,579	378,596	378,613	
Shareholders' equity	1,347,415	1,535,765	1,304,790	1,191,891	1,120,956	
Shareholders' equity per common share outstanding	\$32.51	\$33.86	\$28.80	\$26.38	\$24.70	
<b>SUPPLEMENTAL FINANCIAL DATA</b>						
Capital expenditures	\$78,771	\$93,174	\$107,030	\$83,695	\$65,949	
Depreciation and amortization	109,259	108,073	100,816	96,327	91,216	
Research and development	139,462	134,652	116,403	106,385	102,600	
Twelve-month backlog (5)	1,339,959	1,296,371	1,279,307	1,324,809	1,181,303	
<b>RATIOS</b>						
Net return on sales	6.0	%4.6	%6.2	%5.8	%5.1	%
Return on shareholders' equity	10.4	%8.6	%12.1	%11.4	%9.8	%
Current ratio	2.30	2.28	2.33	2.53	2.70	
Net debt to capitalization (6)	32.3	%26.4	%32.1	%33.9	%36.8	%

(1) Includes the effects of our share repurchase program. See the Consolidated Statements of Shareholders' Equity and Consolidated Statements of Cash Flow at Item 8, Financial Statements and Supplementary Data of this report.

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

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

(4) Includes the effects of acquisitions. In 2012, we acquired four business, two each in our Components and Space and Defense Controls segments. 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.

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

(6) 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:

Defense market - primary and secondary flight controls for military aircraft, tactical and strategic missile steering controls and gun aiming controls, stabilization and automatic ammunition loading controls for armored combat vehicles.

Commercial aircraft market - primary and secondary flight controls for commercial aircraft.

Commercial space market - space satellite positioning controls and thrust vector controls for space launch vehicles.

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

Industrial automation market - injection molding, metal forming, heavy industry, material and automotive testing, pilot training simulators and surveillance systems.

Energy market - oil and gas exploration, wind energy and power generation.

Medical market - motors used in sleep apnea devices, enteral clinical nutrition and infusion therapy pumps and 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 34%, 33% and 32% of our sales in 2014, 2013 and 2012, respectively.

We recognize revenue on these contracts using the percentage of completion, cost-to-cost method of accounting as work progresses toward completion. The remainder of our sales are recognized when the risks and rewards of ownership and title to the product are transferred to the customer, principally as units are delivered or as service obligations are satisfied. This method of revenue recognition is predominantly used within the Industrial Systems, 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, "When Performance Really Matters®." We believe we have achieved a leadership position in the high performance, precision controls market, by capitalizing on our strengths, which include:

- superior technical competence in delivering mission-critical solutions,
- an innovative customer-intimacy approach,
- a diverse base of customers and end markets served by a broad product portfolio,
- well-established international presence serving customers worldwide, and
- a proven ability to successfully undertake investments designed to enhance our control systems product franchise and drive continued growth.

These strengths afford us the ability to innovate our current solutions into new, complimentary technologies, providing us the opportunity to expand our product scope supply from one market to another. In addition, we will continue to strive for achieving substantial content positions on the platforms on which we currently participate, while strengthening our position in the current niche markets we serve. We also look for innovation in all aspects of our business, employing new technologies to improve productivity and to develop innovative business models.



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 while continuously focusing on internal cost improvement initiatives.

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 "When Performance Really Matters®,"
- utilizing our global capabilities and strong engineering heritage,
- continuing to grow our profitable aftermarket business,
- capitalizing on strategic acquisitions and opportunities,
  - maximizing customer value through continuous cost improvements, and
- investing in talent development to accelerate our leadership capability and employee performance.

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.

#### Financial Highlights

Net earnings in 2014 grew 31% to a company record of \$158 million compared to 2013. We also generated \$287 million in cash flow from operations in 2014. We continued to increase shareholder return by repurchasing 4 million shares of common stock. We lowered our average outstanding shares 2%, going from 46 million in 2013 to 45 million in 2014. Earnings per share grew 34%, driven in part by the absence of last year's goodwill impairment and loss on divestiture, as well as lower interest rates and our share repurchase program. Our strong cash from operations is mainly due to favorable timing on collections of receivables and improved inventory turns. We achieved this level of cash from operations in 2014 despite higher levels of pension contributions.

#### 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.

We did not complete any acquisitions in 2014.

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 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 our Medical Devices segment, including the possibility of selling the entire segment.

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## 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.

### Revenue Recognition on Long-Term Contracts

Revenue representing 34% of 2014 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 2014, 2013 or 2012.

### Contract Loss Reserves

At September 27, 2014, we had contract loss reserves of \$36 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 27, 2014, we had net inventories of \$517 million, or 31% of current assets. Reserves for inventory were \$99 million, or 16% 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.

#### Reviews for Impairment of Goodwill

At September 27, 2014, we had \$758 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 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 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.

#### Interim Test

We performed an interim test on goodwill for impairment for our Medical Devices reporting unit in the first quarter of 2014. We performed a quantitative assessment for this reporting unit, which had \$85 million of goodwill as of the date

of our test. Based on this test, the fair value of our Medical Devices reporting unit exceeded its carrying value by 1%. Therefore, goodwill was not impaired. The determination of each of our assumptions is subjective and requires significant estimates. Changes in these estimates and assumptions could materially affect the results of our impairment review.

#### Annual test - Qualitative Assessments

For our annual test of goodwill for impairment in 2014, we performed qualitative assessments for each of our three regional reporting units within Industrial Systems. We considered our most recent quantitative tests performed last year, and concluded that it is more likely than not that the fair values exceeded their carrying values.

#### Annual test - Quantitative Assessments

For our annual test of goodwill for impairment in 2014, we performed quantitative assessments for the other five 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 11.0% 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. Therefore, we concluded that goodwill was not impaired.

The fair value of each reporting unit exceeded its carrying amount by at least 10%. 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. Had we used discount rates that were 100 basis points higher than those we assumed, the fair values of the smaller of our Aircraft Controls reporting units and our Medical Devices reporting unit would not have exceeded their carrying amounts and we would have measured impairment of goodwill. However, each of our other reporting units would have still had fair values in excess of their carrying amounts by a substantial amount. If we had used a discount rate that was 50 basis points higher or a terminal growth rate that was 100 basis points lower than those we assumed, the fair values of each of our reporting units would have continued to exceed their carrying amounts.

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.

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.

#### Pension Assumptions

We maintain various defined benefit pension plans covering employees at certain locations. Pension expense for all defined benefit plans for 2014 was \$36 million. Pension obligations and the related costs are determined using actuarial valuations that involve several assumptions. The most critical assumptions are the discount rate, the long-term expected return on assets and mortality rates. Other assumptions include 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. defined benefit plans (each a "U.S. plan") 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. In determining expense for 2014 for our largest U.S. plan, we used a 5.00% discount rate, compared to 3.75% for 2013. We will use a 4.40% discount rate to determine our expense in 2015 for this plan. This 60 basis point decrease in the discount rate will increase our pension expense by \$4 million in 2015.

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 2014 expense for our largest plan, we used an 8.4% return on assets assumption, compared to 8.6% for 2013. A 50 basis point decrease in the long-term expected return on assets assumption would increase our annual pension expense by \$2 million.



Mortality assumptions are used to estimate the life expectancy of plan participants during which they are expected to receive benefit payments. We use the most recent mortality table (RP-2000) and projection scale for future improvements in mortality, as published by the Society of Actuaries (SOA), as a basis for our mortality assumptions for our U.S. plans. The SOA recently published a new mortality table (RP-2014) and a new projection scale for future improvements in mortality. This new mortality table and projection scale reflect longer life expectancies. The use of this new table and projection scale would result in an increase to our pension obligation, an increase to our future pension expense and a decrease to our funded status. In 2015, we will analyze whether the new mortality table and projection scale as issued or an alternative table and projection method best reflects our demographics and anticipated plan outcomes.

#### Deferred Tax Asset Valuation Allowances

At September 27, 2014, we had gross deferred tax assets of \$263 million and a deferred tax asset valuation allowance of \$5 million. The deferred tax assets principally relate to benefit accruals, inventory obsolescence, tax benefit carryforwards and contract loss reserves. The deferred tax assets include \$10 million related to tax benefit carryforwards for which \$5 million of deferred tax asset valuation allowances are recorded.

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)				2014 vs. 2013		2013 vs. 2012			
	2014	2013	2012	\$ Variance	% Variance	\$ Variance	% Variance		
Net sales	\$2,648	\$2,610	\$2,470	\$38	1	%	\$141	6	%
Gross margin	30.1	% 30.0	% 30.2	%					
Research and development expenses	\$139	\$135	\$116	\$5	4	%	\$18	16	%
Selling, general and administrative expenses as a percentage of sales	15.2	% 15.2	% 15.6	%					
Interest expense	\$13	\$27	\$34	\$(14)	(54)	%	\$(7)	(21)	%
Restructuring expense	\$13	\$14	\$—	\$(1)	(8)	%	\$14	n/a	
Goodwill Impairment	\$—	\$38	\$—	\$(38)	n/a		\$38	n/a	
Other	\$10	\$8	\$1	\$2	25	%	\$8	n/a	
Effective tax rate	27.7	% 27.0	% 27.0	%					
Net earnings	\$158	\$120	\$152	\$38	31	%	\$(32)	(21)	%
Diluted earnings per share	\$3.52	\$2.63	\$3.33	\$0.89	34	%	\$(0.70)	(21)	%

Net sales increased in 2014 compared to 2013 due to growth in Aircraft Controls and Components. Sales declined in Medical Devices, Space and Defense Controls and Industrial Systems. Acquisitions in Components and Space and Defense Controls contributed 56% of the sales growth, while changes in foreign currency exchange rates contributed 44% of the sales growth.

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 sales growth in 2013.

Gross margin was flat in 2014 compared to 2013. Unfavorable sales mix, primarily in Aircraft Controls, was offset by lower pension expense as well as benefits realized from the 2013 restructuring activities. Our pension expense in 2014 decreased \$12 million, driven by the increase in the discount rate for our U.S. plan, rising to 5.00% from 3.75%.

Research and development expenses increased in 2014 compared to 2013. Within Aircraft Controls, research and development expenses increased \$11 million as the ramp up of activities on the Embraer E-Jets program was partially offset by decreasing development activity on the Boeing 787 and Airbus A350 programs. Within Industrial Systems, research and development expenses decreased \$6 million. Research and development expenses increased in 2013 compared to 2012 due to lower reimbursements negotiated on commercial transport programs and increased activity on the Boeing 787 program.

Selling, general and administrative expenses as a percentage of sales for 2014 were comparable to 2013's percentage of sales as benefits from earlier restructuring activities were offset by start up activities on a new ERP system. Selling, general and administrative expenses as a percentage of sales for 2013 decreased compared to 2012 due to cost containment activities.

Interest expense decreased in 2014 compared to 2013, with \$11 million of the decrease due to the redemption of our senior subordinated notes. On December 19, 2013, we repurchased our 7¼% senior subordinated notes due on January 15, 2018. In doing so, we incurred a 3.625% call premium in the first quarter of 2014. On January 15, 2013, we repurchased our 6¼% senior subordinated notes at par. Interest expense decreased in 2013 compared to 2012 due to

the January 15, 2013 redemption of 6¼% senior subordinated notes.

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 the fourth quarter of 2014, we incurred restructuring expenses, primarily in our Aircraft Controls and Space and Defense Controls segments. The restructuring actions were in response to the business outlooks for each segment, including a change in the mix of sales and delays and cancellations of orders for certain product lines. Each segment's restructuring expense totaled \$5 million. We expect these activities to result in \$16 million of cost savings during 2015. Our fourth quarter of 2014 restructuring expense included \$1 million for the impairment of long-lived assets in our Medical Devices segment and \$1 million for the impairment of intangibles assets in our Industrial Systems segment. In 2013, we initiated workforce reduction activities in our Industrial Systems, Space and Defense Controls and Aircraft Controls segments. Through 2014, the total savings were \$23 million, or 98% of our projected annual benefits.

Other expense in 2014 includes payment of a \$7 million call premium on the early redemption of our 7¼% senior subordinated notes and a \$5 million write-down of a technology investment in Industrial Systems.

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.

The effective tax rate in 2014 was higher than in 2013 due primarily to the absence of benefits from the prior year. Last year, 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 in 2013, we also had a lower effective tax rate. The effective tax rate remained unchanged in 2013 as compared to 2012 due to similar levels of benefits in each year. In 2012, we benefited from a reduction in the deferred tax asset valuation allowance associated with net operating loss carryforwards from a foreign operation.

Other comprehensive income decreased in 2014. The retirement liability adjustment decreased other comprehensive income by \$148 million due primarily to a 60 basis point decrease on the discount rates applicable to our U.S. plan. Also, foreign currency translation adjustments, driven by the Euro relative to the U.S. dollar, decreased other comprehensive income \$38 million compared to 2013. Other comprehensive income increased in 2013 compared to 2012. The retirement liability adjustment increased other comprehensive income by \$153 million due primarily to a 125 basis point increase on the discount rates applicable to our U.S. plan.

2015 Outlook – We expect sales in 2015 to increase 1% to \$2.66 billion, with modest growth in our Components, Industrial Systems and Space and Defense Controls segments. We expect flat sales in Medical Devices. We expect sales in Aircraft Controls to decline slightly as the growth in Commercial OEM is offset by declines in our military business and in commercial aftermarket programs. We expect an increase in our profitability as our operating margin increases to 11.5%. We expect operating margin increases in Space and Defense Controls due to the benefits of our restructuring actions and in Industrial Systems due to the absence of various charges. We expect relatively flat margins in Aircraft Controls and Medical Devices and slightly lower margins in Components. We expect net earnings to increase 14% to \$180 million, and diluted earnings per share to increase 21% to \$4.25. The difference between projected diluted earnings per share growth and projected net earnings growth is anticipated to come from shares repurchased through the end 2014.

## 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)	2014	2013	2012	2014 vs. 2013		2013 vs. 2012	
				\$	%	\$	%
				Variance	Variance	Variance	Variance
Net sales - military aircraft	\$572	\$596	\$576	\$(24 )	(4 %)	\$20	4 %
Net sales - commercial aircraft	546	463	388	83	18 %	76	20 %
	\$1,118	\$1,060	\$963	\$58	5 %	\$96	10 %
Operating profit	\$116	\$127	\$105	\$(11 )	(9 %)	\$22	21 %
Operating margin	10.4 %	12.0 %	10.9 %				
Backlog	\$715	\$671	\$658	\$43	6 %	\$13	2 %

Aircraft Controls' net sales increased in our commercial market but decreased in our military market in 2014 compared to 2013. However, sales in our commercial and our military markets both increased in 2013 compared to 2012.

Commercial OEM sales in 2014 increased compared to 2013 due to Boeing and Airbus program ramp ups and volume increases. Sales to Boeing increased \$48 million as production continued to ramp up on the Boeing 787 and volume increased on legacy Boeing production programs. Also, sales to Airbus increased \$14 million due to the production growth on the A350 program. In addition, commercial aftermarket increased \$18 million due to higher initial provisioning sales for the Boeing 787. Partially offsetting the commercial growth was a decline in military sales. Helicopters declined \$16 million due mostly to lower deliveries on the V-22. Also, military aftermarket sales declined \$8 million due in part to the absence of foreign military F-15 sales.

During 2013, nearly 80% of the sales growth compared to 2012 was from the commercial market with OEM sales to Boeing driving most of the growth. Boeing OEM sales increased \$64 million as production ramped up on the Boeing 787 and volume increased on the 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. Additionally, most of the sales growth in the military market was from aftermarket platforms, especially in foreign military F-15 sales. Military OEM sales increased slightly as increases on the KC-46 Tanker program and on fighter programs were partially offset by lower sales in navigation aids.

Operating margin for 2014 declined as compared to 2013. Research and development costs increased \$11 million. We had development costs associated with the ramp up of the Embraer E-Jets program, but those costs were partially offset by decreasing development activity on the Boeing 787 and Airbus A350 programs. Additionally, we incurred \$5 million in costs associated with start up activities on a new ERP system as well as \$4 million in higher restructuring expenses than in 2013. We incurred a \$5 million restructuring expense in the fourth quarter of 2014 that we expect will provide \$9 million of annual benefits, approximately three quarters of which we will achieve in 2015. Partly offsetting the operating margin declines was \$7 million of lower pension expense, driven by the increase in the discount rate.

Operating margin for 2013 improved as compared to 2012. Higher volume and more favorable product mix offset a \$13 million increase 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.

The increase of twelve-month backlog for Aircraft Controls at September 27, 2014 compared to September 28, 2013 is largely related to increases in commercial orders. The higher level of twelve-month backlog for Aircraft Controls at September 28, 2013 compared to September 29, 2012 is also largely related to increases in commercial orders and is partially offset by fulfilling past orders on various military programs.

2015 Outlook for Aircraft Controls – We expect sales in Aircraft Controls to decline slightly to \$1.1 billion in 2015. Commercial aircraft sales are expected to increase 3% to \$563 million due to strong sales in our OEM programs, with sales on the Airbus A350 program driving the increase. Partially offsetting the OEM growth is an expected decrease in commercial aftermarket sales as the higher initial provisioning sales in 2014 for the Boeing 787 do not repeat. We also expect a 6% decline in military sales. Activity on our major military OEM programs will continue to decline, while we expect sales across most of our military aftermarket programs to decrease as well. We expect our operating margin will be 10.5% in 2015, about the same level as 2014. Margin headwinds include an increase in less favorable sales on early commercial production programs and lower domestic and foreign military sales. However, we expect these declines to be offset by lower research and development costs and by the benefit of our 2014 restructuring activities.

## Space and Defense Controls

(dollars in millions)				2014 vs. 2013		2013 vs. 2012	
	2014	2013	2012	\$	%	\$	%
				Variance	Variance	Variance	Variance
Net sales	\$395	\$396	\$359	\$(1 )	— %	\$37	10 %
Operating profit	\$26	\$25	\$43	\$1	3 %	\$(18 )	(41 %)
Operating margin	6.6 %	6.4 %	11.9 %				
Backlog	\$254	\$254	\$204	\$—	— %	\$50	25 %

Space and Defense Controls' net sales in 2014 are comparable to sales in 2013. Sales increased in 2013 compared to 2012 due to acquisitions in the space market more than offsetting declines in our defense market.

Sales within the defense market in 2014 were flat compared to 2013. Sales for a missile defense system increased \$9 million due to higher production rates and security sales increased \$5 million due to higher product demand.

Offsetting these increases was a \$13 million decline in our defense controls business. The decline is mostly due to a program's prior year sales not repeating because of its cyclical nature. Sales in our space market in 2014 declined \$2 million. Within our space market, sales of satellite components and engines programs declined \$3 million due mostly to activity slowdowns and program delays. Sales in our launch vehicle programs were flat. Activity on NASA's Soft Capture System increased sales in our space market by \$12 million, but was offset mostly by other program completions.

Sales within the space market in 2013 increased \$48 million, with acquisitions accounting for \$58 million of incremental sales. The In-Space Propulsion acquisition contributed an incremental \$32 million of sales and the Broad Reach Engineering acquisition 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 market in 2013 declined \$11 million. A decline in missile systems production rates contributed to a \$6 million defense sales decline, while the absence of Driver Vision Enhancement sales in 2013 contributed to a \$5 million sales decline.

Operating margin in 2014 and 2013 were both affected by restructuring activities. In 2013, we incurred \$5 million of restructuring expenses. We expected to receive \$9 million in future cost savings in 2014, of which we realized 99%. In 2014, we also incurred \$5 million of restructuring expenses. We expect these expenses will provide \$9 million of future cost savings in 2015.

Operating margin in 2014 was comparable to operating margin in 2013. The 2014 operating profit benefited from \$9 million realized from the 2013 restructuring activities. Additionally, we benefited from a \$2 million settlement related to a recent acquisition. These improvements were mostly offset by a lower level of profitable spares sales for defense controls.

Operating margin declined in 2013 as compared to 2012. This is due in part to \$5 million of restructuring expenses incurred in 2013. 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.

The level of twelve-month backlog at September 27, 2014 is comparable to the level at September 28, 2013, as increases in our defense market were offset by declines in our space market. The increased level in twelve-month backlog at September 28, 2013 compared to September 29, 2012 is mainly due to companies acquired in the year.



2015 Outlook for Space and Defense Controls – We expect sales in Space and Defense Controls to increase 2% to \$403 million in 2015. We expect sales in our defense market to increase due to stronger domestic and foreign sales on military vehicles as well as higher security sales. Offsetting this growth is an expected lower level of satellite component sales. We expect our operating margin to increase to 10.7% in 2015 from 6.6% in 2014 as we benefit from our 2014 restructuring actions and a more favorable sales mix associated with higher defense controls sales.

## Industrial Systems

(dollars in millions)	2014	2013	2012	2014 vs. 2013		2013 vs. 2012	
				\$	%	\$	%
				Variance	Variance	Variance	Variance
Net sales	\$591	\$592	\$634	\$(1 )	— %	\$(42 )	(7 %)
Operating profit	\$58	\$42	\$63	\$16	38 %	\$(21 )	(33 %)
Operating margin	9.8	% 7.1	% 10.0				
Backlog	\$182	\$187	\$234	\$(5 )	(2 %)	\$(46 )	(20 %)

Industrial Systems' net sales were flat in 2014 compared to 2013. Sales in our industrial automation and energy markets improved but were offset by declines in our simulation and test market. Industrial Systems' sales decreased in 2013 compared to 2012 due to lower wind energy sales.

Within our industrial automation market, sales increased \$14 million in 2014 compared to 2013 due to improvements from our European businesses in metal forming and presses, distribution and aftermarket. Additionally, sales in our energy market increased \$4 million due to a new wind application in Brazil. Offsetting the growth was a \$19 million decline in our simulation and test market, resulting from lower orders from our larger flight training simulation customers.

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, with sales decreases in metal forming and presses, heavy industry and plastics and die castings. Sales in our test markets declined \$9 million, primarily in our auto test programs. This decline was more than offset by our motion simulation programs increasing \$17 million on strength in flight training systems.

Operating margin increased in 2014 compared to 2013. Operating profit improved as we realized the \$14 million of expected benefits associated with the 2013 restructuring activities. Additionally in 2014, we benefited from \$7 million less in restructuring expenses, additional cost containment activities, lower material costs and lower levels of research and development expenses. However, the operating margin in 2014 was negatively impacted by an incremental \$3 million of technology investment write-downs and by a \$3 million charge related to a quality issue on a customer application.

Operating margin declined in 2013 compared to 2012 due 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 lower level of twelve-month backlog in Industrial Systems at September 27, 2014 compared to September 28, 2013 is primarily due to timing of orders in our energy market. 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, auto test and wind energy orders.

2015 Outlook for Industrial Systems – We expect sales in Industrial Systems to increase 2% to \$600 million in 2015. We expect sales in our simulation and test market to increase as we recover from the low level of flight simulation sales in 2014. We expect that our operating margin will increase to 12.1% in 2015 from 9.8% in 2014 as we benefit from a more favorable mix as well as the absence of investment write-downs.

## Components

(dollars in millions)	2014	2013	2012	2014 vs. 2013		2013 vs. 2012	
				\$	%	\$	%
Net sales	\$425	\$415	\$374	\$10	2 %	\$41	11 %
Operating profit	\$65	\$69	\$57	\$(4 )	(5 %)	\$11	20 %
Operating margin	15.3 %	16.5 %	15.3 %				
Backlog	\$176	\$176	\$167	\$(1 )	— %	\$10	6 %

Components' net sales increased in 2014 compared to 2013. Sales increased in our non-aerospace and defense market due largely to a recent acquisition, while sales decreased in our aerospace and defense market. Components' sales increased in 2013 compared to 2012, primarily as a result of incremental sales from acquisitions.

Sales in our non-aerospace and defense market increased \$18 million in 2014 compared to 2013. Incremental sales from the Aspen Motion Technologies acquisition provided \$17 million of this sales growth. Energy sales increased \$3 million in our marine market due to a large offshore exploration application sale. Sales in our aerospace and defense market decreased \$8 million. The decline in sales was largely driven by lower defense spending across various aircraft and space and defense programs.

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 for offshore oil exploration products. Sales into our medical market also increased. 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.

Operating margin declined in 2014 compared to 2013. Our operating margin in 2013 included a \$2 million benefit associated with an unachieved earn out provision related to an acquisition. Also in 2014, start up activities on a new ERP system reduced operating profit by \$2 million.

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.

The twelve-month backlog at September 27, 2014 is comparable to the level at September 28, 2013. The higher level of twelve-month backlog at September 28, 2013 compared to September 29, 2012 is attributable to increased orders for oil and gas exploration products and to our recent acquisitions.

2015 Outlook for Components – We expect sales to increase 3% to \$440 million in 2015 with growth from both our aerospace and defense and our non-aerospace and defense markets. We expect most of the growth in our aerospace and defense market to come from higher sales in the space market and higher foreign military vehicle sales. We expect most of the growth in our non-aerospace and defense market to come from our industrial market, reflecting the general improvement in domestic economic conditions. We expect our operating margin to decrease slightly to 14.8% in 2015.



## Medical Devices

(dollars in millions)	2014	2013	2012	2014 vs. 2013		2013 vs. 2012	
				\$	%	\$	%
				Variance	Variance	Variance	Variance
Net sales	\$120	\$147	\$140	\$(27 )	(18 %)	\$8	5 %
Operating profit (loss)	\$11	\$(36 )	\$5	\$46	(130 %)	\$(41 )	n/a
Operating margin	8.8	% (24.1 %)	3.9 %				
Backlog	\$13	\$7	\$17	\$5	71 %	\$(9 )	(56 %)

Medical Devices' net sales decreased in 2014 when compared to 2013 with declines in all of our major product categories. Sales increased in 2013 when compared to 2012.

In 2014 as compared to 2013, pump and set sales declined \$19 million due to lower sales to a distribution partner. Additionally, in June 2013, we divested our Buffalo, New York Ethox Medical operations, which contributed \$9 million of lost sales in 2014.

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.

Operating margin in 2014 increased when compared to 2013 due to the absence of two charges. 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 higher operating margin in 2014 compared to 2013 is in part due to cost containment activities and reductions in freight expense. The improved operating margin in 2013 compared to 2012 is due in part to increased enteral product volumes.

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.

2015 Outlook for Medical Devices – We expect flat sales in 2015 compared to 2014. We expect sales increases in our pumps and sets products as we benefit from higher sales volumes. However, we expect the increase to be offset by a decrease in our other medical products. We expect our operating margin to remain flat with 2014, at 8.8%.

## FINANCIAL CONDITION AND LIQUIDITY

(dollars in millions)	2014	2013	2012	2014 vs. 2013		2013 vs. 2012	
				\$	%	\$	%
				Variance	Variance	Variance	Variance
Net cash provided (used) by:							
Operating activities	\$287	\$251	\$214	\$36	14 %	\$37	17 %
Investing activities	(87 )	(173 )	(216 )	87	(50 %)	42	(20 %)
Financing activities	(118 )	(72 )	37	(46 )	64 %	(110 )	(293 %)

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 27, 2014, our cash balance was \$231 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 2014 compared to 2013. We benefited by \$82 million due to favorable timing on collections of receivables, primarily in our Aircraft Controls, Medical Devices and Space and Defense Controls segments. We also benefited \$31 million due to lower levels of inventory, primarily in our Aircraft Controls segment. The change in the cash provided by operating activities was negatively impacted by higher levels of pension contributions, and by \$28 million due to the unfavorable timing of payments in our Aircraft Controls and Space and Defense Controls segments.

Net cash provided by operating activities increased in 2013 compared to 2012. Half of the increase in cash provided by operating activities was driven by higher customer advances, primarily from our Aircraft Controls and, to a lesser degree, our Space and Defense Controls segments. Also 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.

## Investing activities

Net cash used by investing activities in 2014 includes \$79 million for capital expenditures and \$9 million used to redeem our 7¼% senior subordinated notes that were invested in our supplemental retirement plan.

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 includes \$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.

The higher level of capital expenditures in 2012 compared to both 2013 and 2014 was partly attributable to the construction of new facilities. We expect our 2015 capital expenditures to be approximately \$100 million, as we support the increased production of commercial aircraft.

### Financing activities

The cash used by financing activities for 2014 includes \$266 million to fund our stock repurchase program and \$7 million for the call premium on our 7¼% senior subordinated notes. We also used credit facility borrowings to fund the redemption of our 7¼% senior subordinated notes.

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.



## 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 May 22, 2014, we amended our U.S. revolving credit facility. The amendment increased the capacity on our revolving credit facility from \$900 million to \$1,100 million and extended the maturity of the credit facility to May 22, 2019. The amendment also provides an expansion option, which permits us to request an increase of up to \$200 million to the credit facility upon satisfaction of certain conditions. The U.S. revolving credit facility had an outstanding balance of \$765 million at September 27, 2014. Interest on the outstanding credit facility borrowings is based on LIBOR plus the applicable margin, which was 138 basis points at September 27, 2014. 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 \$165 million for 2014 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 27, 2014, we had \$334 million of unused borrowing capacity, including \$321 million from the U.S. revolving credit facility after considering standby letters of credit. The entire unused borrowing capacity as of September 27, 2014 was available to us without violating any of our U.S. revolving credit facility covenants.

We have a trade receivables securitization facility (the "Securitization Program"), which terminates on February 13, 2015. 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. revolving credit facility. We had an outstanding balance of \$100 million at September 27, 2014. The Securitization Program reduced the amount outstanding under our U.S. revolving credit facility and increased the amount of short-term borrowings. The Securitization Program has a minimum borrowing requirement, which was \$80 million at September 27, 2014. Interest on the secured borrowings under the Securitization Program was 80 basis points at September 27, 2014 and is based on prevailing market rates for short-term commercial paper plus an applicable margin.

On December 19, 2013, we repurchased our 7¼% senior subordinated notes due on January 15, 2018 at 103.625%, 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 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.

Net debt to capitalization was 32% at September 27, 2014 and 26% at September 28, 2013. The increase in net debt to capitalization is due to our share repurchase program, partially offset by our net earnings and positive cash flow in 2014.

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

On January 24, 2014 and August 12, 2014, the Board of Directors amended our share repurchase program. The program includes both Class A and Class B common shares, and allows us to buy up to an aggregate nine million common shares. Under this program, we have purchased approximately 4,002,000 shares for \$273 million as of September 27, 2014.

#### 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 27, 2014 are as follows:

(dollars in millions)	Payments due by period				
	Total	2015	2016- 2017	2018- 2019	After 2019
Contractual Obligations					
Long-term debt	\$770	\$5	\$—	\$765	\$—
Operating leases	121	22	34	22	43
Purchase obligations	518	464	41	1	12
Total contractual obligations	\$1,409	\$491	\$75	\$788	\$55

In addition to the obligations in the table above, we have \$3 million recorded for unrecognized tax benefits in current liabilities, which includes \$2 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.

The table above 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 27, 2014, would be approximately \$12 million annually.

Total contractual obligations exclude pension obligations. In 2015, we have no minimum funding requirements.

However, we anticipate making contributions to defined benefit pension plans of \$62 million, of which approximately \$52 million is to the U.S. plan. We are unable to determine minimum funding requirements beyond 2015.

We have made discretionary incremental contributions to our defined benefit plans in excess of minimum funding requirements in 2014 and expect to continue to do the same in 2015. These additional contributions are being made in an effort to migrate toward fully funded status and reduce the volatility to our consolidated financial statements. The discretionary contributions made in 2014 were a result of strong cash flow, cash position and to utilize cash held outside the U.S. for foreign plans.

(dollars in millions)	Commitments expiring by period				
	Total	2015	2016- 2017	2018- 2019	After 2019
Other Commercial Commitments					
Standby letters of credit	\$14	\$9	\$4	\$1	\$—

## 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 62% of our 2014 sales were generated in aerospace and defense markets. Within aerospace and defense, we serve three end markets: defense, commercial aircraft and space.

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

Reductions in the U.S. Department of Defense's mandatory and discretionary budgeted spending, which became effective on March 1, 2013, resulting from the Budget Control Act of 2011, will have ongoing ramifications for the domestic aerospace and defense market for the near future. As originally passed, the Budget Control Act provided that, in addition to an initial significant reduction in future domestic defense spending, further automatic cuts to defense spending authorization (which is generally referred to as sequestration) of approximately \$500 billion through the Federal Government's 2021 fiscal year would be triggered by the failure of Congress to produce a deficit reduction bill. The sequestration spending cuts were intended to be uniform by category for programs, projects and activities within accounts. The Bipartisan Budget Act of 2013, passed and signed into law in December 2013, provides some opportunities to lessen the effects of sequestration. This act kept the defense base spending budget flat at approximately \$500 billion for Federal Government's 2014 and 2015 fiscal years. This provided over \$30 billion in sequester relief over the two fiscal years in exchange for extending the imposition of sequestration to fiscal years 2022 and 2023. Although federal agencies have received guidance from the Office of Management and Budget on how to implement the new spending parameters of sequestration, at this time, we do not have material information from our defense customers that would allow us to reliably estimate the impact of sequestration or the Bipartisan Budget Act of 2013. We believe that our military sales remain likely to be most affected due to lower defense spending. Currently, we expect to realize approximately \$640 million in U.S. defense sales in 2015.

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

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



## Industrial

Approximately 38% of our 2014 sales were generated in industrial markets. Within industrial, we serve three end markets: industrial automation, energy and medical.

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

The energy market we serve are affected by changing oil and natural gas prices, global urbanization, the resulting increase in demand for global energy and the political climate and corresponding public support for investments in renewable energy generation capacity. Drivers for global growth include investments in power generation infrastructure, including renewable energy, and exploration in search of new oil and gas resources.

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 spans, in turn resulting in greater need for medical services. These same technology and treatment advances also drive increased demand from the general population as a means to improve quality of life. Access to medical insurance, whether through government funded health care plans or private insurance, also affects the demand for medical services.

## Foreign Currencies

We are affected by the movement of foreign currencies compared to the U.S. dollar, particularly in Industrial Systems. About one-third of our 2014 sales were denominated in foreign currencies. During 2014, average foreign currency rates generally strengthened against the U.S. dollar compared to 2013. The translation of the results of our foreign subsidiaries into U.S. dollars increased sales by \$17 million compared to one year ago. 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 2013 sales by \$10 million compared to 2012.

## RECENT ACCOUNTING PRONOUNCEMENTS

In March 2013, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("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.

In April 2014, the FASB issued ASU No. 2014-08, "Presentation of Financial Statements (Topic 205) and Property, Plant, and Equipment (Topic 360): Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity." This ASU is intended to change the criteria for reporting discontinued operations and enhance convergence of the FASB's and the International Accounting Standard Board's (IASB) reporting requirements for discontinued operations. The provisions of this ASU are effective for fiscal years beginning after December 15, 2014 and interim periods within those fiscal years. This amendment is applicable to us beginning in the first quarter of 2016. Early adoption is permitted, but only for disposals (or classifications as held for sale) that have not been reported in financial statements previously issued or available for issuance. The adoption of this standard is not expected to have a material impact on our financial statements.



In May 2014, the FASB issued ASU No. 2014-09, “Revenue from Contracts with Customers (Topic 606),” which supersedes the revenue recognition requirements in ASC 605, Revenue Recognition. This ASU requires revenue recognition to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. This ASU also requires additional disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and assets recognized from costs incurred to obtain or fulfill a contract. This ASU can be applied using one of two prescribed retrospective methods, and no early adoption is permitted. The provisions of this ASU are effective for fiscal years beginning after December 15, 2016 and interim periods within those fiscal years. This amendment is applicable to us beginning in the first quarter of 2018. We are currently evaluating the adoption of this standard on our financial statements.

In June 2014, the FASB issued ASU No. 2014-11, “Transfers and Servicing (Topic 860): Repurchase to Maturity Transactions, Repurchase Financings and Disclosures.” This ASU changes the accounting for repurchase-to-maturity transactions to secured borrowing accounting, requires certain disclosures for transactions accounted for as sales and requires certain disclosures for other transactions accounted for as secured borrowings. The provisions of this ASU are effective for fiscal years beginning after December 15, 2014 and for interim periods beginning after March 15, 2015. This amendment is applicable to us beginning in the third quarter of 2015. Other than requiring additional disclosures, the adoption of this standard is not expected to have a material impact on our financial statements.

In August 2014, the FASB issued ASU No. 2014-13, “Consolidation (Topic 810): Measuring the Financial Assets and Financial Liabilities of a Consolidated Collateralized Financing Entity.” This ASU allows a reporting entity to elect to measure the financial assets and the financial liabilities of a consolidated collateralized financing entity using either the measurement alternative included in the Update or Topic 820. The provisions of this ASU are effective for annual periods and interim periods within those annual periods beginning after December 15, 2015. Early adoption is permitted as of the beginning of an annual period. This amendment is applicable to us beginning in the first quarter of 2017. The adoption of this standard is not expected to have a material impact on our financial statements.

In August 2014, the FASB issued ASU No. 2014-15, “Presentation of Financial Statements - Going Concern (Subtopic 205-40): Disclosures of Uncertainties about an Entity’s Ability to Continue as a Going Concern.” This ASU requires management to evaluate whether there are conditions or events that raise substantial doubt about the entity’s ability to continue as a going concern within one year after the date that the financial statements are issued or are available to be issued. This ASU also requires management to disclose certain information depending on the results of the going concern evaluation. The provisions of this ASU are effective for annual periods ending after December 15, 2016, and for interim and annual periods thereafter. Early adoption is permitted. This amendment is applicable to us beginning in the first quarter of 2017. 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 2014, our derivative instruments consisted of interest rate swaps designated as cash flow hedges and foreign currency forwards.

At September 27, 2014, we had \$549 million of borrowings subject to variable interest rates. During 2014, our average borrowings subject to variable interest rates were \$474 million and, therefore, if interest rates had been one percentage point higher during 2014, our interest expense would have been \$5 million higher. At September 27, 2014, we had interest rate swaps with notional amounts totaling \$320 million. The interest rate swaps effectively convert this amount of variable-rate debt to fixed-rate debt at 2.0%, including the applicable margin of 138 basis points as of September 27, 2014. The interest will revert back to variable rates based on LIBOR plus the applicable margin upon the maturity of the interest rate swaps. These interest rate swaps will mature at various times between January 15, 2015 and June 5, 2017.

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 \$250 million outstanding at September 27, 2014 that mature at various times through the third quarter of 2016.

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 2014 would have decreased by \$13 million from foreign currency translation. Offsetting that translation decrease would be a \$26 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 27, 2014	September 28, 2013	September 29, 2012
NET SALES	\$2,648,385	\$2,610,311	\$2,469,536
COST OF SALES	1,850,809	1,826,561	1,724,232
GROSS PROFIT	797,576	783,750	745,304
Research and development	139,462	134,652	116,403
Selling, general and administrative	403,487	396,636	385,051
Interest	12,513	26,962	34,312
Restructuring	12,913	14,075	—
Goodwill impairment	—	38,200	—
Other	10,278	8,219	697
EARNINGS BEFORE INCOME TAXES	218,923	165,006	208,841
INCOME TAXES	60,725	44,509	56,379
NET EARNINGS	\$158,198	\$120,497	\$152,462
NET EARNINGS PER SHARE			
Basic	\$3.57	\$2.66	\$3.37
Diluted	\$3.52	\$2.63	\$3.33
AVERAGE COMMON SHARES OUTSTANDING			
Basic	44,362,412	45,335,336	45,246,960
Diluted	44,952,437	45,823,720	45,718,324

See accompanying Notes to Consolidated Financial Statements.



Inc. Consolidated Statements of Comprehensive Income  (dollars in thousands)	Fiscal Years Ended		
	September 27, 2014	September 28, 2013	September 29, 2012
NET EARNINGS	\$158,198	\$120,497	\$152,462
OTHER COMPREHENSIVE INCOME (LOSS), NET OF TAX:			
Foreign currency translation adjustment	(31,318 )	7,079	144
Retirement liability adjustment	(41,289 )	106,729	(46,296 )
Change in accumulated (loss) income on derivatives	(73 )	(1,255 )	385
OTHER COMPREHENSIVE INCOME (LOSS), NET OF TAX	(72,680 )	112,553	(45,767 )
COMPREHENSIVE INCOME	\$85,518	\$233,050	\$106,695
See accompanying Notes to Consolidated Financial Statements.			

Inc.		
Consolidated Balance Sheets		
(dollars in thousands, except per share data)	September 27, 2014	September 28, 2013
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$231,292	\$157,090
Receivables	780,874	811,376
Inventories	517,056	551,674
Deferred income taxes	92,390	91,052
Prepaid expenses and other current assets	42,452	36,183
<b>TOTAL CURRENT ASSETS</b>	<b>1,664,064</b>	<b>1,647,375</b>
<b>PROPERTY, PLANT AND EQUIPMENT, net</b>	<b>555,348</b>	<b>562,363</b>
<b>GOODWILL</b>	<b>757,852</b>	<b>766,924</b>
<b>INTANGIBLE ASSETS, net of accumulated amortization of \$190,954 in 2014 and \$180,586 in 2013</b>	<b>178,070</b>	<b>208,756</b>
<b>OTHER ASSETS</b>	<b>53,118</b>	<b>51,677</b>
<b>TOTAL ASSETS</b>	<b>\$3,208,452</b>	<b>\$3,237,095</b>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Short-term borrowings	\$103,660	\$105,088
Current installments of long-term debt	5,262	3,382
Accounts payable	162,667	181,893
Accrued salaries, wages and commissions	141,096	130,467
Customer advances	145,500	145,854
Contract loss reserves	35,984	44,228
Other accrued liabilities	128,635	112,318
<b>TOTAL CURRENT LIABILITIES</b>	<b>722,804</b>	<b>723,230</b>
<b>LONG-TERM DEBT, excluding current installments</b>		
Senior debt	765,114	409,125
Senior subordinated notes	—	191,562
<b>LONG-TERM PENSION AND RETIREMENT OBLIGATIONS</b>	<b>288,216</b>	<b>269,751</b>
<b>DEFERRED INCOME TAXES</b>	<b>83,931</b>	<b>104,377</b>
<b>OTHER LONG-TERM LIABILITIES</b>	<b>972</b>	<b>3,285</b>
<b>TOTAL LIABILITIES</b>	<b>1,861,037</b>	<b>1,701,330</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	43,628	43,613
Issued 43,627,531 and outstanding 37,820,830 shares at September 27, 2014		
Issued 43,613,060 and outstanding 41,608,799 shares at September 28, 2013		
Class B - Authorized 20,000,000 shares. Convertible to Class A on a one-for-one basis	7,652	7,667
Issued 7,652,182 and outstanding 3,622,303 shares at September 27, 2014		
Issued 7,666,653 and outstanding 3,750,459 shares at September 28, 2013		
Additional paid-in capital	463,965	447,478
Retained earnings	1,447,911	1,289,713
Treasury shares	(360,445 )	(83,003 )
Stock Employee Compensation Trust	(48,458 )	(35,545 )

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Accumulated other comprehensive loss	(206,838	)	(134,158	)
TOTAL SHAREHOLDERS' EQUITY	1,347,415		1,535,765	
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$3,208,452		\$3,237,095	

See accompanying Notes to Consolidated Financial Statements.

Inc.			
Consolidated Statements of Shareholders' Equity			
(dollars in thousands)	Fiscal Years Ended		
	September 27, 2014	September 28, 2013	September 29, 2012
<b>COMMON STOCK</b>			
Beginning and end of year	\$51,280	\$51,280	\$51,280
<b>ADDITIONAL PAID-IN CAPITAL</b>			
Beginning of year	447,478	421,969	412,370
Issuance of treasury shares at more than cost	256	7,134	1,282
Equity-based compensation expense	7,189	6,620	6,226
Adjustment to market - SECT, and other	9,042	11,755	2,091
End of year	463,965	447,478	421,969
<b>RETAINED EARNINGS</b>			
Beginning of year	1,289,713	1,169,216	1,016,754
Net earnings	158,198	120,497	152,462
End of year	1,447,911	1,289,713	1,169,216
<b>TREASURY SHARES AT COST</b>			
Beginning of year	(83,003 )	(74,980 )	(74,479 )
Class A shares issued as consideration for acquisitions	—	—	(46 )
Class A shares issued related to options	1,991	3,591	945
Class A and B shares purchased	(279,433 )	(11,614 )	(1,400 )
End of year	(360,445 )	(83,003 )	(74,980 )
<b>STOCK EMPLOYEE COMPENSATION TRUST (SECT)</b>			
Beginning of year	(35,545 )	(15,984 )	(13,090 )
Sale of SECT stock to RSP	1,144	781	1,766
Purchase of SECT stock	(7,924 )	(9,676 )	(2,929 )
Adjustment to market - SECT	(6,133 )	(10,666 )	(1,731 )
End of year	(48,458 )	(35,545 )	(15,984 )
<b>ACCUMULATED OTHER COMPREHENSIVE (LOSS)</b>			
<b>INCOME</b>			
Beginning of year	(134,158 )	(246,711 )	(200,944 )
Other comprehensive (loss) income	(72,680 )	112,553	(45,767 )
End of year	(206,838 )	(134,158 )	(246,711 )
<b>TOTAL SHAREHOLDERS' EQUITY</b>	<b>\$1,347,415</b>	<b>\$1,535,765</b>	<b>\$1,304,790</b>
<b>TREASURY SHARES - CLASS A COMMON STOCK</b>			
Beginning of year	(2,004,262 )	(2,253,318 )	(2,393,039 )
Class A shares issued as consideration for acquisitions	—	—	(1,208 )
Class A shares issued related to options	283,921	495,297	175,823
Class A shares purchased	(4,086,361 )	(246,241 )	(34,894 )
End of year	(5,806,702 )	(2,004,262 )	(2,253,318 )
<b>TREASURY SHARES - CLASS B COMMON STOCK</b>			
Beginning of year	(3,305,971 )	(3,305,971 )	(3,305,971 )
Class B shares purchased	(13,067 )	—	—
End of year	(3,319,038 )	(3,305,971 )	(3,305,971 )
<b>SECT SHARES - CLASS B COMMON STOCK</b>			
Beginning of year	(610,223 )	(418,317 )	(395,470 )
Sale of SECT stock to RSP	18,444	21,237	48,579
Purchase of SECT stock	(119,062 )	(213,143 )	(71,426 )

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End of year (710,841 ) (610,223 ) (418,317 )  
See accompanying Notes to Consolidated Financial Statements.



Inc.			
Consolidated Statements of Cash Flows			
(dollars in thousands)	Fiscal Years Ended		
	September 27, 2014	September 28, 2013	September 29, 2012
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>			
Net earnings	\$ 158,198	\$ 120,497	\$ 152,462
Adjustments to reconcile net earnings to net cash provided by operating activities:			
Depreciation	78,078	75,000	67,084
Amortization	31,181	33,073	33,732
Deferred income taxes	5,021	(8,216 )	(4,113 )
Equity-based compensation expense	7,189	6,620	6,226
Redemption of senior subordinated notes	8,002	—	—
Goodwill impairment	—	38,200	—
Other	7,260	7,620	3,077
Changes in assets and liabilities providing (using) cash, excluding the effects of acquisitions:			
Receivables	23,707	(58,368 )	(53,424 )
Inventories	23,666	(6,871 )	(21,289 )
Accounts payable	(17,783 )	10,543	(7,602 )
Customer advances	(304 )	32,437	11,508
Accrued expenses	7,685	(2,625 )	10,357
Accrued income taxes	6,273	3,678	(9,371 )
Net pension and post retirement liabilities	(43,612 )	8,174	27,122
Other assets and liabilities	(7,459 )	(8,485 )	(1,429 )
<b>NET CASH PROVIDED BY OPERATING ACTIVITIES</b>	<b>287,102</b>	<b>251,277</b>	<b>214,340</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>			
Acquisitions of businesses, net of cash acquired	—	(69,157 )	(104,089 )
Purchase of property, plant and equipment	(78,771 )	(93,174 )	(107,030 )
Other investing transactions	(8,124 )	(11,067 )	(4,454 )
<b>NET CASH USED BY INVESTING ACTIVITIES</b>	<b>(86,895 )</b>	<b>(173,398 )</b>	<b>(215,573 )</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>			
Net short-term (repayments) borrowings	(977 )	16,124	81,849
Proceeds from revolving lines of credit	680,875	897,162	805,859
Payments on revolving lines of credit	(319,740 )	(782,617 )	(848,505 )
Payments on long-term debt	(3,256 )	(3,113 )	(1,335 )
Payments on senior subordinated notes	(191,575 )	(187,000 )	—
Payment of premium on redemption of senior subordinated notes	(6,945 )	—	—
Proceeds from sale of treasury stock	2,247	10,725	2,227
Purchase of outstanding shares for treasury	(272,876 )	(11,614 )	(1,400 )
Proceeds from sale of stock held by SECT	1,144	781	1,766
Purchase of stock held by SECT	(7,924 )	(9,676 )	(2,929 )
Excess tax benefits from equity-based payment arrangements	2,910	1,089	360
Other financing transactions	(2,288 )	(3,949 )	(470 )

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NET CASH (USED) PROVIDED BY FINANCING ACTIVITIES	(118,405 )	(72,088 )	37,422
Effect of exchange rate changes on cash	(7,600 )	2,458	(1,027 )
INCREASE IN CASH AND CASH EQUIVALENTS	74,202	8,249	35,162
Cash and cash equivalents at beginning of year	157,090	148,841	113,679
Cash and cash equivalents at end of year	\$231,292	\$157,090	\$148,841
SUPPLEMENTAL CASH FLOW INFORMATION			
Interest paid	\$17,300	\$29,320	\$32,636
Income taxes paid, net of refunds	41,999	54,461	69,480
Unsecured notes issued for acquisitions	—	8,450	—
See accompanying Notes to Consolidated Financial Statements.			

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

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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 27, 2014, September 28, 2013 and September 29, 2012.

**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 34%, 33% and 32% of 2014, 2013 and 2012 sales, respectively, 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 2014, 2013 or 2012.

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 2014, 66% 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:

	2014	2013	2012
Basic weighted-average shares outstanding	44,362,412	45,335,336	45,246,960
Dilutive effect of equity-based awards	590,025	488,384	471,364
Diluted weighted-average shares outstanding	44,952,437	45,823,720	45,718,324

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 5 years for computer hardware and software. 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 2014 or 2012.

**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. In 2014, we recorded a \$739 impairment charge in our Industrial Systems segment related to intangible assets from a product line we decided to exit. We also recorded a \$1,296 impairment charge in our Medical Devices segment related to equipment from a product line we are no longer pursuing. Both of these charges are included as restructuring in the consolidated statements of earnings. There were no impairment charges recorded in 2013 or 2012.

**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:

	2014	2013	2012
Warranty accrual at beginning of year	\$17,429	\$18,859	\$19,247
Additions from acquisitions	—	—	233
Warranties issued during current year	12,611	9,019	9,842
Adjustments to pre-existing warranties	(2,037)	) (1,911)	) (460)
Reductions for settling warranties	(7,759)	) (8,507)	) (10,016)
Foreign currency translation	(291)	) (31)	) 13
Warranty accrual at end of year	\$19,953	\$17,429	\$18,859



**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. 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 segregate income taxes from accrued expenses.

#### 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.

There were no acquisitions completed in 2014.

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. Aspen also specializes in custom motor designs for end product integration and significant product enhancement in a variety of high-performance industrial applications.

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 2013 acquisitions are complete.



## Note 3 - Receivables

Receivables consist of:

	September 27, 2014	September 28, 2013
Accounts receivable	\$332,450	\$328,038
Long-term contract receivables:		
Amounts billed	125,497	133,149
Unbilled recoverable costs and accrued profits	313,530	337,520
Total long-term contract receivables	439,027	470,669
Other	13,738	17,168
Total receivables	785,215	815,875
Less allowance for doubtful accounts	(4,341 )	(4,499 )
Receivables	\$780,874	\$811,376

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 \$16,929 at September 27, 2014 and \$11,532 at September 28, 2013. Unbilled recoverable costs and accrued profits under long-term contracts to be billed to the U.S. Government were \$15,816 at September 27, 2014 and \$11,963 at September 28, 2013. 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 75% 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. There are no material balances billed but not paid by customers under retainage provisions.

Concentrations of credit risk on receivables are limited to those from significant customers who are believed to be financially sound. Receivables from Boeing were \$147,421 at September 27, 2014 and \$182,050 at September 28, 2013. 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 27, 2014	September 28, 2013
Raw materials and purchased parts	\$198,166	\$194,249
Work in progress	251,701	289,124
Finished goods	67,189	68,301
Inventories	\$517,056	\$551,674

There are no material inventoried costs relating to long-term contracts where revenue is accounted for using the percentage of completion, cost-to-cost method of accounting as of September 27, 2014 and September 28, 2013.

## Note 5 - Property, Plant and Equipment

Property, plant and equipment consists of:

	September 27, 2014	September 28, 2013
Land	\$28,299	\$28,983
Buildings and improvements	398,783	390,525
Machinery and equipment	767,342	756,503
Property, plant and equipment, at cost	1,194,424	1,176,011
Less accumulated depreciation and amortization	(639,076 )	(613,648 )
Property, plant and equipment	\$555,348	\$562,363

## 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, 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
Adjustments to prior year acquisitions	—	(2,734	)—	—	—	(2,734
Foreign currency translation	439	(795	)(3,311	)(1,943	)(728	)(6,338
Balance at September 27, 2014	\$ 192,852	\$ 159,607	\$ 118,009	\$ 202,910	\$ 84,474	\$ 757,852

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. 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. In the fourth quarter of 2013, we began a strategic assessment of our Medical Devices segment. We determined that the medical pumps business is not core to our overall strategy, but we are currently operating the business as part of ongoing operations.

The components of acquired intangible assets are as follows:

	September 27, 2014			September 28, 2013	
	Weighted- Average Life (Years)	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Customer-related	11	\$ 180,670	\$(102,251	)\$ 193,744	\$(97,347
Program-related	18	80,054	(24,065	)79,607	(18,988
Technology-related	9	76,057	(46,296	)76,558	(42,000
Marketing-related	10	26,707	(14,779	)33,259	(18,476
Acquired intangible assets	12	\$ 363,488	\$(187,391	)\$ 383,168	\$(176,811

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 \$29,907 in 2014, \$31,137 in 2013 and \$31,235 in 2012. Based on acquired intangible assets recorded at September 27, 2014, amortization is estimated to be approximately \$25,300 in 2015, \$23,800 in 2016, \$20,500 in 2017, \$18,800 in 2018 and \$16,800 in 2019.



## Note 7 - Indebtedness

Short-term borrowings consist of:

	September 27, 2014	September 28, 2013
Securitization program	\$100,000	\$100,000
Lines of credit	3,660	5,088
Short-term borrowings	\$103,660	\$105,088

The Securitization Program matures on February 13, 2015 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 thereto for successive 364-day terms. Interest for the Securitization Program is 0.8% at September 27, 2014 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. The Securitization Program has a minimum borrowing requirement equal to the lesser of either 80% of our borrowing capacity or 100% of our borrowing base, which is a subset of the trade receivables sold under this agreement. As of September 27, 2014, our minimum borrowing requirement is \$80,000.

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 1.4% at September 27, 2014.

Long-term debt consists of:

	September 27, 2014	September 28, 2013
U.S. revolving credit facility	\$765,000	\$403,865
Other long-term debt	5,225	8,577
Obligations under capital leases	151	65
Senior debt	770,376	412,507
7¼% senior subordinated notes	—	191,562
Total long-term debt	770,376	604,069
Less current installments	(5,262 )	(3,382 )
Long-term debt	\$765,114	\$600,687

On May 22, 2014, we amended our U.S. revolving credit facility. The amendment increased the capacity on our revolving credit facility from \$900,000 to \$1,100,000 and extended the maturity of the credit facility to May 22, 2019. The amendment also provides an expansion option, which permits us to request an increase to the credit facility of up to \$200,000 upon satisfaction of certain conditions. The credit facility is secured by substantially all of our U.S. assets. The loan agreement contains various covenants which, among others, specify interest coverage and maximum leverage and capital expenditures. We are in compliance with all covenants. Interest on all of the outstanding credit facility borrowings is 1.5% and is based on LIBOR plus the applicable margin, which was 138 basis points at September 27, 2014.

Other long-term debt at September 27, 2014 consists of debt instruments being repaid in 2015 that carry an interest rate of 3.3%.

On December 19, 2013, we repurchased our 7¼% senior subordinated notes due on January 15, 2018 at 103.625%, 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. The associated loss on the redemption includes \$6,945 of call premium paid to external bondholders and a \$1,057 write off of deferred debt issuance costs.

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Maturities of long-term debt are \$5,262 in 2015, \$38 in 2016, \$37 in 2017, \$27 in 2018 and \$765,012 in 2019. At September 27, 2014, we had pledged assets with a net book value of \$1,573,599 as security for long-term debt. At September 27, 2014, we had \$333,806 of unused short and long-term borrowing capacity, including \$320,665 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 interest rate risk associated with long-term debt and foreign exchange risk related to foreign operations and foreign currency transactions. We enter into derivative financial instruments with a number of major financial institutions to minimize counterparty credit risk.

Derivatives designated as hedging instruments

Interest rate swaps are used to adjust the proportion of total debt that is subject to variable and fixed interest rates. The interest rate swaps are designated as hedges of the amount of future cash flows related to interest payments on variable-rate debt that, in combination with the interest payments on the debt, convert a portion of the variable-rate debt to fixed-rate debt. At September 27, 2014, we had interest rate swaps with notional amounts totaling \$320,000. The interest rate swaps effectively convert this amount of variable-rate debt to fixed-rate debt at 2.0%, including the applicable margin of 138 basis points as of September 27, 2014. The interest will revert back to variable rates based on LIBOR plus the applicable margin upon the maturity of the interest rate swaps. These interest rate swaps mature at various times between January 15, 2015 and June 5, 2017.

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 \$43,548 at September 27, 2014. These contracts mature at various times through May 27, 2016.

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 2014, 2013 or 2012.

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 \$206,396 at September 27, 2014. 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 net gains of \$4,105 in 2014 and \$2,249 in 2013 on the foreign currency forwards. These gains are included in other expense and generally offset the losses 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 27, 2014	September 28, 2013
Derivatives designated as hedging instruments:			
Interest rate swaps	Other current assets	\$70	\$—
Interest rate swaps	Other assets	107	—
Foreign currency forwards	Other current assets	—	217
Foreign currency forwards	Other assets	—	100
	Total assets	\$177	\$317
Interest rate swaps	Other accrued liabilities	\$110	\$85
Interest rate swaps	Other long-term liabilities	28	42
Foreign currency forwards	Other accrued liabilities	1,521	1,342
Foreign currency forwards	Other long-term liabilities	494	636
	Total liabilities	\$2,153	\$2,105
Derivatives not designated as hedging instruments:			
Foreign currency forwards	Other current assets	\$821	\$68
	Total assets	\$821	\$68
Foreign currency forwards	Other accrued liabilities	\$2,991	\$956
	Total liabilities	\$2,991	\$956

## 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 indicate 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 27, 2014:

	Classification	Level 1	Level 2	Level 3	Total
Interest rate swaps	Other current assets	\$—	\$70	—	\$70
Interest rate swaps	Other assets	—	107	—	107
Foreign currency forwards	Other current assets	—	821	—	821
	Total assets	\$—	\$998	\$—	\$998
Interest rate swaps	Other accrued liabilities	\$—	\$110	\$—	\$110
Interest rate swaps	Other long-term liabilities	—	28	—	28
Foreign currency forwards	Other accrued liabilities	—	4,512	—	4,512
Foreign currency forwards	Other long-term liabilities	—	494	—	494
	Total liabilities	\$—	\$5,144	\$—	\$5,144

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

	2014	2013
Balance at beginning of year	\$4,007	\$6,422
Additions from acquisitions	—	3,447
Increase (decrease) in discounted future cash flows recorded as interest expense	(121 )	317
Decrease in earn out provisions recorded as other income	(1,585 )	(3,368 )
Settlements paid in cash	(2,301 )	(2,811 )
Balance at end of year	\$—	\$4,007

## 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.

In 2014, we initiated restructuring plans in response to the business outlook, which includes a change in the mix of sales and delays and cancellations of orders for certain product lines. The restructuring actions taken will result in workforce reductions, primarily in the U.S. and Europe.

Restructuring expense in 2014 principally relates to severance, but also includes \$1,296 for the impairment of long-lived assets in our Medical Devices segment and \$739 for the impairment of intangibles assets in our Industrial Systems segment. Restructuring activity for severance by segment is as follows:

	Aircraft Controls	Space and Defense Controls	Industrial Systems	Total
Balance at September 29, 2012	\$—	\$—	\$—	\$—
Charged to expense	1,692	4,968	7,415	14,075
Cash payments - 2013 plan	(1,672)	(600)	(4,711)	(6,983)
Foreign currency translation	16	8	13	37
Balance at September 28, 2013	36	4,376	2,717	7,129
Charged to expense	5,440	5,438	—	10,878
Cash payments - 2013 plan	(35)	(4,014)	(2,452)	(6,501)
Foreign currency translation	(2)	(36)	(79)	(117)
Balance at September 27, 2014	\$5,439	\$5,764	\$186	\$11,389

Payments related to these severance benefits are expected to be paid in full by October 3, 2015 for both the 2013 plan and the 2014 plan. As of September 27, 2014, restructuring consists of \$10,899 for the 2014 plan and \$490 for the 2013 plan.

## 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 27, 2014, the participants in the RSP owned 552,011 Class A shares and 1,684,812 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	
	2014	2013	2014	2013
Change in projected benefit obligation:				
Projected benefit obligation at prior year measurement date	\$678,063	\$779,977	\$169,980	\$153,089
Service cost	21,571	26,856	5,533	4,874
Interest cost	33,354	28,818	5,984	5,749
Contributions by plan participants	—	—	1,014	970
Actuarial losses (gains)	74,369	(138,603 )	22,702	8,781
Foreign currency exchange impact	—	—	(10,237 )	1,400
Benefits paid from plan assets	(20,032 )	(17,586 )	(2,697 )	(1,903 )
Benefits paid by Moog	(1,883 )	(1,556 )	(2,985 )	(3,162 )
Other	(1,239 )	157	(352 )	182
Projected benefit obligation at measurement date	\$784,203	\$678,063	\$188,942	\$169,980
Change in plan assets:				
Fair value of assets at prior year measurement date	\$498,918	\$441,426	\$98,625	\$84,044
Actual return on plan assets	50,630	42,853	11,631	12,147
Employer contributions	59,283	34,584	20,655	8,077
Contributions by plan participants	—	—	1,014	970
Benefits paid	(21,915 )	(19,142 )	(5,682 )	(5,065 )
Foreign currency exchange impact	—	—	(5,425 )	(1,485 )
Other	(1,239 )	(803 )	(64 )	(63 )
Fair value of assets at measurement date	\$585,677	\$498,918	\$120,754	\$98,625
Funded status and amount recognized in assets and liabilities	\$(198,526 )	\$(179,145 )	\$(68,188 )	\$(71,355 )
Amount recognized in assets and liabilities:				
Other assets - non-current	\$—	\$—	\$4,191	\$2,043
Accrued and long-term pension liabilities	(198,526 )	(179,145 )	(72,379 )	(73,398 )
Amount recognized in assets and liabilities	\$(198,526 )	\$(179,145 )	\$(68,188 )	\$(71,355 )
Amount recognized in accumulated other comprehensive loss, before taxes:				
Prior service cost (credit)	\$846	\$995	\$(363 )	\$(172 )
Actuarial losses	298,534	247,803	40,254	28,550
Amount recognized in accumulated other comprehensive loss, before taxes	\$299,380	\$248,798	\$39,891	\$28,378

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 \$877,846 in 2014 and \$766,870 in 2013. At the measurement date in 2014, our plans had fair values of plan assets totaling \$706,431. At the measurement date in 2014, three of our plans had fair values of plan assets totaling \$78,643, which exceeded their accumulated benefit obligations of \$67,423. 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. 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 27, 2014	September 28, 2013
Projected benefit obligation	\$895,302	\$802,239
Accumulated benefit obligation	810,424	725,886
Fair value of plan assets	627,788	549,696

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		
	2014	2013	2012	2014	2013	2012
Assumptions for net periodic benefit cost:						
Discount rate	5.0 %	3.7 %	4.7 %	3.7 %	4.0 %	4.7 %
Return on assets	8.4 %	8.6 %	8.9 %	4.1 %	4.5 %	5.5 %
Rate of compensation increase	4.1 %	4.1 %	3.8 %	2.8 %	2.9 %	3.0 %
Assumptions for benefit obligations:						
Discount rate	4.4 %	5.0 %	3.7 %	3.1 %	3.6 %	3.9 %
Rate of compensation increase	4.1 %	4.1 %	4.1 %	2.7 %	2.8 %	2.9 %

Pension plan investment policies and strategies are developed on a plan specific basis, which varies by country. At September 27, 2014, the U.S. plans represented 83% of consolidated pension assets, while the non-U.S. plans represented 17% 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 2014, we assumed an average rate of return on U.S. pension assets of approximately 8.4% 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 2014, we assumed an average rate of return on non-U.S. pension assets of approximately 4.1% 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 27, 2014 and September 28, 2013 are as follows:

Asset category:	U.S. Plans			Non-U.S. Plans		
	Target	2014 Actual	2013 Actual	Target	2014 Actual	2013 Actual
Equity	45%-70%	54	% 60	% 40%-60%	30	% 30
Debt	20%-35%	34	% 30	% 40%-60%	41	% 43
Real estate and other	10%-20%	12	% 10	% 0%-30%	28	% 27

The following tables present the consolidated plan assets using the fair value hierarchy, which is described in Note 9 - Fair Value, as of September 27, 2014 and September 28, 2013.

U.S. Plans, September 27, 2014	Level 1	Level 2	Level 3	Total
Shares of registered investment companies:				
Non-investment grade	\$66,201	\$—	\$—	\$66,201
Other	7,442	—	—	7,442
Fixed income funds:				
U.S. Government obligations	—	47,275	—	47,275
Corporate and other	—	82,850	—	82,850
Employer securities	78,874	—	—	78,874
Interest in common collective trusts	—	153,183	—	153,183
Money market funds	—	46,135	—	46,135
Limited partnerships	—	—	81,342	81,342
Insurance contracts and other	—	—	22,375	22,375
Fair value	\$152,517	\$329,443	\$103,717	\$585,677
Non-U.S. Plans, September 27, 2014	Level 1	Level 2	Level 3	Total
Shares of registered investment companies	\$—	\$32,819	\$—	\$32,819
Domestic equity	6,731	195	—	6,926
International equity	8,730	—	—	8,730
Fixed income funds	4,976	35,774	—	40,750
Cash and cash equivalents	85	497	—	582
Insurance contracts and other	—	764	30,183	30,947
Fair value	\$20,522	\$70,049	\$30,183	\$120,754



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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

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 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
Return on assets	8,852	4,689	13,541
Purchases from contributions to Plans	14,426	2,086	16,512
Proceeds from sales of investments	(3,511 )	—	(3,511 )
Settlements paid in cash	(8,317 )	(250 )	(8,567 )
Foreign currency translation	—	(2,162 )	(2,162 )
Balance at September 27, 2014	\$103,717	\$ 30,183	\$133,900

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. The limited partnerships have unfunded commitments of \$20,743 at September 27, 2014. 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 27, 2014, 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		
	2014	2013	2012	2014	2013	2012
Service cost	\$21,571	\$26,856	\$23,347	\$5,533	\$4,874	\$4,046
Interest cost	33,354	28,818	29,786	5,984	5,750	5,864
Expected return on plan assets	(43,374 )	(41,340 )	(41,970 )	(4,487 )	(3,789 )	(3,832 )
Amortization of prior service cost (credit)	149	8	9	(57 )	(51 )	(62 )
Amortization of actuarial loss	16,346	27,604	17,024	1,398	1,589	875
Settlement loss	37	—	—	—	245	—
Pension expense for defined benefit plans	28,083	41,946	28,196	8,371	8,618	6,891
Pension expense for defined contribution plans	13,196	11,223	9,114	6,458	5,672	5,105
Total pension expense	\$41,279	\$53,169	\$37,310	\$14,829	\$14,290	\$11,996

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 2015 are \$92 and \$24,782, respectively.

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

	U.S. Plans	Non-U.S. Plans
2015	\$24,970	\$5,830
2016	27,335	5,796
2017	30,149	